

2050 Metropolitan Transportation Plan/Sustainable Communities Strategy and Regional Transportation Plans for Monterey, San Benito and Santa Cruz Counties

Draft Environmental Impact Report

SCH #2024010524

prepared by

Association of Monterey Bay Area Governments
24580 Silver Cloud Court
Monterey, California 93940
Contact: Heather Adamson, Director of Planning

prepared with the assistance of

Rincon Consultants, Inc.
2511 Garden Road, Suite C-250
Monterey, California 93940

November 2025

RINCON CONSULTANTS

Table of Contents

Executive Summary ES-1
Project Synopsis ES-1
Project Vision ES-3
CEQA Project Objectives ES-4
Alternatives ES-5
Areas of Known Controversy ES-6
Issues to be Resolved ES-7
Summary of Impacts and Mitigation Measures ES-7
1 Introduction 1-1
1.1 Background 1-1
1.1.1 Environmental Impact Report Background 1-2
1.2 Purpose and Legal Authority 1-4
1.3 Scope and Content 1-5
1.4 Implementation Issues and Future Environmental Review 1-6
1.4.1 Streamlining Under SB 375 1-7
1.4.2 Streamlining Under SB 226 1-8
1.4.3 Streamlining Under SB 743 1-8
1.4.4 Other Tiering Opportunities 1-8
1.5 Lead, Responsible, and Trustee Agencies 1-10
1.6 EIR Content and Format 1-10
1.7 Environmental Review Process 1-11
2 Project Description 2-1
2.1 Project Applicant 2-1
2.2 Lead Agency Contact Person 2-1
2.3 Project Purpose 2-1
2.3.1 General Legislative Requirements 2-1
2.3.2 SB 375 Requirements 2-2
2.3.3 Infrastructure Investment and Jobs Act 2-4
2.3.4 Environmental Justice 2-4
2.3.5 Metropolitan/Regional Transportation Plans 2-5
2.3.6 CEQA Project Objectives 2-6
2.4 Project Location 2-7
2.5 Project Characteristics 2-7
2.5.1 Vision 2-19

2.5.2 Transportation Investments 2-20
2.5.3 Financial Plan 2-22
2.5.4 Sustainable Communities Strategy 2-23
2.6 2050 MTP/SCS and County Level RTP Transportation Projects 2-25
2.7 Intended Use of EIR 2-28
2.7.1 Agencies Expected to Use EIR in Decision-making 2-28
2.7.2 Project Permits and Approvals 2-28
2.8 Relationship with Other Plans and Programs 2-29
3 Environmental Setting 3-1
3.1 Regional Setting 3-1
3.2 Sub-Region Descriptions 3-1
3.3 Regional Transportation System 3-2
3.3.1 Monterey County 3-2
3.3.2 San Benito County 3-4
3.3.3 Santa Cruz County 3-5
3.4 Plan Consistency 3-6
4 Environmental Impact Analysis 4-1
Mitigation Approach, EIR Baseline, Approach for Impact Analyses 4-2
Mitigation Approach 4-2
EIR Baseline 4-2
Interim Timeframes 4-3
Approach for Direct Impact Analysis 4-3
4.1 Aesthetics 4.1-1
4.1.1 Setting 4.1-1
4.1.2 Regulatory Setting 4.1-5
4.2 Agriculture and Forestry 4.2-1
4.2.1 Setting 4.2-1
4.2.2 Regulatory Setting 4.2-10
4.2.3 Impact Analysis 4.2-14
4.2.4 Cumulative Impacts 4.2-21
4.3 Air Quality and Health Impacts/Risks 4.3-1
4.3.1 Setting 4.3-1
4.3.2 Regulatory Setting 4.3-11
4.3.3 Impact Analysis 4.3-27
4.3.4 Cumulative Impacts 4.3-49

4.4 Biological Resources 4.4-1
4.4.1 Setting 4.4-1
4.4.2 Regulatory Setting 4.4-23
4.4.3 Impact Analysis 4.4-31
4.4.4 Cumulative Impacts 4.4-50
4.5 Cultural Resources 4.5-1
4.5.1 Setting 4.5-1
4.5.2 Regulatory Setting 4.5-8
4.5.3 Impact Analysis 4.5-19
4.5.4 Cumulative Impacts 4.5-27
4.6 Energy 4.6-1
4.6.1 Setting 4.6-1
4.6.2 Regulatory Setting 4.6-5
4.6.3 Impact Analysis 4.6-16
4.6.4 Cumulative Impacts 4.6-23
4.7 Geology, Soils, and Mineral Resources 4.7-1
4.7.1 Setting 4.7-1
4.7.2 Regulatory Setting 4.7-16
4.7.3 Impact Analysis 4.7-24
4.7.4 Cumulative Impacts 4.7-39
4.8 Greenhouse Gas Emissions/Climate Change 4.8-1
4.8.1 Setting 4.8-1
4.8.2 Regulatory Setting 4.8-8
4.8.3 Impact Analysis 4.8-20
4.8.4 Cumulative Impacts 4.8-35
4.9 Hazards and Hazardous Materials 4.9-1
4.9.1 Setting 4.9-1
4.9.2 Regulatory Setting 4.9-8
4.9.3 Impact Analysis 4.9-19
4.9.4 Cumulative Impacts 4.9-29
4.10 Hydrology and Water Quality 4.10-1
4.10.1 Setting 4.10-1
4.10.2 Regulatory Setting 4.10-19
4.10.3 Impact Analysis 4.10-31
4.10.4 Cumulative Impacts 4.10-46

4.11 Land Use and Planning....4.11-1
4.11.1 Setting....4.11-1
4.11.2 Regulatory Setting....4.11-7
4.11.3 Impact Analysis....4.11-21
4.12 Noise....4.12-1
4.12.1 Setting....4.12-1
4.12.2 Regulatory Setting....4.12-6
4.12.3 Impact Analysis....4.12-14
4.12.4 Cumulative Impacts....4.12-32
4.13 Population and Housing....4.13-1
4.13.1 Setting....4.13-1
4.13.2 Regulatory Setting....4.13-3
4.13.3 Impact Analysis....4.13-11
4.13.4 Cumulative Impacts....4.13-17
4.14 Public Services and Recreation....4.14-1
4.14.1 Setting....4.14-1
4.14.2 Regulatory Setting....4.14-5
4.14.3 Impact Analysis....4.14-15
4.14.4 Cumulative Impacts....4.14-22
4.15 Transportation....4.15-1
4.15.1 Setting....4.15-1
4.15.2 Regulatory Setting....4.15-13
4.15.3 Impact Analysis....4.15-22
4.15.4 Cumulative Impacts....4.15-33
4.16 Tribal Cultural Resources....4.16-1
4.16.1 Setting....4.16-1
4.16.2 Regulatory Setting....4.16-2
4.16.3 Impact Analysis....4.16-6
4.16.4 Cumulative Impacts....4.16-11
4.17 Utilities and Service Systems....4.17-1
4.17.1 Setting....4.17-1
4.17.2 Regulatory Setting....4.17-10
4.17.3 Impact Analysis....4.17-27
4.17.4 Cumulative Impacts....4.17-39

4.18 Wildfire 4.18-1
4.18.1 Setting 4.18-1
4.18.2 Regulatory Setting....4.18-8
4.18.3 Impact Analysis 4.18-17
4.18.4 Cumulative Impacts 4.18-26
5 MTP Consistency with Other Plans Analysis....5-1
5.1 Monterey County General Plan/Local Coastal Program....5-2
5.2 San Benito County General Plan 5-3
5.3 Santa Cruz County General Plan/Local Coastal Plan....5-4
5.4 AMBAG Region Transit Agency Plans 5-5
5.4.1 Monterey-Salinas Transit Business Plan and Short Range Transit Plan 5-5
5.4.2 Santa Cruz METRO Short-Range Transit Plan 5-6
5.4.3 San Benito County Local Transportation Authority Short- and Long-Range Transit Plan 5-8
5.5 Local Agency Formation Commissions 5-9
6 Other CEQA Required Discussions....6-1
6.1 Growth Inducement....6-1
6.1.1 Employment, Household, and Population Growth....6-1
6.1.2 Removal of Obstacles to Growth 6-2
6.2 Significant Irreversible Environmental Changes 6-3
6.3 List of Significant and Unavoidable Impacts 6-4
6.4 Cumulative Impacts 6-5
6.4.1 Approach for Cumulative Analysis....6-6
6.4.2 Cumulative Impacts Analysis 6-10
7 Alternatives....7-1
7.1 Alternatives Development and Screening Process....7-2
7.2 Alternatives Considered but Rejected 7-3
7.2.1 Aggressive VMT Reduction Alternative 7-3
7.2.2 Road Pricing Alternative 7-4
7.2.3 Financially Unconstrained Alternative....7-5
7.3 Alternative 1: No Project Alternative....7-6
7.3.1 Description....7-6
7.3.2 Impact Analysis 7-6
7.4 Alternative 2: Infill and Transit Focus 7-17
7.4.1 Description....7-17
7.4.2 Impact Analysis 7-18

7.5 Alternative 3: Infill and Operational/Complete Streets....7-28
7.5.1 Description....7-28
7.5.2 Impact Analysis....7-29
7.6 Comparison of Alternative Impacts; Environmentally Superior Alternative....7-39
8 References....8-1
8.1 Bibliography....8-1
8.2 List of Preparers....8-43

Tables

Table ES-1 Summary of Environmental Impacts, Mitigation Measures, and Residual Impacts....ES-9
Table 1-1 NOP Comments and EIR Response....1-3
Table 2-1 AMBAG Population Growth 2022-2050....2-9
Table 4.2-1 Farmland Conversion by County 2018-2020....4.2-3
Table 4.2-2 2050 MTP/SCS Projects That May Result in Agriculture and Forestry Impacts....4.2-19
Table 4.3-1 Description of Selected Air Contaminants....4.3-3
Table 4.3-2 2022 Daily Emissions Estimates....4.3-6
Table 4.3-3 Ten-Year NCCAB Air Quality Summary (2014-2023) for Days Over the Ozone and PM10 NAAQS and CAAQS....4.3-8
Table 4.3-4 Days Exceeding the 8-Hour Ozone CAAQS (2014-2023)....4.3-8
Table 4.3-5 Emissions Inventory and Forecasts for ROG and NOX....4.3-9
Table 4.3-6 Emissions Inventory and Forecasts for PM2.5 and PM10....4.3-9
Table 4.3-7 Current Federal and State Ambient Air Quality Standards....4.3-11
Table 4.3-8 MBARD Fugitive Dust Control Measures....4.3-16
Table 4.3-9 Regional Emissions Analysis....4.3-35
Table 4.3-10 Mobile Source Fugitive Particulate (PM10 + PM2.5) Emissions....4.3-40
Table 4.3-11 On-Road Mobile Source Diesel Toxics Comparison....4.3-43
Table 4.3-12 Daily Hours of Truck Delay in AMBAG Region....4.3-44
Table 4.3-13 2050 MTP/SCS Projects that May Result in Air Quality Impacts....4.3-48
Table 4.4-1 Sensitive Communities Documented within Monterey, San Benito, and Santa Cruz Counties....4.4-16
Table 4.4-2 Federal Designated Critical Habitat within Monterey, San Benito, and Santa Cruz Counties....4.4-22
Table 4.5-1 Monterey County Historical Resources....4.5-3
Table 4.5-2 San Benito County Historical Resources....4.5-6

Table 4.5-3 Santa Cruz County Historical Resources 4.5-7
Table 4.5-4 2050 MTP/SCS Projects that May Result in Cultural Resources Impacts 4.5-25
Table 4.6-1 2022 Oil and Natural Gas Production by County....4.6-2
Table 4.6-2 2023 Electricity and Natural Gas Consumption by County....4.6-3
Table 4.6-3 2023 Fuel Consumption by County....4.6-4
Table 4.6-4 2022 Daily VMT for the AMBAG Region 4.6-4
Table 4.6-5 Indirect Energy Consumption Factors 4.6-18
Table 4.6-6 Direct and Indirect Transportation Energy Use 4.6-20
Table 4.7-1 2050 MTP/SCS Projects that May Result in Geologic Impacts 4.7-39
Table 4.8-1 AMBAG Regional 2019/2020 GHG Emissions Detailed Summary (MT CO2e)....4.8-3
Table 4.8-2 AMBAG Regional Adjusted Forecast Detailed Summary (MT CO2e) 4.8-22
Table 4.8-3 2050 MTP/SCS Net Change in Total GHG Emissions (2022-2050)....4.8-28
Table 4.8-4 Per Capita Carbon Dioxide Emission Comparison: Passenger Vehicles....4.8-29
Table 4.8-5 2030 and 2045 GHG Emissions Compared to 1990 Levels 4.8-31
Table 4.9-1 2050 MTP/SCS Projects that May Result in Hazardous Materials Impacts 4.9-28
Table 4.10-1 Water Bodies Listed as Impaired 4.10-7
Table 4.10-2 Medium and High Priority Basins and GSP Status 4.10-22
Table 4.10-3 2050 MTP/SCS Projects that Would Likely Result in a Flooding Impact....4.10-46
Table 4.12-1 Noise Abatement Criteria 4.12-7
Table 4.12-2 FTA Groundborne Vibration Architectural Damage Criteria - Construction....4.12-9
Table 4.12-3 FTA Groundborne Vibration Criteria - Operation 4.12-9
Table 4.12-4 Screening Distances for Noise Assessments – Rail Transit Projects (in feet)....4.12-10
Table 4.12-5 Screening Distances for Noise Assessments – Bus Transit Projects (in feet)....4.12-10
Table 4.12-6 Typical Construction Noise Levels (dBA)....4.12-15
Table 4.12-7 Construction Equipment Vibration Levels 4.12-19
Table 4.12-8 Public and Private Airports within the AMBAG Region 4.12-28
Table 4.12-9 2050 MTP/SCS Projects that May Result in Noise/Vibration Impacts....4.12-30
Table 4.13-1 2022 Population, Housing, and Employment for the AMBAG Region 4.13-2
Table 4.13-2 Forecasted AMBAG Population Growth 2022-2050....4.13-12
Table 4.13-3 Forecasted AMBAG Increase in Housing Units 2022-2050....4.13-15
Table 4.14-1 Fire Service Providers in the AMBAG Region....4.14-1
Table 4.14-2 Police Service Providers in the AMBAG Region 4.14-3
Table 4.14-3 AMBAG Region Public Schools and Enrollment by County 4.14-4

Table 4.15-1 AMBAG Region Highway Descriptions....4.15-3
Table 4.15-2 Baseline VMT (2022) for AMBAG Region....4.15-6
Table 4.15-3 Percent of Jobs within 0.5 Mile of a High Quality Transit Corridor....4.15-24
Table 4.15-4 General Transit Use Indicators....4.15-25
Table 4.15-5 Daily Vehicle Miles Traveled....4.15-27
Table 4.16-1 2050 MTP/SCS Projects that May Result in Tribal Cultural Resources Impacts....4.16-9
Table 4.17-1 Phase II Regulated Small MS4s within the AMBAG Region....4.17-8
Table 4.17-2 Landfills Located in the AMBAG Region....4.17-10
Table 4.18-1 2050 MTP/SCS Projects That May Result in Increased Wildfire Risk....4.18-25
Table 6-1 Cumulative Impact Analysis Geographic Scope....6-7
Table 6-2 Population, Households and Employment Projections of Cumulative Impact Analysis Area, 2022-2050....6-9
Table 7-1 Regional Emissions Analysis of the No Project Alternative....7-8
Table 7-2 No Project Alternative Net Change in Total GHG Emissions....7-11
Table 7-3 Regional Emissions Analysis for Alternative 2....7-19
Table 7-4 Alternative 2 Net Change in Total GHG Emissions....7-22
Table 7-5 Regional Emissions Analysis for Alternative 3....7-30
Table 7-6 Alternative 3 Net Change in Total GHG Emissions....7-33
Table 7-7 Impact Comparison of Alternatives....7-41

Figures

Figure 1-1 Environmental Review Process....1-13
Figure 2-1 Project Location....2-8
Figure 2-2 MTP Projects Monterey County (2050)....2-11
Figure 2-3 SCS Land Use Monterey County: North (2050)....2-12
Figure 2-4 SCS Land Use Monterey County: South (2050)....2-13
Figure 2-5 MTP Projects San Benito County (2050)....2-14
Figure 2-6 SCS Land Use San Benito County (2050....2-15
Figure 2-7 MTP Projects Santa Cruz County (2050)....2-16
Figure 2-8 SCS Land Use Santa Cruz County (2050)....2-17
Figure 4.2-1 Farmland in Monterey County (2020)....4.2-5
Figure 4.2-2 Farmland in San Benito County (2020)....4.2-6
Figure 4.2-3 Farmland in Santa Cruz County (2020)....4.2-7
Figure 4.2-4 Timber Production Zones in Santa Cruz County (2023)....4.2-9
Figure 4.3-1 NCCAB Air Quality Monitoring Stations....4.3-7

Figure 4.4-1 Habitat Classifications in Monterey County 4.4-2
Figure 4.4-2 Habitat Classifications in San Benito County 4.4-3
Figure 4.4-3 Habitat Classifications in Santa Cruz County 4.4-4
Figure 4.4-4 Wetlands and Aquatic Resources in Monterey County 4.4-11
Figure 4.4-5 Wetlands and Aquatic Resources in San Benito County 4.4-12
Figure 4.4-6 Wetlands and Aquatic Resources in Santa Cruz County 4.4-13
Figure 4.4-7 Federally Designated Critical Habitat in Monterey County 4.4-19
Figure 4.4-8 Federally Designated Critical Habitat in San Benito County 4.4-20
Figure 4.4-9 Federally Designated Critical Habitat in Santa Cruz County 4.4-21
Figure 4.7-1 Monterey County Alquist-Priolo Fault Zones 4.7-2
Figure 4.7-2 San Benito County Alquist-Priolo Fault Zones 4.7-3
Figure 4.7-3 Santa Cruz County Alquist-Priolo Fault Zones 4.7-4
Figure 4.7-4 2050 MTP/SCS Transportation Projects within Alquist-Priolo Zones – North Monterey County 4.7-5
Figure 4.7-5 2050 MTP/SCS Transportation Projects within Alquist-Priolo Zones – South Monterey County 4.7-6
Figure 4.7-6 2050 MTP/SCS Transportation Projects within Alquist-Priolo Zones – San Benito County 4.7-7
Figure 4.7-7 2050 MTP/SCS Transportation Projects within Alquist-Priolo Zones – Santa Cruz County 4.7-8
Figure 4.10-1 Monterey County Surface Waters 4.10-2
Figure 4.10-2 San Benito County Surface Waters 4.10-3
Figure 4.10-3 Santa Cruz County Surface Waters 4.10-4
Figure 4.10-4 Monterey County Flood Map 4.10-16
Figure 4.10-5 San Benito County Flood Map 4.10-17
Figure 4.10-6 Santa Cruz County Flood Map 4.10-18
Figure 4.11-1 Monterey and Santa Cruz Counties Coastal Zone 4.11-3
Figure 4.11-2 Protected Open Space in Monterey County 4.11-4
Figure 4.11-3 Protected Open Space in Santa Cruz County 4.11-5
Figure 4.11-4 Protected Open Space in San Benito County 4.11-6
Figure 4.15-1 Highways in the AMBAG Region 4.15-5
Figure 4.18-1 Northern Monterey County Fire Hazard Severity Zones 4.18-4
Figure 4.18-2 Southern Monterey County Fire Hazard Severity Zones 4.18-5
Figure 4.18-3 San Benito County Fire Hazard Severity Zones 4.18-6
Figure 4.18-4 Santa Cruz County Fire Hazard Severity Zones 4.18-7

Appendices

Appendix A Notice of Preparation and NOP Response Letters
Appendix B 2050 MTP/SCS and RTPs Transportation Project List
Appendix C Performance Metric Data
Appendix D Special Status Species
Appendix E 2050 MTP/SCS Air Quality and GHG Emissions
Appendix F Assembly Bill 52 Consultation
Appendix G 2050 MTP/SCS and RTPs Transportation Alternatives Project List

Executive Summary

This document is an Environmental Impact Report (EIR) analyzing the environmental effects of the proposed 2050 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) and three county-level Regional Transportation Plans (RTPs). This section summarizes the characteristics of the proposed project, alternatives to the proposed project, and the environmental impacts and mitigation measures associated with the proposed project.

Project Synopsis

Lead Agency

Association of Monterey Bay Area Governments (AMBAG)
24580 Silver Cloud Court
Monterey, California 93940
831-883-3750

Lead Agency Contact Person

Heather Adamson, Director of Planning
AMBAG
24580 Silver Cloud Court
Monterey, California 93940
831-264-5086

Project Description

This EIR has been prepared to examine the environmental effects of the Metropolitan Transportation Plan/Sustainable Communities Strategy (hereafter referred to as the 2050 MTP/SCS) and Regional Transportation Plans (RTPs). The following is a summary of the full project description, which can be found in Chapter 2, *Project Description*.

The 2050 MTP/SCS covers the entire area of Monterey, San Benito, and Santa Cruz counties and includes all the incorporated cities and unincorporated communities contained therein. Refer to Figure 2-1 in Chapter 2, *Project Description* for a map of the project location. The three RTPs each cover the entire areas of their respective county. Transportation projects identified in the 2050 MTP/SCS and each of the county-level RTPs are located on State highways, county roads and locally owned streets, as well as on transit district property, and public utility lands.

Project Characteristics

The 2050 MTP/SCS and county level RTPs are an update to the previously adopted 2045 plans which were adopted in June 2022. The updates from the 2045 MTP/SCS and county

level RTPs consisted of: updating the growth forecasts from 2015-2045 to 2022-2050; updating project cost estimates; updating revenue assumptions; and changes to transportation project lists. The MTP/SCS vision, policies, and goals have also been updated as well as the performance measures.

The 2050 MTP/SCS and county level RTPs address how the AMBAG region will meet its transportation needs for the period through 2050, considering existing and projected future land use patterns as well as population and job growth. The 2050 MTP/SCS estimates $16 billion in revenues expected to be available to the region from all transportation funding sources over the course of the planning period. It identifies and prioritizes expenditures of this anticipated funding for transportation projects of all transportation modes: highways, streets and roads, transit, rail, bicycle and pedestrian, aviation, as well as transportation demand management measures and transportation systems management.

The 2050 MTP/SCS is based on a preferred land use and transportation scenario which defines a pattern of future growth and transportation system investment for the region emphasizing a transit oriented development and infill approach to land use and housing. Population and job growth are allocated principally within existing urban areas near public transit. Table 2-1 in Chapter 2, *Project Description*, identifies the current and projected population growth within the AMBAG region. The preferred land use and transportation scenario is based on the most recent planning assumptions and considers local general plans and other factors such as updated specific plans and recently completed transportation planning studies, as described in Chapters 2 and 4 of the 2050 MTP/SCS.

Transportation projects and the preferred land use pattern that are included in the 2050 MTP/SCS are shown in Figure 2-2 through Figure 2-8 of the Project Description. Chapter 4 of the 2050 MTP/SCS describes the proposed SCS, with Chapter 5 identifying the metrics to quantify the transportation, environmental, economic and equity benefits of the Plan. Appendix G of the 2050 MTP/SCS highlights the performance of the MTP/SCS for 2050.

The 2050 MTP/SCS preferred scenario consists of an intensified land use distribution approach that concentrates the forecasted population and employment growth in urban areas. The transportation network includes additional highway capacity, local street improvements, active transportation, and transit investments, as well as transportation demand management and system management to serve a more concentrated urban growth pattern.

The 2050 MTP/SCS is organized into seven chapters plus an Executive Summary:

- *Executive Summary*. Includes an overview of the 2050 MTP/SCS, the preferred scenario and its performance, an explanation of the planning process and the allocation of transportation funding.
- *Chapter 1 – Vision*. Discusses legal authority, the overall purpose of the 2050 MTP/SCS and transportation-related issues and challenges faced by the region.

- *Chapter 2 – Transportation Investments*. Defines how to make the most out of the existing transportation system by investing in system preservation and maintenance, along with strategic system expansion and travel demand and system management strategies. The transportation investments are intended to provide safe and efficient travel choices for the region's residents, businesses, and visitors.
- *Chapter 3 – Financial Plan*. The financial plan presents funding strategies that are reasonably available by 2050.
- *Chapter 4 – Sustainable Communities Strategy*. Describes how the SCS was developed, identifies the land use and transportation connection, identifies the transportation system and programs, discusses resource areas and farmland, methods to accommodate the region's housing needs, how AMBAG will meet GHG reduction targets, and implementation strategies.
- *Chapter 5 – Outcomes*. Introduces the concept of performance measures as they relate to accomplishing the 2050 MTP/SCS goals while meeting social equity responsibilities.
- *Chapter 6 – Public Participation*. Provides a public participation process including methods for engaging the community and local jurisdictions in the development of the 2050 MTP/SCS.
- *Chapter 7 – Glossary*. Identifies key terms and their definitions.
- *Appendices*. The appendices include the following:
  A. Regional Growth Forecast
  B. Financial Plan
  C. Project Lists
  D. Public Participation
  E. SCS Documentation
  F. Travel Demand Model and Land Use Model Documentation
  G. Performance Measures
  H. Complete Streets Policy
  I. SCS Maps
  J. MTP Checklist

Of these seven chapters, the Vision Element, Transportation Investments, Financial Plan and Sustainable Communities Strategy (Chapters 1, 2, 3, and 4) are the four components that include provisions with the potential to create physical changes to the environment and are the primary focus for analysis in this EIR. These chapters are described in more detail in Chapter 2, *Project Description*.

Project Vision

The 2050 MTP/SCS integrates policies, strategies, and investments to support a responsive and efficient transportation system that meets the diverse needs of the region through

2050. AMBAG developed the 2050 MTP/SCS by confirming the following goals and policy objectives:

- **Mobility.** Build and maintain a safe and robust multimodal transportation network.
- **Environment.** Create a sustainable and healthy region for all.
- **Communities.** Develop, engage, connect, and sustain communities that are livable and thriving.
- **Economic**. Support a sustainable, efficient, and productive regional economic environment that provides opportunities for all.
- **Equitable.** Plan for people of all ages, abilities, and backgrounds.

It is AMBAG's intent that the goals and policy objectives be supported by the individual RTPs prepared by Monterey, San Benito, and Santa Cruz counties. The goals, policies and objectives that create the framework for each RTP are summarized in Chapter 2, *Project Description*.

CEQA Project Objectives

The purpose of the 2050 MTP/SCS and the county level RTPs is to coordinate and facilitate the planning, programming and budgeting of all transportation facilities and services within the Monterey Bay region through 2050 and demonstrate how the region will integrate transportation and land use planning to meet the GHG reduction targets established by CARB. In developing the 2050 MTP/SCS and county level RTPs, AMBAG and the respective RTPAs followed the Infrastructure Investment and Jobs Act (Public Law 117-58) requirements that the RTP planning process provide for consideration of projects and strategies that will:

- Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity and efficiency;
- Increase the safety and security of the transportation system for motorized and non-motorized users;
- Increase the accessibility and mobility options available to people and freight;
- Protect and enhance the environment, promote energy conservation, improve the quality of life and promote consistency between transportation improvements and State and local planned growth and economic development patterns;
- Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
- Promote efficient system management and operation;
- Emphasize the preservation of the existing transportation system;
- Improve resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts; and

- Enhance travel and tourism. For purposes of this EIR, the primary objective of the 2050 MTP/SCS and the county level RTPs is to comply with applicable regulatory requirements, including CTC Guidelines[1] and SB 375[2], including SB 375's regional GHG reduction targets. AMBAG's specific objectives for the 2050 MTP/SCS are to additionally ensure that the SCS and the transportation system planned for the AMBAG region accomplishes the following:
- Serves regional goals, objectives, policies, and plans.
- Responds to community and regional transportation needs.
- Promotes energy efficient, environmentally sound modes of travel and facilities and services.
- Promotes equity and efficiency in the distribution of transportation projects and services.

Alternatives

As required by the California Environmental Quality Act (CEQA), this EIR examines alternatives to the proposed project. Studied alternatives include the following three alternatives. Based on the alternatives analysis, Alternative 3 was determined to be the environmentally superior alternative.

- Alternative 1: No Project Alternative
- Alternative 2: Infill and Transit Focus
- Alternative 3: Infill and Operational/Complete Streets

Alternative 1 (No Project Alternative) assumes that the transportation network would be comprised of committed transportation projects fully programmed through construction included in AMBAG's Fiscal Years 2024/25 – 2027/28 Metropolitan Transportation Improvement Program (AMBAG 2024). The growth in population, jobs, and homes would be the same as the growth forecast for the proposed 2050 MTP/SCS. This alternative assumes the same housing and employment growth as the 2050 MTP/SCS, but that growth would occur based on existing land use trends in the AMBAG region as opposed to more compact development envisioned by the 2050 MTP/SCS.

As outlined in Chapter 7, *Alternatives*, the expanded land development beyond existing urbanized areas under Alternative 1 would lead to increased ground disturbance compared to the 2050 MTP/SCS. Consequently, Alternative 1 would result in greater overall impacts than the 2050 MTP/SCS, particularly in the areas of aesthetics and visual resources; agriculture and forestry resources; biological resources; geology, soils, and mineral resources; land use and planning; noise; tribal cultural resources; and wildfire.

Alternative 2 (Infill and Transit Focus) is intended to reduce VMT by locating the places where people work and live within urban centers and closer to transit. This alternative

[1] Pursuant to Government Code Section 14522, the CTC has adopted Regional Transportation Plan Guidelines that guide Metropolitan Planning Organizations and Regional Transportation Planning Agencies in preparing RTPs every four to five years, identifying a 20-year vision for regional transportation priorities and investments.

[2] Under SB 375, the RTP prepared by Metropolitan Planning Organizations (MPO) must incorporate a Sustainable Communities Strategy (SCS), which is a regional growth strategy demonstrating how regional GHG targets set by CARB can be met.

assumes the same total growth in population, jobs, and housing numbers as the 2050 MTP/SCS. This alternative assumes more investment (approximately $1 billion more) in transit infrastructure and services and less investment in local streets, roads, and highways compared to the proposed 2050 MTP/SCS.

This alternative incorporates less dispersed land use and development than the proposed MTP/SCS, resulting in a more compact growth footprint and increased use of regional and interregional transit service to generate an increase in regional and interregional transit ridership and corresponding decrease in VMT. As outlined in Chapter 7, *Alternatives,* Table 7-7, Alternative 2 would result in reduced impacts related to aesthetics and visual resources; agriculture and forestry resources; biological resources; cultural resources; energy; geology, soils, and mineral resources; tribal cultural resources; and wildfire.

Alternative 3 (Infill and Operational/Complete Streets) is intended to reduce VMT and includes a land use pattern comprised of a more compact growth footprint similar to Alternative 2, an increase in operational and safety projects to maintain a state of good repair, and an increase in Complete Streets and active transportation projects in local communities. This alternative assumes the same total growth in population, jobs, and housing numbers as the 2050 MTP/SCS.

Compared to the 2050 MTP/SCS, this alternative focuses more on prioritizing transportation investments toward all active transportation and Complete Streets projects, as well as operational improvement projects. Active transportation projects would include construction of bicycle lanes and bicycle/pedestrian amenities. The goal of this alternative is to build these projects first and to use as much of the transportation funding available for these alternative transportation modes projects. This alternative includes more than $1 billion more funding for active transportation, Complete Streets, and operational transportation projects than the proposed 2050 MTP/SCS. These include active transportation projects that were not included in the proposed 2050 MTP/SCS as well as additional Complete Streets and operational transportation projects. Examples of active transportation projects developed under this alternative (and not developed under the proposed project) would include bicycle lanes and pedestrian facilities. This alternative includes fewer highway projects than the proposed 2050 MTP/SCS.

As outlined in Chapter 7, *Alternatives,* Alternative 3 would result in reduced overall impacts to aesthetics and visual resources; agriculture and forestry resources; biological resources; cultural resources; energy; geology, soils, and mineral resources; tribal cultural resources; and wildfire. Assuming all environmental issue areas are weighted equally, Alternative 3 is the environmentally superior alternative. Refer to Chapter 7, *Alternatives*, for the complete alternatives analysis.

Areas of Known Controversy

The EIR scoping process identified a few areas of known controversy for the proposed project. Responses to the Notice of Preparation of a Draft EIR (NOP) and input received are

summarized in Table 1-1 of Chapter 1, *Introduction.* Areas of controversy identified in NOP response letters include the proposed project's impacts on biological resources and how to mitigate them, and future exposure of residents to airport-related noise and safety hazards. Several attendees of the scoping meetings also voiced concerns pertaining to biological resources.

Issues to be Resolved

Issues to be resolved include the choice among alternatives, and the nature of mitigation measures to be adopted.

Summary of Impacts and Mitigation Measures

Table ES-1 summarizes the environmental impacts of the proposed project, proposed mitigation measures, and residual impacts (the impact after application of mitigation, if required). Impacts are categorized as follows:

- **Significant and Unavoidable.** An impact that cannot be reduced to below the threshold level given reasonably available and feasible mitigation measures.
- **Less than Significant with Mitigation Incorporated.** An impact that can be reduced to below the threshold level given feasible mitigation measures.
- **Less than Significant.** An impact that may be adverse but does not exceed the threshold levels and does not require mitigation measures.
- **No Impact.** The proposed project would have no effect on environmental conditions or would reduce existing environmental problems or hazards.

This page intentionally left blank.

Table ES-1 Summary of Environmental Impacts, Mitigation Measures, and Residual Impacts

Impact	Mitigation Measure(s)	Impact
Aesthetic and Visual Resources		
Impact AES-1. Proposed transportation improvement projects and land use projects envisioned by the 2050 MTP/SCS would have a substantial adverse effect on scenic vistas. Impacts would remain significant and unavoidable.	**AES-1(a) Discouragement of Architectural Features that Block Scenic Views.** Implementing agencies shall, or can and should, design projects to minimize contrasts in scale and massing between the project and surrounding natural forms and development. Setbacks and acoustical design of adjacent structures shall be preferentially used as mitigation for noise impacts arising from increased traffic volumes associated with adjacent land development. The use of sound walls, or any other architectural features that could block views from the scenic highways or other view corridors, shall be discouraged to the extent possible. Where use of sound walls is found to be necessary, walls shall incorporate offsets, accents and landscaping which resemble the surrounding landscape to visually integrate the wall with the surrounding environment, reduce visual monotony, and help maintain the quality of views from scenic highways or other view corridors. In addition, sound walls shall be complementary in color and texture to surrounding natural features. **AES-1(b) Tree Protection and Replacement.** New roadways and extensions and widenings of existing roadways shall avoid the removal of existing mature trees to the extent possible. If avoidance is not possible, the implementing agency of a particular 2050 MTP/SCS project shall, or can and should, replace any trees lost at a minimum 2:1 basis and incorporate them into the landscaping design for the roadway. The implementing agency also shall ensure the continued vitality of replaced trees through periodic maintenance.	Significant and Unavoidable
Impact AES-2. Proposed transportation improvement projects and land use projects envisioned by the 2050 MTP/SCS would substantially damage scenic resources within a state scenic highways. Impacts would remain significant and unavoidable.	**AES-1(a) Discouragement of Architectural Features that Block Scenic Views.** See Impact AES-1 for mitigation measure. **AES-1(b) Tree Protection and Replacement.** See Impact AES-1 for mitigation measure.	Significant and Unavoidable
Impact AES-3. Proposed transportation improvement projects and land use projects envisioned by the 2050 MTP/SCS would substantially degrade existing visual character in the AMBAG region. Impacts would remain significant and unavoidable.	**AES-3 Design Measures for Visual Compatibility.** The implementing agency shall, or can and should, require measures that minimize contrasts in scale and massing between the project and surrounding natural forms and developments, including: ▪ Siting or designing projects to minimize their intrusion into important viewsheds; ▪ Avoiding large cuts and fills when the visual environment (natural or urban) would be substantially disrupted; ▪ Ensuring that re-contouring provides a smooth and gradual transition between modified landforms and existing grade; ▪ Developing transportation systems to be compatible with the surrounding environments (e.g., colors and materials of construction material; scale of improvements); ▪ Protecting or replacing trees in the project area based on local regulations and ordinances applicable to individual projects; ▪ Designing and installing landscaping to add natural elements and visual interest to soften hard edges, as well as to restore natural features along corridors where possible after widening, interchange modifications, re-alignment, or construction of ancillary facilities. The implementing agency shall provide a performance security equal to the value of the landscaping/irrigation installation to ensure compliance with landscaping plans; and ▪ Designing new structures to be compatible in scale, mass, character, and architecture with existing structures.	Significant and Unavoidable
Impact AES-4. Proposed transportation improvement projects and land use projects envisioned by the 2050 MTP/SCS would create new sources of substantial light or glare that would adversely affect day or nighttime views in the area. Impacts would remain significant and unavoidable.	**AES-4(a) Roadway Lighting.** Roadway lighting shall be minimized, consistent with safety and security objectives and shall not exceed the minimum height requirements of the local jurisdiction in which the project is proposed. This may be accomplished through the use of hoods, low intensity lighting and using as few lights as necessary to achieve the goals of the project. **AES-4(b) Lighting Design Measures.** As part of planning, design and engineering for projects, implementing agencies shall, or can and should, ensure that projects proposed near light-sensitive uses avoid substantial spillover lighting. Design measures include, but are not limited to, the following: ▪ Lighting shall consist of cutoff-type fixtures that cast low angle illumination to minimize incidental spillover of light into adjacent properties and undeveloped open space. Fixtures that project light upward or horizontally shall not be used. ▪ Lighting shall be directed away from habitat and open space areas adjacent to the project site. ▪ Light mountings shall be downcast and the height of the poles minimized to reduce potential for backscatter into the nighttime sky and incidental spillover of light onto adjacent private properties and undeveloped open space. Light poles will be 20 feet high or shorter. Luminary mountings shall have non-glare finishes. ▪ Exterior lighting features shall be directed downward and shielded in order to confine light to the boundaries of the subject project. Where more intense lighting is necessary for safety purposes, the design shall include landscaping to block light from sensitive land uses, such as residences. **AES-4(c) Glare Reduction Measures.** Implementing agencies shall, or can and should, minimize and control glare from transportation and infill development projects near glare-sensitive uses through the adoption of project design features such as: ▪ 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;	Significant and Unavoidable

Impact	Mitigation Measure(s)	Impact
	▪ Landscaping off-street parking areas, loading areas and service areas; ▪ 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 where feasible; ▪ Complying with applicable general plan policies or local controls related to glare; and ▪ Tree species planted to comply with this measure shall provide substantial 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.	
Impact AES-C-1. Development in the Cumulative Impact Analysis area would have a substantial adverse effect on a scenic vista, substantially damage scenic resources within a state scenic highway, degrade existing visual character, or adversely affect night sky lighting. Cumulative impacts would be significant and the contribution of the 2050 MTP/SCS would be cumulatively considerable.	Mitigation Measures AES-1(a), AES-1(b), AES-3, and AES-4(a), AES-4(b), and AES-4(c).	Significant and Cumulatively Considerable
Agriculture and Forestry Resources		
Impact AG-1. Proposed transportation improvements and land use projects envisioned by the 2050 MTP/SCS would result in the conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to nonagricultural use, or conflict with existing zoning for agriculture or a Williamson Act contract. This would be a significant and unavoidable impact.	**AG-1 Agricultural Land Impact Avoidance and Minimization.** Implementing agencies shall implement measures, where feasible based on project and site specific considerations, that include, but are not limited to those identified below. ▪ Require project relocation or corridor realignment, where feasible, to avoid Farmland, agriculturally zoned land and/or land under Williamson Act contract; ▪ Manage project construction to minimize the introduction of invasive species or weeds that may affect agricultural production on agricultural land adjacent to project sites. Managing project construction may include washing construction equipment before bringing equipment on-site, using certified weed-free straw bales for construction BMPs, and other similar measures. ▪ 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 development included as a part of the MTP/SCS; ▪ Achieve compensatory mitigation in advance of impacts through purchase or creation of mitigation credits or the implementation of mitigation projects through Regional Advance Mitigation Planning, as deemed appropriate by permitting agencies; and/or ▪ Require acquisition of conservation easements on land in the same jurisdiction, if feasible, and at least equal in quality and size to converted Important Farmland, to offset the loss of Farmland; ▪ Institute new protection of farmland in the project area or elsewhere through the use of long-term restrictions on use, such as 20-year Farmland Security Zone contracts (Government Code Section 51296 et seq.) or 10-year Williamson Act contracts (Government Code Section 51200 et seq.).	Significant and Unavoidable
Impact AG-2. Proposed transportation improvements and land use projects envisioned by the 2050 MTP/SCS would not conflict with existing zoning for forest land, timberland, or timberland production, nor result in the loss of forest land or convert forest land to non-forest uses. Impacts would be less than significant.	None required.	Less than Significant
Impact AG-C-1. Development in the cumulative impact analysis area would result in conversion of agricultural land to non-agricultural uses. Cumulative impacts would be significant and the contribution of the 2050 MTP/SCS would be cumulatively considerable. Impacts to forestry resources would not be cumulatively considerable.	Mitigation Measure AG-1.	Significant and Cumulatively Considerable

Impact	Mitigation Measure(s)	Impact
Air Quality and Health Impacts/Risks		
Impact AQ-1. The 2050 MTP/SCS would not conflict with or obstruct implementation of the AQMP. Impacts would be less than significant.	None required.	Less than Significant
Impact AQ-2. Construction of proposed transportation improvements and land use projects envisioned by the 2050 MTP/SCS would result in a cumulatively considerable net increase in PM_{10} or ozone precursor emissions. Impacts would be significant and unavoidable.	**AQ-2(a) Application of MBARD Feasible Mitigation Measures.** For all projects, the implementing agency shall incorporate the most recent MBARD feasible mitigation measures and/or technologies for reducing inhalable particles based on analysis of individual sites and project circumstances. Current MBARD feasible mitigation measures include the following measures. Additional and/or modified measures may be adopted by MBARD prior to implementation of individual projects under the 2050 MTP/SCS. The most current list of feasible mitigation measures at the time of project implementation shall be used. ▪ Water all active construction areas at least twice daily. Frequency should be based on the type of operation, soil, and wind exposure. ▪ Prohibit all grading activities during periods of high wind (over 15 miles per hour). ▪ Apply chemical soil stabilizers on inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days). ▪ Apply non-toxic binders (e.g., latex acrylic copolymer) to exposed areas after cut and fill operations and hydro seed area. ▪ Haul trucks shall maintain at least 2'0"of freeboard. ▪ Cover all trucks hauling dirt, sand, or loose materials. ▪ Plant tree windbreaks on the windward perimeter of construction projects if adjacent to open land. ▪ Plant vegetative ground cover in disturbed areas as soon as possible. ▪ Cover inactive storage piles. ▪ Install wheel washers at the entrance to construction sites for all exiting trucks. ▪ Pave all roads on construction sites. ▪ Sweep streets if visible soil material is carried out from the construction site. ▪ Limit the area under construction at any one time. ▪ Post a publicly visible sign which specifies the telephone number and person to contact regarding dust complaints. This person shall respond to complaints and take corrective action within 48 hours. The phone number of the Monterey Bay Air Resources District shall be visible to ensure compliance with Rule 402 (Nuisance). **AQ-2(b) Diesel Equipment Emissions Standards.** The implementing agency shall ensure, to the extent feasible, that diesel construction equipment meeting CARB Tier 4 emission standards for off-road heavy-duty diesel engines is used. If use of Tier 4 equipment is not feasible, diesel construction equipment meeting Tier 3 (or if infeasible, Tier 2) emission standards shall be used, and engines shall be retrofitted with CARB Level 3 Verified Diesel Emissions Control Strategy if available for the equipment. These measures shall be noted on all construction plans and the implementing agency shall perform periodic site inspections. **AQ-2(c) Electric Construction Equipment.** The implementing agency shall ensure that to the extent possible, construction equipment utilizes electricity from power poles rather than temporary diesel power generators and/or gasoline power generators. See also Mitigation Measure GHG-1.	Significant and Unavoidable
Impact AQ-3. Proposed transportation improvements and land use projects envisioned by the 2050 MTP/SCS would result in a cumulatively considerable net increase of PM_{10}. Long-term operational impacts related to criteria pollutant emissions would be significant and unavoidable.	**AQ-3(a) PM_{10} Emissions Reduction.** To help reduce regional PM_{10} emissions, AMBAG and the RTPAs, in partnership with MBARD and implementing agencies, shall: a. Support the use of existing air quality and transportation funds and seek additional funds to continue the implementation of the CARB Carl Moyer Program, which is intended to retrofit and replace trucks and locomotives to reduce particulate matter. b. Incentivize the reduction of mobile PM emissions from mobile exhaust and entrained PM sources such as tire wear, brake wear, and roadway dust through funding. c. Hold forums and workshops to encourage land use projects to incorporate transportation demand management (TDM) strategies as part of the project design to reduce the number of vehicular trips across the transportation network. Potential strategies could include ridesharing, carpooling, subsidized public transit, flexible work hours, and parking management measures. **AQ-3(b) Long-term Regional Operational Emissions.** Implementing agencies including transportation project sponsors, counties, and cities shall, or can and should, implement long-term operational emissions reduction measures. Such reduction measures include the following: ▪ Require that all interior and exterior architectural coatings for all developments utilize coatings following MBARD Rule 426, *Architectural Coatings*. ▪ Increase building envelope energy efficiency standards in excess of applicable building standards and encourage new development to achieve zero net energy use.	Significant and Unavoidable

Impact	Mitigation Measure(s)	Impact
	▪ Install energy-efficient appliances, interior lighting, and building mechanical systems. Encourage installation of solar panels for new residential and commercial development. ▪ Locate sensitive receptors more than 500 feet of a freeway, 500 feet of urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day. ▪ Locate sensitive receptors more than 1,000 feet of a major diesel rail service or railyards. Where adequate buffer cannot be implemented, implement the following: ▫ Install air filtration (as part of mechanical ventilation systems or stand-alone air cleaners) to reduce indoor pollution exposure for residents and other sensitive populations in buildings that are close to transportation network improvement projects. ▫ Use air filtration devices rated MERV-13 [minimum efficiency report value] or higher. ▪ Plant trees and/or vegetation suited to trapping roadway air pollution and/or sound walls between sensitive receptors and the pollution source. The vegetation buffer should be thick, with full coverage from the ground to the top of the canopy ▪ Install higher efficacy public street and exterior lighting. ▪ Use daylight as an integral part of lighting systems in buildings. ▪ Use passive solar designs to take advantage of solar heating and natural cooling. ▪ Install light colored "cool" roofs, cool pavements. ▪ Install solar and tankless hot water heaters. ▪ Exclude wood-burning fireplaces and stoves. ▪ Incorporate design measures and infrastructure that promotes safe and efficient use of alternative modes of transportation (e.g., neighborhood electric vehicles, bicycles) pedestrian access, and public transportation use. Such measures may include incorporation of electric vehicle charging stations, bike lanes, bicycle-friendly intersections, and bicycle parking and storage facilities. ▪ Incorporate design measures that promote ride sharing programs (e.g., by designating a certain percentage of parking spaces for ride sharing vehicles, designating adequate passenger loading and unloading and waiting areas for ride sharing vehicles, and providing a web site or message board for coordinating rides). See also Mitigation Measures GHG-3(a) TRA-2(a), and TRA-2(b).	
Impact AQ-4. Implementation of the 2050 MTP/SCS would expose sensitive receptors to substantial pollutant concentrations. Impacts would be significant and unavoidable.	**AQ-3(b) Long-term Regional Operational Emissions.** See Impact AQ-3 for mitigation measure.	Significant and Unavoidable
Impact AQ-5. Future growth and development facilitated by the 2050 MTP/SCS land use scenarios and transportation projects would expose sensitive receptors to substantial hazardous air pollutant concentrations. Impacts would be significant and unavoidable.	**AQ-5 Health Risk Reduction Measures.** Transportation implementing agencies shall, or can and should, implement the following measures: ▪ Retain a qualified air quality consultant to prepare a health risk assessment in accordance with CARB and OEHHA requirements to determine the exposure of nearby sensitive receptors to TAC concentrations. ▪ If impacts result in increased risks to sensitive receptors above MBARD significance thresholds, then design features or control measures must be included that will reduce the health risks at the location of the off-site sensitive receptors to a level below MBARD significance threshold. For example, plant trees and/or vegetation suited to trapping TACs and/or sound walls between sensitive receptors and the pollution source would be recommended. This measure would trap TACs emitted from pollution sources such as highways, reducing the amount of TACs to which residents and other sensitive populations would be exposed. ▪ AMBAG will partner with MBARD and other implementing agencies to explore a program to retrofit existing residential buildings and other sensitive land uses near freeways or roadways where health risk impacts would exceed MBARD significance thresholds with air filtration devices rated MERV 13. ▪ Implement air pollution reduction strategies as described in Table 1 from the CARB *Strategies to Reduce Air Pollution Exposure Near High-Volume Roadways* technical advisory (2017) when reasonable and feasible for transportation system projects associated with the 2050 MTP/SCS. In addition, consistent with the general guidance contained in CARB's *Air Quality and Land Use Handbook* (2005) and *Technical Advisory on Strategies to Reduce Air pollution Exposure Near High-Volume Roadways* (2017), appropriate measures shall include one or more of the following methods, as determined by a qualified professional, as applicable. The implementing agency shall incorporate health risk reduction measures based on analysis of individual land use sites and project circumstances. These measures may include: ▪ Avoid siting new sensitive land uses within 500 feet of a freeway or railway. ▪ Require development projects for new sensitive land uses to be designed to minimize exposure to roadway-related pollutants to the maximum extent feasible through inclusion of design components including air filtration and physical barriers. ▪ Do not locate sensitive receptors near the entry and exit points of a distribution center.	Significant and Unavoidable

Impact	Mitigation Measure(s)	Impact
	▪ Locate structures and outdoor living areas for sensitive uses as far as possible from the source of emissions. As feasible, locate doors, outdoor living areas and air intake vents primarily on the side of the building away from the freeway or other pollution source. As feasible, incorporate dense, tiered vegetation that regains foliage year-round and has a long-life span between the pollution source and the project. ▪ Maintain a 50-foot buffer from a typical gas dispensing facility (under 3.6 million gallons of gas per year). ▪ Install, operate, and maintain in good working order a central heating and ventilation (HV) system or other air take system in the building, or in each individual residential unit, that meets or exceeds the efficiency standard of the MERV 13. The HV system should include the following features: Installation of a high efficiency filter and/or carbon filter-to-filter particulates and other chemical matter from entering the building. Either HEPA filters or ASHRAE 85 percent supply filters should be used. Ongoing maintenance should occur. ▪ Retain a qualified HV consultant or Home Energy Rating Systems (HERS) rater during the design phase of the project to locate the HV system based on exposure modeling from the mobile and/or stationary pollutant sources. ▪ Maintain positive pressure within the building. ▪ Achieve a performance standard of at least one air exchange per hour of fresh outside filtered air. ▪ Achieve a performance standard of at least four air exchanges per hour of recirculation. Achieve a performance standard of 0.25 air exchanges per hour of unfiltered infiltration if the building is not positively pressurized. ▪ Require project owners to provide a disclosure statement to occupants and buyers summarizing technical studies that reflect health concerns about exposure to highway exhaust emissions. ▪ Implement feasible attenuation measures needed to reduce potential air quality impacts to sensitive receptors such as air filtration systems.	
Impact AQ-6. Implementation of the 2050 MTP/SCS would not result in other emissions (such as those leading to odors) adversely impacting a substantial number of people. Impacts would be less than significant.	None required.	Less than Significant
Impact AQ-C-1. Development in the cumulative Impact Analysis Area would result in an increase of regional fine particulate matter emissions and would expose sensitive receptors to diesel particulates and toxic air contaminants. Cumulative impacts would be significant and the contribution of the 2050 MTP/SCS would be cumulatively considerable.	Mitigation Measures AQ-2(a) through AQ-3(b) and AQ-5.	Significant and Cumulatively Considerable
Biological Resources		
Impact BIO-1. Implementation of transportation improvements and the land use scenario envisioned by the 2050 MTP/SCS would have substantial adverse impacts on special-status plant and animal species, either directly or through habitat modifications. Impacts would be significant and unavoidable.	**BIO-1(a) Biological Resources Screening and Assessment** On a project-by-project basis, a preliminary biological resource screening shall, or can and should, be performed as part of the environmental review process to determine whether the project has any potential to impact biological resources. If it is determined that the project has no potential to impact biological resources, no further action is required. If the project would have the potential to impact biological resources, prior to construction, the implementing agency shall retain a qualified biologist to conduct a biological resources assessment (BRA) to document the existing biological resources and to determine the potential impacts to those resources. Depending on the results of the BRA, design alterations, further technical studies (i.e., protocol surveys) and/or consultations with the USFWS, NMFS, CDFW and/or other local, state, and federal agencies may be required. These protocols may include, but are not limited to: ▪ Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants (USFWS 2000) ▪ Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities (CDFW 2018) ▪ Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species (CDFW 2023) ▪ Interim Survey Guidelines to Permittees for Recovery Permits under Section 10(a)(1)(A) of the Endangered Species Act for the Listed Vernal Pool Branchiopods (USFWS 1996) ▪ Revised Guidance on Site Assessment and Field Surveys for the California Red-legged Frog (USFWS 2005) ▪ Interim Guidance on Site Assessment and Field Surveys for Determining Presence or a Negative Finding of the California Tiger Salamander (USFWS and CDFW 2003) ▪ Considerations for Conserving the Foothill Yellow-legged Frog (CDFW 2018) ▪ Visual Encounter Survey Protocol for Rana Boylii in Lotic Environments (University of California, Davis 2017) ▪ Draft USGS Western Pond Turtle (Emys marmorata) Visual Survey Protocol for the Southcoast Ecoregion (U.S. Geological Survey 2006) ▪ Interim Golden Eagle Inventory and Monitoring Protocols; and Other Recommendations (USFWS 2010)	Significant and Unavoidable

Impact	Mitigation Measure(s)	Impact

- Swainson's Hawk Survey Protocols, Impact Avoidance, and Minimization Measures for Renewable Energy Projects in the Antelope Valley of Los Angeles and Kern Counties, California (California Energy Commission and CDFW 2010)
- Staff Report on Burrowing Owl Mitigation (CDFW 2012)
- Methods for Surveying Marbled Murrelets in Forests: A Revised Protocol of Land Management and Research (Pacific Seabird Group 2003)
- Standardized Recommendations for Protection of the San Joaquin Kit Fox Prior to or During Ground Disturbance (USFWS 1999)

BIO-1(b) Special-Status Plant Species Surveys. If completion of the project-specific BRA determines that special-status plant species have potential to occur on-site, the implementing agency shall require surveys for special-status plants to be completed prior to any vegetation removal, grubbing, or other construction activity of each project (including staging and mobilization). The surveys shall be floristic in nature and shall be seasonally timed to coincide with the target species. Surveys shall be conducted in accordance with the most current protocols established by the CDFW, USFWS, and the local jurisdictions if said protocols exist. A report of the survey results shall be submitted to the implementing agency for review. If special-status plant species are identified, Mitigation Measure BIO-1(c) shall apply.

BIO-1(c) Special-Status Plant Species Avoidance, Minimization and Mitigation. If state- or federally-listed and/or CRPR 1 and 2 species are found during special-status plant surveys [pursuant to Mitigation Measure BIO-1(b)], then the implementing agency shall require the project to be re-designed to avoid impacting these plant species to the extent feasible. If CRPR 3 and 4 species are found, the biologist shall evaluate to determine if they meet criteria to be considered special-status, and if so, the same process as identified for CRPR 1 and 2 species shall apply.

If special-status plants species cannot be avoided and would be impacted by a project implemented under the 2050 MTP/SCS, the implementing agency shall require all impacts to be mitigated at an appropriate ratio to fully offset project impacts, as determined by a qualified biologist for each species as a component of habitat restoration. A restoration plan shall be prepared and submitted to implementing agency overseeing the project for approval.

BIO-1(d) Endangered/Threatened Animal Species Habitat Assessment and Protocol Surveys. If the BRA determines that suitable habitat may be present for federally and/or state endangered or threatened animal species, the implementing agency shall require protocol habitat assessments/surveys to be completed in accordance with CDFW and/or USFWS/NMFS protocols prior to issuance of any construction permits/project approvals.

Alternatively, in lieu of conducting protocol surveys, the implementing agency may choose to assume presence within the project footprint and proceed with development of appropriate avoidance measures, consultation and permitting, as applicable.

If the target species is detected during protocol surveys, or protocol surveys are not conducted and presence is assumed based on suitable habitat, Mitigation Measure BIO-1(e) shall apply.

BIO-1(e) Endangered/Threatened Animal Species Avoidance and Compensatory Mitigation. If habitat is occupied or presumed occupied by federal and/or state listed species and would be impacted by the project, the implementing agency shall require re-design of the project in coordination with a qualified biologist to avoid impacting occupied/presumed occupied habitat to the extent feasible. If occupied or presumed occupied habitat cannot be avoided, the implementing agency shall provide the total acreages for habitat that would be impacted prior to the issuance of construction permits/approvals. The implementing agency shall purchase credits at a USFWS, NMFS and/or CDFW approved conservation bank if available for the affected species and/or provide compensatory mitigation to offset impacts to federal and/or state listed species habitat.

Compensatory mitigation shall be provided at an appropriate ratio to fully offset project impacts, as determined by a qualified biologist for permanent impacts. Compensatory mitigation may be combined/nested with special-status plant species and sensitive community restoration where applicable. Temporary impact areas shall be restored to pre-project conditions.

If on and/or off-site mitigation sites are identified the implementing agency shall retain a qualified biologist to prepare a Habitat Mitigation and Monitoring Plan (HMMP) to ensure the success of compensatory mitigation sites that are to be conserved for compensation of permanent impacts to federal and/or state listed species. The HMMP shall identify long term site management needs, routine monitoring techniques, techniques and success criteria, and shall determine if the conservation site has restoration needs to function as a suitable mitigation site. The HMMP shall be submitted to the agency overseeing the project for approval.

BIO-1(f) Endangered/Threatened Species Avoidance and Minimization During Construction. The implementing agency shall apply the following measures to aquatic and terrestrial species, where appropriate. Implementing agencies shall select from these measures as appropriate depending on site conditions, the species with potential for occurrence and the results of the biological resources screening and assessment (Mitigation Measure BIO-1[a]).

- Pre-construction surveys for federal and/or state listed species with potential to occur shall be conducted where suitable habitat is present by a qualified biologist not more than 48 hours prior to the start of construction activities. The survey area shall include the proposed disturbance area and all proposed ingress/egress routes, plus a 100-foot buffer. If any life stage of federal and/or state listed species is found within the survey area, the qualified biologist shall recommend an appropriate course of action, which may include consultation with USFWS, NMFS and/or CDFW. The results of the pre-construction surveys shall be submitted to the implementing agency for review and approval prior to start of construction.
- Ground disturbance shall be limited to the minimum necessary to complete the project. The project limits of disturbance shall be flagged. Areas of special biological concern shall have highly visible orange construction fencing.
- All work shall be conducted during the day-time hours to the maximum extent feasible. Any night lighting shall be minimized, and directed to illuminate the work site only.

Impact	Mitigation Measure(s)	Impact

- All food waste shall be secured in a closed container and removed from the site at the end of each work day.
- All projects occurring within/adjacent to aquatic habitats (including riparian habitats and wetlands) shall be completed between April 1 and October 31, to avoid impacts to sensitive aquatic species.
- All projects occurring within or adjacent to sensitive habitats that may support federally and/or state endangered/threatened species shall have a qualified biologist present during all initial ground disturbing/vegetation clearing activities. Once initial ground disturbing/vegetation clearing activities have been completed, said biologist shall conduct daily pre-activity clearance surveys for endangered/threatened species. Alternatively, and upon approval of the CDFW and/or USFWS/NMFS or as outlined in project permits, said biologist may conduct site inspections at a minimum of once per week to ensure all prescribed avoidance and minimization measures are begin fully implemented.
- No endangered/threatened species shall be captured and relocated without authorization from the CDFW and/or USFWS/NMFS.
- If pumps are used for dewatering activities, all intakes shall be completely screened with wire mesh not larger than five millimeters to prevent animals from entering the pump system.
- If at any time during construction of the project an endangered/threatened species enters the construction site or otherwise may be impacted by the project, all project activities shall cease. At that point, a qualified biologist shall recommend an appropriate course of action, which may include consultation with USFWS, NMFS and/or CDFW.
- All vehicle maintenance/fueling/staging shall occur more than 100 feet from any riparian habitat or water body. Suitable containment procedures shall be implemented to prevent spills.
- No equipment shall be permitted to enter wetted portions of any affected drainage channel.
- All equipment operating within streambeds (restricted to conditions in which water is not present) shall be in good conditions and free of leaks. Spill containment shall be installed under all equipment staged within stream areas and extra spill containment and clean up materials shall be located in close proximity for easy access.
- At the end of each workday, excavations shall be secured with cover or a ramp shall be provided to prevent wildlife entrapment.
- All trenches, pipes, culverts or similar structures shall be inspected for animals prior to burying, capping, moving, or filling.

BIO-1(g) Non-Listed Special-Status Animal Species Avoidance and Minimization. Depending on the species identified in the BRA, the implementing agency shall select from among the following to reduce the potential for impacts to non-listed special-status animal species:

- Pre-construction clearance surveys shall be conducted within 14 days prior to the start of construction (including staging and mobilization) to identify all special-status animal species that may occur on-site. All non-listed special-status species shall be relocated from the site. A report of the pre-construction survey shall be submitted to the implementing agency for their review and approval prior to the start of construction.
- A qualified biologist shall be present during all initial ground disturbing activities, including vegetation removal, to recover special-status animal species unearthed by construction activities.
- Upon completion of the project, a qualified biologist shall prepare a final compliance report documenting all compliance activities implemented for the project, including the pre-construction survey results.

BIO-1(h) Preconstruction Surveys for Nesting Birds. For construction activities occurring during the nesting season (generally February 1 to September 15), surveys for nesting birds covered by the CFGC, the Migratory Bird Treaty Act and Bald and Golden Eagle Protection Act shall be conducted by a qualified biologist retained by the implementing agency no more than 10 days prior to vegetation removal activities.

A qualified biologist shall conduct preconstruction surveys for raptors. The survey for the presence of bald and golden eagles shall cover all areas within of the disturbance footprint plus a one-mile buffer where access can be secured. The survey area for all other nesting bird and raptor species shall include the disturbance footprint plus a 300-foot and 500-foot buffer, respectively.

If active nests (nests with eggs or chicks) are located, the qualified biologist shall establish an appropriate avoidance buffer ranging from 250 to 500 feet based on the species biology and the current and anticipated disturbance levels occurring in vicinity of the nest.

For special status raptor nests an avoidance buffer of up to one mile shall be established on a case-by-case basis in consultation with the USFWS and/or CDFW. The size of the buffer may be influenced by the existing conditions and disturbance regime, relevant landscape characteristics, and the nature, timing and duration of the expected disturbance. The buffer shall be established between February 1 and August 31; however, buffers may be relaxed earlier than August 31 if a qualified ornithologist determines that a given nest has failed or that all surviving chicks have fledged and the nest is no longer in use.

If on-site activities halt for more than 14 days during the nesting season, surveys for nesting birds shall be repeated prior to work resuming on-site. A report of these preconstruction nesting bird surveys and nest monitoring (if applicable) shall be submitted to the implementing agency for review and approval prior to the start of construction.

BIO-1(i) Worker Environmental Awareness Program. Prior to initiation of construction activities, all personnel associated with project construction shall attend Worker Environmental Awareness Program training, conducted by a qualified biologist retained by the implementing agency, to aid workers in recognizing special-status resources and

Impact	Mitigation Measure(s)	Impact
	review of the limits of construction and mitigation measures required. A fact sheet conveying this information shall also be prepared for distribution to all contractors, their employers and other personnel involved with construction of the project.	
Impact BIO-2. Implementation of transportation improvements and the land use scenario envisioned by the 2050 MTP/SCS would result in substantial adverse impacts on sensitive habitats, including sensitive natural communities, and state and federally protected wetlands. This impact would be significant and unavoidable.	**BIO-2(a) Aquatic Resources Delineation and Impact Avoidance.** If the results of Mitigation Measure BIO-1(a) indicates projects implemented under the 2050 MTP/SCS occur within or adjacent to wetland, drainages, riparian habitats, or other areas that may fall under the jurisdiction of the CDFW, USACE, RWQCB and/or California Coastal Commission, a qualified biologist shall complete an aquatic resources delineation in accordance with the requirement set forth by each agency. The result shall be submitted to the implementing agency, USACE, RWQCB, CDFW and/or California Coastal Commission, as appropriate, for review and approval, and the project shall be designed to minimize impacts to jurisdictional areas to the extent feasible. The delineation shall serve as the basis to identify potentially jurisdictional areas to be protected during construction, through implementation of the avoidance and minimization identified in Mitigation Measure B-2(c). **BIO-2(b) Wetlands, Drainages, and Riparian Habitat Compensatory Mitigation.** Impacts to jurisdictional wetlands, drainages, and riparian habitat shall be mitigated at an appropriate ratio to fully offset project impacts, as determined by a qualified biologist retained by the implementing agency, and shall occur on-site or as close to the impacted habitat as possible. A mitigation and monitoring plan shall be developed by a qualified biologist to ensure the success of compensatory mitigation sites that are to be conserved for compensation of permanent impacts to jurisdictional water and wetlands. The mitigation and monitoring plan can be prepared in combination with HMMP defined under Mitigation Measure BIO-1(e) above, if applicable. The mitigation and monitoring plan shall identify long term site management needs, routine monitoring techniques, techniques and success criteria, and shall determine if the conservation site has restoration needs to function as a suitable mitigation site. The mitigation and monitoring plan shall be submitted to the regulatory agencies with permitting authority over the project. Alternatively, mitigation shall be accomplished through purchase of credits from an agency-approved wetlands mitigation bank. **BIO-2(c) Wetlands, Drainages, and Riparian Habitat Best Management Practices During Construction.** The following best management practices shall be required by the implementing agency for development within or adjacent to wetlands, drainages, or riparian habitat: ▪ Access routes, staging and construction areas shall be limited to the minimum area necessary to achieve the project goal and minimize impacts to other waters including locating access routes and ancillary construction areas outside of jurisdictional areas. ▪ To control sedimentation during and after project implementation, appropriate erosion control materials shall be deployed to minimize adverse effects on jurisdictional areas in the vicinity of the project. ▪ Project activities within the jurisdictional areas should occur during the dry season (typically between April 1 and October 31) in any given year, or as otherwise directed by the regulatory agencies. ▪ During construction, no litter or construction debris shall be placed within jurisdictional areas. All such debris and waste shall be picked up daily and properly disposed of at an appropriate site. ▪ Raw cement, concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances which could be hazardous to aquatic species resulting from project related activities, shall be prevented from contaminating the soil and/or entering wetlands, drainages or riparian habitat. ▪ All refueling, maintenance and staging of equipment and vehicles shall occur at least 100 feet from bodies of water or within secondary containment, and in a location where a potential spill would not drain directly toward aquatic habitat (e.g., on a slope that drains away from the water source). Prior to the onset of work activities, a plan must be in place for prompt and effective response to any accidental spills. **BIO-2(d) Landscaping Plan.** If landscaping is proposed for a specific project, a qualified biologist/landscape architect retained by the implementing agency shall prepare a landscape plan. Drought tolerant, locally native plant species shall be used. Noxious, invasive and/or non-native plant species that are recognized on the Federal Noxious Weed List, California Noxious Weeds List and/or California Invasive Plant Council Inventory shall not be permitted. Species selected for planting shall be regionally appropriate native species that are known to occur in the adjacent native habitat types. **BIO-2(e) Sensitive Natural Community Avoidance and Mitigation.** If the results of Mitigation Measure BIO-1(a) indicates projects implemented under the 2050 MTP/SCS would impact sensitive natural communities in addition to riparian habitat which is addressed by Mitigation Measure BIO-2(b), the implementing agency shall avoid impacts to sensitive natural communities through final project design modifications if feasible. If the implementing agency determines that sensitive natural communities cannot be avoided, impacts shall be mitigated on-site or offsite at an appropriate ratio to fully offset project impacts, as determined by a qualified biologist based on any applicable resource agency guidelines. Temporarily impacted areas shall be restored to pre-project conditions. A Restoration Plan shall be developed by a qualified biologist and submitted to the implementing agency for approval. Mitigation for impacts to sensitive natural communities can be developed and included in the HMMP defined under Mitigation Measure BIO-1(e) above, if applicable. The mitigation and monitoring plan shall identify long term site management needs, routine monitoring techniques, techniques and success criteria. **BIO-2(f) Invasive Weed Prevention and Management Program.** Prior to start of construction for each project that occurs within or adjacent to native habitats, an Invasive Weed Prevention and Management Program shall be developed by a qualified biologist retained by the implementing agency to prevent invasion of native habitat by non-native plant species. The plan shall be submitted to the implementing agency for review and approval. A list of target species shall be included, along with measures for early detection and eradication.	Significant and Unavoidable

Impact	Mitigation Measure(s)	Impact
	The plan, which shall be implemented by the implementing agency, shall also include, but not be limited to, the following measures to prevent the introduction of invasive weed species: ▪ During construction, limit the use of imported soils for fill. If the use of imported fill material is necessary, the imported material must be obtained from a source that is known to be free of invasive plant species. ▪ To minimize colonization of disturbed areas and the spread of invasive species, the contractor shall stockpile topsoil and redeposit the stockpiled soil after construction or transport the topsoil to a permitted landfill for disposal. ▪ All erosion control materials, including straw bales, straw wattles, or mulch used on-site must be free of invasive species seed. ▪ Exotic and invasive plant species shall be excluded from any erosion control seed mixes and/or landscaping plant palettes associated with the proposed project. ▪ All disturbed areas shall be hydroseeded with a mix of locally native species or sterile annuals upon completion of work in those areas.	
Impact BIO-3. Implementation of transportation improvements and the land use scenario envisioned by the 2050 MTP/SCS would substantially interfere with wildlife movement, including fish migration, and/or impede the use of a native wildlife nursery. This impact would be significant and unavoidable.	**BIO-3(a) Project Design for Wildlife Connectivity.** The implementing agency shall implement the following measures. All projects including long segments of fencing and lighting shall be designed to minimize impacts to wildlife. Where fencing or other project components are required for public safety concerns, these project components shall be designed to permit wildlife movement by incorporating design features such as: ▪ A minimum 16 inches between the ground and the bottom of the fence to provide clearance for small animals; ▪ A minimum 12 inches between the top two fence wires, or top the fence with a wooden rail, mesh, or chain link instead of wire to prevent animals from becoming entangled; ▪ If fencing or other project components must be designed in such a manner that wildlife passage would not be permitted, wildlife crossing structures such as overpasses, underpasses, culverts, etc., shall be incorporated into the project design as appropriate; ▪ Lighting installed as part of any project shall be designed to be minimally disruptive to wildlife (see mitigation measure AES-3(a) Roadway Lighting for lighting requirements); and ▪ Vegetative buffers, consisting of California native plant and tree species, shall be installed where feasible to provide a natural noise barrier between roadway projects and sensitive wildlife habitat, including movement corridors. The buffer shall be maintained in perpetuity to ensure noise levels from the roadway are minimized within adjacent sensitive habitat. **BIO-3(b) Maintain Connectivity in Drainages.** Permanent structures that would impede wildlife movement shall be avoided to the extent feasible within any drainage or river that serves as a wildlife migration corridor. In addition, upon completion of construction within any drainage, areas of stream channel and banks that are temporarily impacted shall be returned to pre-construction contours and in a condition that allows for unimpeded passage through the area once the work has been complete. If water is to be diverted around work sites, a diversion plan shall be submitted to the implementing agency for review and approval prior to issuance of project construction permits/approvals. The diversion shall be designed in a way as to not impede movement while the diversion is in place. **BIO-3(c) Construction Best Management Practices to Minimize Disruption to Wildlife.** The following construction best management practices shall be incorporated by the implementing agency into all grading and construction plans to minimize temporary disruption of wildlife, which could hinder wildlife movement: ▪ Designation of a 20 mile per hour speed limit in all construction areas. ▪ Daily construction work schedules shall be limited to daylight hours only. ▪ Mufflers shall be used on all construction equipment and vehicles shall be in good operating condition. ▪ All trash shall be placed in sealed containers and shall be removed from the project site a minimum of once per week. ▪ No pets are permitted on project site during construction.	Significant and Unavoidable
Impact BIO-4. Implementation of transportation improvements and the land use scenario envisioned by the 2050 MTP/SCS would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy. This impact would be less than significant.	None required.	Less than Significant
Impact BIO-5. Implementation of transportation improvements and the land use scenario envisioned by the 2050 MTP/SCS would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community	None required.	No Impact

Impact	Mitigation Measure(s)	Impact
Conservation Plan, or other approved local, regional, or state habitat conservation plan. There would be no impact.		
Impact BIO-C-1. Development in the cumulative impact analysis area would have substantial adverse impacts on special-status plant and animal species, sensitive natural communities, and interfere with wildlife movement. Cumulative impacts would be significant and the contribution of the 2050 MTP/SCS would be cumulatively considerable.	Mitigation Measures BIO-1(a) through BIO-3(c.)	Significant and Cumulatively Considerable
Cultural Resources		
Impact CUL-1. Implementation of proposed transportation improvements and the land use scenario envisioned by the 2050 MTP/SCS would cause a substantial adverse change in built environment cultural resources that are historical resources as defined in State CEQA Guidelines Section 15064.5. Impacts would be significant and unavoidable.	**CR-1 Historical Resources Impact Minimization.** Prior to individual project permit issuance, the implementing agency of a 2050 MTP/SCS project involving earth disturbance or construction of permanent above ground structures or roadways shall, or can and should, prepare a map defining the Area of Potential Effects (APE). This map shall indicate the areas of primary and secondary disturbance associated with construction and operation of the facility and will help in determining whether known historical resources are located within the impact zone. If a structure greater than 45 years in age is within the identified APE, a survey and evaluation of the structure(s) to determine their eligibility for recognition under State, federal, or local historic preservation criteria shall be conducted. The evaluation shall be prepared by an architectural historian, or historical architect meeting the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation, Professional Qualification Standards. The evaluation shall comply with CEQA Guidelines section 15064.5(b). Study recommendations shall be implemented, which may include, but would not be limited to, the following: ▪ Realign or redesign projects to avoid impacts on known historic resources where possible ▪ If avoidance of a significant architectural/built environment resource is not feasible, additional mitigation options include, but are not limited to, specific design plans for historic districts, or plans for alteration or adaptive re-use of a historical resource that follows the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitation, Restoring, and Reconstructing Historic Buildings ▪ Comply with existing local regulations and policies that exceed or reasonably replace any of the above measures that protect historic resources	Significant and Unavoidable
Impact CUL-2. Implementation of proposed transportation improvements and the land use scenario envisioned by the 2050 MTP/SCS would cause a substantial adverse change in the significance of archaeological resources as defined in State CEQA Guidelines Section 15064.5. Impacts would be significant and unavoidable.	**CR-2(a) Archaeological Resources Impact Minimization.** Before construction activities, implementing agencies shall, or can and should, retain a qualified archaeologist to conduct a record search at the Northwest Information Center to determine whether the project area has been previously surveyed and whether resources were identified. When recommended by the Information Center, implementing agencies shall, or can and should, retain a qualified archaeologist to conduct archaeological surveys before construction activities. Implementing agencies shall, or can and should, follow recommendations identified in the survey, which may include, but would not be limited to: subsurface testing, designing and implementing a Worker Environmental Awareness Program (WEAP), construction monitoring by a qualified archaeologist, or avoidance of sites and preservation in place. Recommended mitigation measures will be consistent with CEQA Guidelines Section 15126.4(b)(3) recommendations and may include but not be limited to preservation in place and/or data recovery. All cultural resources work shall follow accepted professional standards in recording any find including submittal of standard DPR Primary Record forms (Form DPR 523) and location information to the appropriate California Historical Resources Information System office for the project area. **CR-2(b) Unanticipated Discoveries During Construction.** If evidence of any prehistoric or historic-era subsurface archaeological features or deposits are discovered during construction-related earthmoving activities (e.g., ceramic shard, trash scatters, lithic scatters), implementing agencies shall, or can and should, halt all ground-disturbing activity proximate to the discovery until a qualified archaeologist (36 CFR Section 61) can assess the significance of the find. If the find is a prehistoric archaeological site, the culturally affiliated California Native American tribe shall be notified. If the archaeologist determines that the find does not meet the CRHR standards of significance for cultural resources, construction may proceed. If the archaeologist determines that further information is needed to evaluate significance, a testing plan shall be prepared and implemented. If the find is determined to be significant by the qualified archaeologist (i.e., because the find is determined to constitute either an historical resource or a unique archaeological resource), the archaeologist shall work with the implementing agency to avoid disturbance to the resources, and if complete avoidance is not feasible in light of project design, economics, logistics and other factors, shall recommend additional measures such as the preparation and implementation of a data recovery plan. Recommended mitigation measures will be consistent with State CEQA Guidelines Section 15126.4(b)(3) recommendations and may include but not be limited to preservation in place and/or data recovery. All cultural resources work shall follow accepted professional standards in recording any find including submittal of standard DPR Primary Record forms (Form DPR 523) and location information to the appropriate California Historical Resources Information System office for the project area. If the find is a prehistoric archaeological site, the culturally affiliated California Native American tribe shall be notified and afforded the opportunity to monitor mitigative treatment. During evaluation or mitigative treatment, ground disturbance and construction work may continue in other parts of the project area that are distant enough from the find not to impact it, as determined by the qualified archaeologist.	Significant and Unavoidable
Impact CUL-3. Implementation of proposed transportation improvements and the land use scenario envisioned by the 2050 MTP/SCS could disturb human remains. Impacts would be less than significant.	None required.	Less than Significant

Impact	Mitigation Measure(s)	Impact
Impact CUL-C-1. Implementation of the proposed transportation improvements and the land use scenario envisioned under the 2050 MTP/SCS would cause substantial impacts to known and unknown cultural, historical, or archaeological resources. Cumulative impacts would be significant and the contribution of the 2050 MTP/SCS would be cumulatively considerable**.**	Mitigation Measures CR-1, CR-2(a), and CR-2(b).	Significant and Cumulatively Considerable
Energy		
Impact E-1. Future transportation improvement projects and implementation of the land use scenario envisioned by the 2050 MTP/SCS would not result in a significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources. This impact would be less than significant.	None required.	Less than Significant
Impact E-2. The 2050 MTP/SCS would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. This impact would be less than significant.	None required.	Less than Significant
Impact E-C-1. Development in the cumulative impact analysis area would increase demand for energy beyond existing conditions, but would comply with energy efficiency regulations and policies. Cumulative impacts would be less than significant, and the MTP/SCS contribution would not be cumulatively considerable.	None required.	Less than Significant
Geology and Soils		
Impact GEO-1. Implementation of proposed transportation improvements and future projects included in land use scenario envisioned in the 2050 MTP/SCS would result in substantial development in the region, which is subject to seismic activity and hazards in some areas. Though risk of loss, injury, or death related to liquefaction or landslides exists in these areas, compliance with applicable regulations would reduce the potential for seismic damage to occur. With compliance with applicable regulations, these proposed transportation projects and land use changes would not directly or indirectly cause substantial adverse effects involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, including liquefaction, or landslides. Impacts would be less than significant.	None required.	Less than Significant
Impact GEO-2. Construction activities related to the transportation improvements and future projects included in the land use scenario envisioned in the 2050 MTP/SCS would involve some grading and soil-moving activities. With compliance with existing regulations pertaining to grading and erosion, buildout of the proposed projects would not cause substantial soil erosion or loss of top soil. impacts would be less than significant.	None required.	Less than Significant

Impact	Mitigation Measure(s)	Impact
Impact GEO-3. Implementation of proposed transportation improvements and future projects included in the land use scenario envisioned in the 2050 MTP/SCS would be located on potentially unstable soils, in areas of lateral spreading, subsidence, or high liquefaction potential, or areas of expansive soil. Adherence to applicable policies and regulations, as well as to the CBC would reduce risk such that Impacts would be less than significant.	None required.	Less than Significant
Impact GEO-4. Implementation of proposed transportation improvements and future projects included in the land use scenario envisioned in the 2050 MTP/SCS in rural areas would be located on soils incapable of adequately supporting septic tanks or alternative wastewater disposal systems. Compliance with existing regulations would minimize or reduce impacts. Impacts would be less than significant.	None required.	Less than Significant.
Impact GEO-5. Implementation of proposed transportation improvements and the land use scenario envisioned by the 2050 MTP/SCS would have the potential to directly or indirectly destroy a unique paleontological resource or site or unique geological feature. Even with implementation of Mitigation Measure GEO-5, impacts would be significant and unavoidable.	**GEO-5**. The designated lead agency implementing a specific a 2050 MTP/SCS project involving ground disturbing activities (including grading, trenching, foundation work and other excavations) shall, or can and should, retain a qualified paleontologist, defined as a paleontologist who meets the Society of Vertebrate Paleontology (SVP) standards for Qualified Professional Paleontologist (SVP 2010), to conduct a Paleontological Resources Assessment (PRA). The PRA shall determine the age and paleontological sensitivity of geologic formations underlying the proposed disturbance area, consistent with SVP Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources (SVP 2010) guidelines for categorizing paleontological sensitivity of geologic units within a project area. If underlying formations are found to have a high potential (sensitivity) for paleontological resources and/or would be considered a unique geologic feature, the following measures shall apply: ▪ **Avoidance.** Avoid routes and project designs that would permanently alter unique paleontological and geological features. If avoidance practices cannot feasibly be implemented, the following measures shall apply. ▪ **Paleontological Mitigation and Monitoring Program.** A qualified paleontologist shall prepare a Paleontological Mitigation and Monitoring Program to be implemented during ground disturbance activity. This program shall outline the procedures for construction staff training, paleontological monitoring extent and duration (i.e., in what locations and at what depths paleontological monitoring shall be required), salvage and preparation of fossils, the final mitigation and monitoring report and paleontological staff qualifications. ▪ **Paleontological Worker Environmental Awareness Program (WEAP).** Prior to the start of ground disturbance activity, construction personnel shall be informed on the appearance of fossils and the procedures for notifying paleontological staff should fossils be discovered by construction staff. ▪ **Paleontological Monitoring.** Ground disturbing activity with the potential to disturb geologic units with high paleontological sensitivity, as determined by initial paleontological surveying or records search as deemed appropriate, shall be monitored on a full-time basis by a qualified paleontological monitor. Should no fossils be observed during the first 50 percent of such excavations, paleontological monitoring could be reduced, under the discretion of the qualified paleontologist, to weekly spot-checking. Monitoring shall be conducted by a qualified paleontological monitor, who is defined as an individual who has experience with collection and salvage of paleontological resources. ▪ **Salvage of Fossils.** If fossils are discovered, the implementing agency shall be notified immediately, and the qualified paleontologist (or paleontological monitor) shall recover them. Typically, fossils can be safely salvaged quickly by a single paleontologist and not disrupt construction activity. In some cases, larger fossils (such as complete skeletons or large mammal fossils) require more extensive excavation and longer salvage periods. In this case, the paleontologist shall have the authority to temporarily direct, divert or halt construction activity to ensure that the fossil(s) can be removed in a safe and timely manner. ▪ **Preparation and Curation of Recovered Fossils.** Once salvaged, fossils shall be identified to the lowest possible taxonomic level, prepared to a curation-ready condition, as defined by the specific receiving institution or collection, and curated in a scientific institution with a permanent paleontological collection, along with all pertinent field notes, photos, data and maps. ▪ **Final Paleontological Mitigation and Monitoring Report.** Upon completion of ground disturbing activity (and curation of fossils if necessary) the qualified paleontologist shall prepare a final mitigation and monitoring report outlining the results of the mitigation and monitoring program. The report shall include discussion of the location, duration and methods of the monitoring, stratigraphic sections, any recovered fossils, and the scientific significance of those fossils, and where fossils were curated.	Significant and Unavoidable

Impact	Mitigation Measure(s)	Impact
Impact GEO-6. Implementation of proposed transportation improvements and future projects included in the land use scenario envisioned in the 2050 MTP/SCS would not result in the loss of availability of known mineral resources of value or locally-important mineral resource recovery sites. This impact would be less than significant.	None required.	Less than Significant
Impact GEO-C-1. Development in the cumulative impacts analysis area, and projects implementing the 2050 MTP/SCS, would be subject to seismic hazards, such as fault rupture, earthquakes, and landslides. However, compliance with applicable requirements would reduce cumulative impacts to less than significant. Cumulative impacts to mineral resources would be less than significant.	Not applicable; cumulative impacts are addressed through regional planning efforts rather than project-level mitigation.	Less than Significant
Impact GEO-C-2: Excavation and ground disturbance associated with development in the cumulative impacts analysis area would damage or destroy subsurface paleontological resources. Although Mitigation Measure GEO-5 would reduce paleontological resource impacts associated with 2050 MTP/SCS projects, the 2050 MTP/SCS's contribution would remain cumulatively considerable.	Mitigation Measure GEO-5.	Significant and Cumulatively Considerable
Greenhouse Gas Emissions/Climate Change		
Impact GHG-1. Construction of the transportation improvement projects and development within future land use patterns envisioned by the 2050 MTP/SCS would generate a net increase GHG emissions by 2050 compared to baseline 2022 conditions. Impacts would be significant and unavoidable.	**GHG-1 Construction GHG Reduction Measures.** The project sponsor shall incorporate the most recent GHG reduction measures and/or technologies for reducing GHG emissions measures for off-road construction vehicles during construction. The measures shall be noted on all construction plans and the project sponsor shall perform periodic site inspections. Current GHG-reducing measures include the following: ▪ Use of on-road heavy-duty trucks that meet the CARB's 2007 or cleaner certification standard for on-road heavy-duty diesel engines, and comply with the State On-Road Regulation; ▪ All on and off-road diesel equipment shall not idle for more than 5 minutes. Signs shall be posted in the designated queuing areas and or job sites to remind drivers and operators of the five-minute idling limit; ▪ Substitute gasoline-powered in place of diesel-powered equipment, where feasible; ▪ Use of alternatively fueled construction equipment, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane or biodiesel, in place of diesel-powered equipment for 15 percent of the fleet, to the extent electric powered equipment is not feasible; ▪ Use of materials sourced from local suppliers; ▪ Recycling of at least 75 percent of construction waste materials; and ▪ Project proponents shall incentivize that construction workers carpool, and/or use electric vehicles to commute to and from the project site. See also Mitigation Measures AQ-2(b) and AQ-2(c).	Significant and Unavoidable
Impact GHG-2. Operation of the 2050 MTP/SCS would not generate a net increase in GHG emissions by 2050 compared to baseline 2022 conditions. Impacts would be less than significant.	None required.	Less than Significant
Impact GHG-3. Implementation of the 2050 MTP/SCS would not conflict with regional SB 375 per capita passenger vehicle CO_2 emission reduction targets of 6 percent by 2035 from 2005 levels. Impacts would be less than significant.	None required.	Less than Significant
Impact GHG-4. Implementation of the 2050 MTP/SCS would not achieve the State GHG reduction targets of 40 percent below 1990 levels by 2030 and 85 percent below 1990 levels by 2045. Therefore, the 2050 MTP/SCS would conflict with	**GHG-4(a) Transportation-Related GHG Reduction Measures.** The implementing agency shall incorporate the most recent GHG reduction measures and/or technologies for reducing VMT and associated transportation related GHG emissions. GHG-reducing mitigation measures include the following: ▪ Installation of electric vehicle charging stations beyond those required by State and local codes ▪ Utilization of electric vehicles and/or alternatively fueled vehicles in company fleet	Significant and Unavoidable

Impact	Mitigation Measure(s)	Impact
the State's ability to achieve SB 32, AB 1279, 2022 Scoping Plan, and applicable local GHG reduction plan targets and goals. Impacts would be significant and unavoidable.	▪ Provision of dedicated parking for carpools, vanpool, and clean air vehicles ▪ Provision of new or improved transit amenities (e.g., covered turnouts, bicycle racks, covered benches, signage, lighting, sidewalk connectivity, and accessible crosswalks) if project site is located along an existing transit route ▪ Optimize transit route networks and service levels to boost ridership ▪ Provision of employee lockers and showers ▪ Provision of on-site services that reduce the need for off-site travel (e.g., childcare facilities, automatic teller machines, postal machines, food services) ▪ Provision of alternative work schedule options, such as telework or reduced schedule (e.g., 9/80 or 10/40 schedules) for employees ▪ Implementation of transportation demand management programs to educate and incentivize residents and/or employees to use transit, smart commute, and alternative transportation options **GHG-4(b) Land Use Project Energy Consumption and Water Use Reduction Measures.** For land use projects under their jurisdiction, the cities and counties in the AMBAG region can and should implement measures to reduce energy consumption, water use, solid waste generation, and VMT, all of which contribute to GHG emissions. Project specific environmental documents may adjust these mitigation measures as necessary to respond to site specific conditions. ▪ Require new commercial construction to install solar energy systems or be solar-ready ▪ Require new residential and commercial development to install low flow water fixtures ▪ Require new residential and commercial development to install water-efficient drought-tolerant landscaping, including the use of compost and mulch ▪ Require new development to exceed the applicable Title 24 energy-efficiency requirements ▪ Encourage new development to be fully electric See also Mitigation Measures T-2(a) and T-2(b).	
Impact GHG-C-1. Development in the cumulative impacts analysis area, as well as projects implementing the 2050 MTP/SCS, would generate temporary short-term GHG emissions which would result in a significant cumulative impact, and the 2050 MTP/SCS contribution would be cumulatively considerable. Construction and operational GHG emissions as a result of implementation of the 2050 MTP/SCS would have a cumulatively considerable contribution to a significant cumulative impact related to exceeding State GHG reduction targets.	Mitigation Measures GHG-1, AQ-2(b), AQ-2(c), GHG-3(a), GHG-3(b),T-2(a) and T-2(b) .	Significant and Cumulatively Considerable
Hazards and Hazardous Materials		
Impact HAZ-1. Proposed transportation improvement projects and land use projects included in the 2050 MTP/SCS may facilitate the routine transport, use, or disposal of hazardous material, and may result in reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. Impacts would be less than significant.	None required.	Less than Significant
Impact HAZ-2. Proposed transportation improvement projects and land use projects included in the 2050 MTP/SCS would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school. Impacts would be less than significant.	None required.	Less than Significant
Impact HAZ-3. The 2050 MTP/SCS includes land use projects and transportation projects that could occur on sites on the list of hazardous material sites compiled by Government Code Section 65962.5. Impacts would be significant and unavoidable.	**HAZ-3 Site Remediation.** If an individual project included in the 2050 MTP/SCS is located on or near a hazardous materials and/or waste site pursuant to Government Code Section 65962.5, the implementing agency shall prepare a Phase I ESA in accordance with the American Society for Testing and Materials' E-1527-05 standard. For work requiring any demolition or renovation, the Phase I ESA shall make recommendations for any hazardous building materials survey work that shall be done. All recommendations included in a Phase I ESA prepared for a site shall be implemented. If a Phase I ESA indicates the presence or likely presence of contamination, the implementing agency shall require a Phase II ESA, and recommendations of the Phase II ESA shall be fully implemented. Examples of typical recommendations provided in Phase I/II ESAs include removal of contaminated soil	Significant and Unavoidable

Impact	Mitigation Measure(s)	Impact
	in accordance with a soil management plan approved by the local environmental health department; covering stockpiles of contaminated soil to prevent fugitive dust emissions; capturing groundwater encountered during construction in a holding tank for additional testing and characterization and disposal based on its characterization; and development of a health and safety plan for construction workers.	
Impact HAZ-4. Transportation improvement projects and land use development included in the 2050 MTP/SCS located within an airport land use plan or within two miles of a public or public use airport would not result in a safety hazard or excessive noise for people residing or working in the project area with compliance with applicable regulations. Impacts would be less than significant.	None required.	Less than Significant
Impact HAZ-5. Land use development and transportation projects included in the 2050 MTP/SCS would not impair implementation or physically interfere with adopted emergency response or evacuation plans. Impacts would be less than significant.	None required.	Less than Significant
Impact HAZ-C-1. Development in the cumulative impacts analysis area, as well as projects implementing the 2050 MTP/SCS, could result in hazards and exposure to hazardous materials. The 2050 MTP/SCS would have cumulatively considerable contributions to significant cumulative impacts related to hazards and hazardous materials.	Mitigation Measure HAZ-3.	Significant and Cumulatively Considerable
Hydrology and Water Quality		
Impact HYD-1. Transportation improvements and future projects included in the land use scenario envisioned in the 2050 MTP/SCS would result in some stormwater discharge, would result in additional impervious surfaces, and would alter some site-specific drainage patterns. All projects would comply with applicable water quality standards or waste discharge requirements, and would not substantially alter the existing drainage pattern of the overall region or of the specific site or area in a manner which would result in substantial erosion or siltation. With compliance with existing regulations, impacts would be less than significant.	None required.	Less than Significant
Impact HYD-2. With compliance with existing regulations, transportation improvements and future projects included in the land use scenario envisioned in the 2050 MTP/SCS would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that sustainable groundwater management of the basin would be impeded. Impacts would be less than significant.	None required.	Less than Significant
HYD-3. Transportation improvements and future projects included in the land use scenario envisioned in the 2050 MTP/SCS would alter site specific drainage patterns. However, with compliance with existing regulations, proposed projects would not alter existing drainage patterns such that they would substantially increase the rate or amount of surface runoff, or create or contribute runoff	None required.	Less than Significant

Impact	Mitigation Measure(s)	Impact
water throughout the region which would exceed the capacity of stormwater drainage systems. Impacts would be less than significant.		
HYD-4. Transportation improvements and future projects included in the land use scenario envisioned in the 2050 MTP/SCS would alter some site-specific drainage patters and would potentially introduce new development in areas with risk of inundation. However, compliance with applicable regulations would ensure overall buildout would not substantially alter drainage patterns in the region in a manner which would impede or redirect floor flows, or risk release of pollutants due to project inundation in flood hazard, tsunami, or seiche zones. This impact would be less than significant.	None required.	Less than Significant
HYD-5. Transportation improvements and future projects included in the land use scenario envisioned in the 2050 MTP/SCS would comply with all applicable regulations such that obstruction of a water quality control plan or sustainable groundwater management plan would not occur. Impacts would be less than significant.	None required.	Less than Significant
HYD-C-1. Construction of cumulative development would increase impervious surfaces and would have the potential to increase erosion potential, alter drainage patterns, increase runoff volumes and velocity, infiltrate groundwater, and risk release of pollutants due to inundation. Compliance with existing regulations, such as National Pollutant Elimination System and local stormwater management requirements would reduce cumulative impacts to less than significant.	None required.	Less than Significant
Land Use		
Impact LU-1. While construction of proposed transportation improvements and the land use scenario envisioned by the 2050 MTP/SCS would lead to temporary disruptions, traffic control plans would ensure that construction impacts related to division of an established community are less than significant. During operation, proposed transportation improvements and the land use scenario would increase connectivity and lead to additional development in established communities. Operational impacts would be less than significant.	None required.	Less than Significant
Impact LU-2. The 2050 MTP/SCS would not cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation and result in a physical change to the environment not already addressed in other resource chapters. This impact would be less than significant after implementation of mitigation discussed throughout this EIR.	Mitigation measures are provided for applicable resources throughout their respective environmental issue area sections of the EIR to reduce impacts.	Less than Significant
Impact LU-C-1. Development in the cumulative impacts analysis area would not physically divide an established community. However, it could result in inconsistencies or conflicts with local land use plans and local coastal plans, policies, and regulations adopted for the purpose of avoiding	Mitigation measures are provided for applicable resources throughout their respective environmental issue area sections of the EIR to reduce impacts.	Less than significant

Impact	Mitigation Measure(s)	Impact
or mitigating environmental effects. The 2050 MTP/SCS contribution to cumulative impacts would not be cumulatively considerable.		
Noise		
Impact N-1. Construction activities associated with transportation projects and land use projects under the 2050 MTP/SCS would generate a substantial temporary increase in ambient noise levels in excess of standards or over existing noise levels, and would generate a substantial absolute noise increase over existing noise levels. Impacts would be significant and unavoidable.	**N-1 Construction Noise Reduction.** To reduce construction noise levels to achieve applicable standards and prevent a substantial increase in ambient noise levels, implementing agencies for transportation and land use projects shall implement the measures identified below where feasible and necessary. ▪ Implementing agencies of 2050 MTP/SCS projects shall ensure that, where residences or other noise sensitive uses are located within 200 feet of construction sites, appropriate measures shall be implemented to ensure compliance with local ordinance requirements relating to construction noise. Specific techniques may include, but are not limited to: restrictions on construction timing, use of sound blankets on construction equipment, and the use of temporary walls and noise barriers to block and deflect noise. ▪ Designate an on-site construction complaint and enforcement manager for projects within 200 feet of sensitive receivers. ▪ Implementing agencies of the 2050 MTP/SCS shall post phone numbers for the on-site enforcement manager at construction sites along with complaint procedures and who to notify in the event of a problem. ▪ For any project within 800 feet of sensitive receptors that requires pilings, the implementing agencies shall require caisson drilling or sonic pile driving as opposed to impact pile driving, where feasible. This shall be accomplished through the placement of conditions on the project during its individual environmental review. ▪ Implementing agencies of 2050 MTP/SCS projects shall ensure that equipment and trucks used for project construction utilize the best available noise and vibration control techniques, including mufflers, intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds. ▪ Implementing agencies of 2050 MTP/SCS projects shall ensure that impact equipment (e.g., jack hammers, pavement breakers and rock drills) used for project construction be hydraulically or electrically powered wherever feasible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatically powered tools is unavoidable, use of an exhaust muffler on the compressed air exhaust can lower noise levels from the exhaust by up to about 10 dBA. When feasible, external jackets on the impact equipment can achieve a reduction of 5 dBA. Whenever feasible, use quieter procedures, such as drilling rather than impact equipment operation. ▪ The following timing restrictions shall apply to MTP/SCS project construction activities located within 200 feet of a dwelling unit, or 800 feet if impact pile driving is involved, except where timing restrictions are already established in local codes or policies. Construction activities shall be limited to: ▫ Monday through Friday: 7 a.m. to 6 p.m. ▫ Saturday: 9 a.m. to 5 p.m. ▪ Implementing agencies of 2050 MTP/SCS projects shall locate stationary noise and vibration sources as far from sensitive receptors as feasible. Stationary noise sources that must be located near existing receptors will be adequately muffled.	Significant and Unavoidable
Impact N-2. Construction activities associated with transportation projects and land use projects under the 2050 MTP/SCS would generate excessive groundborne vibration levels. Impacts would be significant and unavoidable.	**N-1 Construction Noise Reduction.** See Impact N-1 for Mitigation Measure N-1. **N-2 Construction Vibration Reduction.** If construction equipment would generate vibration levels exceeding acceptable levels as established by the FTA (as shown in Table 4.12-2), implementing agencies of the 2050 MTP/SCS shall, or can and should, complete the following tasks: ▪ Prior to construction, survey the project site for vulnerable buildings, and complete geotechnical testing (preconstruction assessment of the existing subsurface conditions and structural integrity), for any older or historic buildings within 50 feet of pile driving. The testing shall be completed by a qualified geotechnical engineer and qualified historic preservation professional and/or structural engineer. ▪ Prepare and submit a report to the lead agency that contains the results of the geological testing. If recommended by the preconstruction report, implementing agencies shall require ground vibration monitoring of nearby historic structures. Methods and technologies shall be based on the specific conditions at the construction site. 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. ▪ To minimize disturbance withing 550 feet of 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 duration of pile driving), where feasible, in consideration of geotechnical and structural requirements and conditions as defined as part of the geotechnical testing, if testing was feasible. ▪ Use cushion blocks to dampen noise from pile driving. ▪ Phase operations of construction equipment to avoid simultaneous vibration sources	Significant and Unavoidable

Impact	Mitigation Measure(s)	Impact
Impact N-3. Implementation of the 2050 MTP/SCS would generate a substantial permanent increase in ambient noise levels in excess of standards or over existing noise levels and generate a substantial absolute noise increase over existing noise levels. Impacts would be significant and unavoidable.	**N-3 Noise Assessment and Control for Transportation Noise Sources.** Sponsor agencies of 2050 MTP/SCS transportation projects shall complete detailed noise assessments using applicable guidelines (e.g., FTA Transit Noise and Vibration Impact Assessment for rail and bus projects and the Caltrans Traffic Noise Analysis Protocol) for transportation projects that may impact noise sensitive receivers. The implementing agency shall ensure that a noise survey is conducted that, at minimum: ▪ Determines existing and projected noise levels ▪ Determines the amount of attenuation needed to reduce potential noise impacts to applicable State and local standards ▪ Identifies potential alternate alignments that allow greater distance from, or greater buffering of, noise-sensitive areas ▪ If warranted, recommends methods for mitigating noise impacts, including: ▫ Appropriate setbacks ▫ Sound attenuating building design, including retrofit of existing structures with sound attenuating building materials ▫ Use of sound barriers (earthen berms, sound walls, or some combination of the two) Where new or expanded roadways, rail, or transit projects are found to expose receivers to noise that exceed acceptable standards or to a substantial permanent absolute increase in ambient noise levels, the implementing agency shall implement techniques as recommended in the project specific noise assessment. The preferred methods for mitigating noise impacts will be the use of appropriate setbacks (design adjustments) and sound attenuating building design, including retrofit of existing structures with sound attenuating building materials where feasible. In instances where use of these techniques is not feasible, the use of sound barriers (earthen berms, sound walls, or some combination of the two) shall be considered. Long expanses of walls or fences shall be interrupted with offsets and provided with accents to prevent monotony. Landscape pockets and pedestrian access through walls should be provided. Whenever possible, a combination of elements shall be used, including solid fences, walls, and landscaped berms. Other techniques such as rubberized asphalt or "quiet pavement" can be used where feasible to reduce road noise for new roadway segments or modifications requiring repaving. The effectiveness of noise reduction measures shall be monitored by taking noise measurements and installing adaptive mitigation measures to achieve applicable standards.	Significant and unavoidable
Impact N-4. The proposed 2050 MTP/SCS land use scenario would encourage infill development near transit and other transportation facilities, which would generate a substantial increase in ambient noise levels in excess of standards or over existing noise levels. Impacts would be significant and unavoidable.	**N-4 Noise Mitigation for Land Uses.** If a 2050 MTP/SCS land use project is located in an area with exterior ambient noise levels above local noise standards, or where it could be exposed to substantial permanent increases in noise levels, the implementing agency can and should ensure that a noise study is conducted to determine the existing exterior noise levels in the vicinity of the project. If the project would be impacted by ambient noise levels, feasible attenuation measures shall be used to reduce operational noise to meet acceptable standards. In addition, noise insulation techniques shall be utilized to reduce indoor noise levels to thresholds set inapplicable State and/or local standards. Such measures may include, but are not limited to: dual-paned windows, solid core exterior doors with perimeter weather stripping, air conditioning system so that windows and doors may remain closed, and situating exterior doors away from roads. The noise study and determination of appropriate mitigation measures shall be completed during the project's individual environmental review.	Significant and unavoidable
Impact N-5. The proposed 2050 MTP/SCS would result in new truck, bus, and train traffic that would generate excessive vibration levels. Impacts would be significant and unavoidable.	**N-5 Vibration Mitigation for Transportation Projects.** Where local vibration and groundborne noise standards do not apply, implementing agencies of 2050 MTP/SCS projects shall comply with guidance provided by the FTA in the most recent version of the *Transit Noise and Vibration Impact Assessment* to assess impacts to buildings and sensitive receptors and reduce vibration and groundborne noise. FTA thresholds, as shown in Table 4.12-3, shall be used except in areas where local standards for groundborne noise and vibration have been established. Methods that would be considered to reduce vibration and groundborne noise impacts include, but are not limited to: ▪ Rail Traffic ▫ Maximizing the distance between tracks and sensitive uses ▫ Conducting rail grinding on a regular basis to keep tracks smooth ▫ 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; ▫ Implementing operational changes such as limiting train speed and reducing nighttime operations. ▪ Bus and Truck Traffic ▫ Constructing noise barriers ▫ Use noise reducing tires and wheel construction on bus wheels ▫ Use vehicle skirts (i.e., a partial enclosure around each wheel with absorptive treatment) on freight vehicle wheels	Significant and unavoidable

Impact	Mitigation Measure(s)	Impact
Impact N-6. Proposed transportation improvements and future projects included in the land use scenario envisioned in the 2050 MTP/SCS would be located in close proximity to existing airports such that applicable exterior and interior noise thresholds would be exceeded. Impacts would be significant and unavoidable.	**N-6 Noise Mitigation Near Airports.** Local lead agencies for all new development proposed to be located within the vicinity of an existing airport influence zone, as defined by the locally ALUCP or local general plan, or within two miles of a an airport that does not have an ALUCP or a private airstrip, shall require a site specific noise compatibility study. The study shall consider and evaluate existing aircraft noise, based on specific aircraft activity data for the airport in question, and shall include recommendations for site design and building construction to assure that people residing in the project area are not exposed to excessive noise levels. Such measures may include, but are not limited to: dual-paned windows, solid core exterior doors with perimeter weather stripping, air conditioning system so that windows and doors may remain closed, and situating exterior doors away from roads, such as dual paned windows. The noise study and determination of appropriate mitigation measures shall be completed during the project's individual environmental review.	Significant and Unavoidable
Impact N-C-1. Development in the cumulative impact analysis area would result in Cumulative significant impacts related to construction and operational noise and excessive noise in proximity to airports. The 2050 MTP/SCS contribution to cumulative impacts would be cumulatively considerable.	Mitigation Measures N-1 through N-6.	Significant and Cumulatively Considerable
Population and Housing		
Impact POP-1. The 2050 MTP/SCS would accommodate forecasted growth through implementation of the envisioned 2050 MTP/SCS land use strategy to intensify density in developed areas, rather than induce unplanned growth. Transportation projects included in the 2050 MTP/SCS would not induce population growth as these projects would be growth accommodating and are generally intended to improve existing transportation networks. The 2050 MTP/SCS would not induce substantial unplanned population growth, either directly or indirectly. This impact would be less than significant.	None required.	Less than Significant
Impact POP-2. Land use and transportation projects included in the 2050 MTP/SCS would temporarily displace existing housing and people during construction, but would not necessitate the construction of replacement housing elsewhere. New development would generally be more dense than existing housing, and therefore, replacement housing is incorporated into the 2050 MTP/SCS itself. As a result, impacts related to housing and population displacement would be less than significant.	None required.	Less than Significant
Impact POP-C-1. Population growth in the cumulative impacts analysis area is generally planned, and cumulative impacts to unplanned growth would be less than significant. Development in the cumulative impact analysis area would result in the temporary or permanent displacement of housing, but displacement would be localized and would not result in displacement at the regional scale. Cumulative population and housing displacement impacts would be less than significant.	None required.	Less than Significant
Public Services and Recreation		
Impact PSR-1. The 2050 MTP/SCS would result in new or expanded governmental facilities, the implementation of which would result in substantial physical impacts. This impact would be significant and unavoidable.	**PSR-1 Increased Public Service Demand.** During the CEQA review process for individual facilities, the implementing agency with responsibility for construction of new public service facilities or the expansion of existing facilities, including those of fire and police services, parks, and other public facilities, can and should apply necessary mitigation measures to avoid or reduce significant environmental impacts associated with the construction or expansion of such facilities. The environmental impacts associated with such construction or expansion should be avoided or reduced through the imposition of conditions required to be followed by those directly involved in the construction or expansion activities. Such conditions should include those necessary to avoid or reduce significant impacts associated with air quality, noise, transportation, biological resources, cultural resources, greenhouse gas emissions, hydrology and water quality, and others that apply to specific construction or expansion of new public or expanded public service facilities.	Significant and Unavoidable

Impact	Mitigation Measure(s)	Impact
Impact PSR-2. The 2050 MTP/SCS would require the provision of new schools, the construction of which would result in substantial physical impacts. Impacts would be less than significant because of state regulations mandating development impact fees.	None required.	Less than Significant
Impact PSR-3 The 2050 MTP/SCS would increase the use of existing parks and recreational facilities, resulting in substantial physical deterioration, and would include recreational facilities that would have an adverse effect on the environment. This impact would be significant and unavoidable.	**PSR-3 Impact Reduction from New Recreational Facilities.** During project specific design and CEQA review, the cities and counties in the AMBAG region, and other agencies with responsibility for the construction of new or expanded recreation facilities, can and should apply necessary mitigation measures to avoid or reduce significant environmental impacts associated with the construction of such facilities. The environmental impacts associated with such construction should be avoided or reduced through the imposition of conditions required to be followed by those directly involved in the construction or expansion activities. Such conditions should include those necessary to avoid or reduce significant impacts associated with air quality, noise, transportation, biological resources, cultural resources, greenhouse gas emissions, hydrology and water quality, and others that apply to specific construction of new or expanded recreation facilities, including recreational trails.	Significant and Unavoidable
Impact PSR-C-1. Development in the cumulative impact analysis area would result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities and the use of recreational facilities, the construction of which could cause significant environmental effects. Cumulative impacts would be significant. The 2050 MTP/SCS contribution to cumulative impacts would be cumulatively considerable.	Mitigation Measures PSR-1 and PSR-3.	Significant and Cumulatively Considerable
Transportation		
Impact TRA-1. Transportation projects facilitated by the 2050 MTP/SCS would involve improvements to transit, roadway, bicycle, and pedestrian facilities. The 2050 MTP/SCS would not result in a significant impact due to conflicts with any programs addressing the circulation system. This impact would be less than significant.	None required.	Less than Significant
Impact TRA-2. The 2050 MTP/SCS would result in an increase to daily VMT per capita between the baseline 2022 conditions and the 2050 conditions. Per capita VMT impacts from implementation of the 2050 MTP/SCS would be significant and unavoidable. The induced travel impact at the regional level would be less than significant.	**TRA-2(a) Land Use Project VMT Analysis and Reduction.** Regionally, 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, and other land use project conditions that reduce VMT. Programs shall be designed to reduce VMT from existing land uses, where feasible, and from new discretionary residential or employment land use projects. The design of programs shall focus on VMT reduction strategies that increase travel choices and improve the comfort and convenience of sharing rides in private vehicles, using public transit, biking, or walking. At a project level, implementing agencies shall evaluate VMT as part of project specific CEQA review and discretionary approval decisions for land use projects. Where project level significant impacts are identified, implementing agencies shall identify and implement measures that reduce VMT. Examples include but are not limited to: ▪ Provide carsharing, vanpool, bike sharing, and ride-sharing programs ▪ Implement or provide access to commute reduction programs ▪ Encourage telecommute programs ▪ Incorporate affordable housing into the project ▪ Increase density, infill, and transit oriented development ▪ Increase mixed uses within the project area ▪ Incorporate improved pedestrian connections within the project/neighborhood ▪ Incentivize development in low VMT communities ▪ Incentivize housing near commercial and offices ▪ Increase access to goods and services, such as groceries, schools, and daycare ▪ Orient the project toward transit, bicycle, and pedestrian facilities ▪ Implement complete streets ▪ Provide traffic calming ▪ Provide bicycle parking	Significant and Unavoidable

Impact	Mitigation Measure(s)	Impact
	▪ Reduce parking requirements ▪ Separate out parking costs ▪ Provide parking cash-out programs **TRA-2(b) Transportation Project VMT Analysis and Reduction.** Transportation project sponsor agencies shall evaluate transportation projects that involve increasing roadway capacity for their potential to increase VMT. Where project level increases are found to be potentially significant, implementing agencies shall, or can and should, identify and implement measures that reduce VMT. Examples of measures that reduce the VMT associated with increases in roadway capacity include, but are not limited to: ▪ Tolling new lanes to encourage carpools and fund transit improvements ▪ Converting existing general purpose lanes to high occupancy vehicle lanes ▪ VMT banks ▪ Implementing or funding offsite travel demand management ▪ Providing a bus rapid transit system ▪ Implement bus on shoulder operations during peak congestion periods ▪ Improving pedestrian or bicycle networks, or transit service ▪ Providing transit passes ▪ Incorporating neighborhood electric vehicle network	
Impact TRA-3. The 2050 MTP/SCS would not substantially increase hazards due to geometric design features or incompatible uses. Impacts would be less than significant.	None required.	Less than Significant
Impact TRA-4. The 2050 MTP/SCS would not result in inadequate emergency vehicle access. Impacts would be less than significant.	None required.	Less than Significant
Impact TRA-C-1. Development in the cumulative impact analysis area would result in significant and unavoidable increase in daily VMT per capita from baseline 2022 conditions. The 2050 MTP/SCS contribution to cumulative VMT impacts would be cumulatively considerable.	Mitigation Measures TRA-2(a) and TRA-2(b).	Significant and Cumulatively Considerable
Tribal Cultural Resources		
Impact TCR-1. Implementation of proposed transportation improvements and future projects included in the land use scenario envisioned in the 2050 MTP/SCS would cause a substantial adverse change in the significance of a tribal cultural resource. Impacts would be significant and unavoidable.	**TCR-1 Tribal Cultural Resources Impact Minimization.** Implementing agencies shall, or can and should, comply with AB 52, which may require formal tribal consultation. If the implementing agency determines that a project may cause a substantial adverse change to a tribal cultural resource, they shall, or can and should, implement mitigation measures identified in the consultation process required under PRC Section 21080.3.2, or shall, or can and should, implement the following measures where feasible to avoid or minimize the project specific significant adverse impacts: ▪ Avoidance and preservation of the resources in place, including, but not limited to planning and construction 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 considering the tribal cultural values and meaning of the resource, including, but not limited to, the following: ▫ Protecting the cultural character and integrity of the resource ▫ Protecting the traditional use of the resource ▫ Protecting the confidentiality of the resource ▫ Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places ▪ Native American monitoring by the appropriate tribe for all projects in areas identified as sensitive for potential tribal cultural resources and/or in the vicinity (within 100 feet) of known tribal cultural resources ▪ If potential tribal cultural resources are encountered during ground-disturbing activities; work in the immediate area must halt and the appropriate tribal representative(s), the implementing agency, and an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (National Park Service 1983) shall be contacted immediately to evaluate the find and determine the proper course of action	Significant and Unavoidable

Impact	Mitigation Measure(s)	Impact
Impact TCR-C-1. Development in the cumulative impact analysis area could result in significant impacts to tribal cultural resources that would result in a significant cumulative impact. The 2050 MTP/SCS contribution to this impact would be cumulatively considerable.	Mitigation Measure TCR-1	Significant and Cumulatively Considerable
Utilities and Service Systems		
Impact UTIL-1. Proposed transportation improvements and land use projects envisioned by the 2050 MTP/SCS would require or result in the relocation or construction of new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction of which would cause significant environmental effects. This impact would be significant and unavoidable.	**UTIL-1(a). Measures to Reduce Impacts from Construction or Expansion of Water and Wastewater Treatment Facilities.** During the CEQA review process for individual facilities, TAMC, SBtCOG, and SCCRTC shall implement, and transportation project sponsor agencies, and cities and counties in the AMBAG region and other utility providers with responsibility for the construction of new water or wastewater treatment and collection facilities or the expansion of existing facilities can and should apply necessary mitigation measures to reduce significant environmental impacts associated with the construction or expansion of such facilities. The environmental impacts associated with such construction or expansion should be avoided or reduced through the imposition of conditions required to be followed by those directly involved in the construction or expansion activities. Such conditions should include those necessary to avoid or reduce impacts associated with air quality, noise, traffic, biological resources, cultural resources, greenhouse gas emissions, hydrology and water quality and others that apply to specific construction or expansion of water or wastewater treatment and collection facilities projects. **UTIL-1(b) Measures to Reduce Impacts from Construction or Expansion of Stormwater Facilities.** During the CEQA review process for individual facilities, TAMC, SBtCOG, and SCCRTC shall implement, and transportation project sponsor agencies, and cities and counties in the AMBAG region and special districts with responsibility for the construction of new stormwater drainage facilities or the expansion of existing facilities to adequately meet projected capacity needs can and should apply necessary mitigation measures to avoid or reduce significant environmental impacts associated with the construction or expansion of such facilities. The environmental impacts associated with such construction or expansion should be avoided or reduced through the imposition of conditions required to be followed by those directly involved in the construction or expansion activities. Such conditions should include those necessary to avoid or reduce impacts associated with air quality, noise, traffic, biological resources, cultural resources, greenhouse gas emissions, hydrology and water quality, and others that apply to specific construction or expansion of storm water drainage facilities projects. **UTIL-1(c) Stormwater Control Methods.** During the CEQA review process for individual facilities, TAMC, SBtCOG, and SCCRTC shall implement, and transportation project sponsor agencies can and should incorporate stormwater control, retention, and infiltration features, such as detention basins, bioswales, vegetated median strips, and permeable paving, early into the design process to ensure such features are analyzed during environmental review. Implement mitigation measures identified for such features on a project specific basis, where feasible and necessary based on project and site specific considerations. **UTIL-1(d) Power, Natural Gas, or Telecommunications Facilities**. During the CEQA review process, cities, counties, and AMBAG region energy and telecommunications providers and regulatory agencies with responsibility for the construction or approval of new electric power, natural gas, or telecommunications facilities or the expansion of existing facilities to adequately meet projected capacity needs can and should apply necessary mitigation measures to avoid or reduce significant environmental impacts associated with the construction or expansion of such facilities. The environmental impacts associated with such construction or expansion should be avoided or reduced through the imposition of conditions required to be followed by those directly involved in the construction or expansion activities. Such conditions should include those necessary to avoid or reduce impacts associated with air quality, noise, traffic, biological resources, cultural resources, greenhouse gas emissions, hydrology and water quality, and others that apply to specific construction or expansion of natural gas and electric facilities projects.	Significant and Unavoidable
Impact UTIL-2. Proposed transportation improvements and land use projects envisioned by the 2050 MTP/SCS would generate solid waste in excess of the capacity of local infrastructure. This impact would be significant and unavoidable.	**UTIL-2 Solid Waste Generation and Disposal.** During the CEQA review process for individual facilities, TAMC, SBtCOG and SCCRTC shall implement, and transportation project sponsor agencies, and cities and counties in the AMBAG region can and should implement, the following measures where feasible: ▪ Provide an easily accessible area that is dedicated to the collection and storage of non-hazardous recycling materials. ▪ Maintain or reuse existing building structures and materials during building renovations and redevelopment. ▪ Use salvaged, refurbished, or reused materials to help divert such items from landfills. ▪ Divert construction waste from landfills, where feasible, through means such as: ▫ Submitting and implementing a construction waste management plan that identifies materials to be diverted from disposal; ▫ Establishing diversion targets, possibly with different targets for different types and scales of development; ▪ Helping project sponsors and implementing agencies share information on available materials with one another, to aid in the transfer and use of salvaged materials.	Significant and Unavoidable
Impact UTIL-3. Proposed transportation improvements and land use development projects envisioned by the 2050 MTP/SCS would be required to comply with all relevant statues and regulations related to solid waste. This impact would be less than significant.	None required.	Less than significant

Impact	Mitigation Measure(s)	Impact
Impact UTIL-4. Implementation of proposed transportation improvements and future projects included in the land use scenario envisioned in the 2050 MTP/SCS would increase water demand in the AMBAG region such that water supplies may be insufficient to serve envisioned development. Impacts would be significant and unavoidable.	**UTIL-4(a) General Water Conservation Measures.** Agencies implementing land use and transportation projects that could increase water demand shall, or can and should, coordinate with relevant water services to ensure demand can be accommodated and identify a water consumption budget. Any existing water conservation measures that reduce demand for potable water, such as reducing water use for landscape irrigation for transportation projects or use of water-conserving fixtures in envisioned land use projects, should be employed. Reclaimed water should be used when possible. **UTIL-4(b) Water Supply for Construction Dust Suppression.** Implementing agencies shall, or can and should, ensure that for all 2050 MTP/SCS projects, where feasible, reclaimed and/or desalinated water is used for dust suppression during construction activities. This measure shall, or can and should, be noted on construction plans and shall be spot checked by the implementing agency. **UTIL-4(c) Landscape Watering.** In jurisdictions that do not already have an applicable local regulatory program related to landscape watering, implementing agencies shall, or can and should, design 2050 MTP/SCS projects that would include landscaping shall be designed with drought tolerant plants and drip irrigation. When feasible, native plant species shall be used. In addition, landscaping associated with proposed improvements shall be maintained using reclaimed and/or desalinated water when feasible. **UTIL-4(d) Porous Pavement and Bioswale Installation.** In jurisdictions that do not already have an appropriate local regulatory program related to porous pavement, implementing agencies for a 2050 MTP/SCS project that involves streetscaping, parking, transit and/or land use improvements shall, or can and should, ensure that porous pavement materials are utilized, where feasible, to allow for groundwater percolation. Additionally, if a project would substantially increase impervious surfaces the sponsor shall ensure that bioswales are installed, where feasible, to facilitate groundwater recharge using stormwater runoff from the project site while improving water quality if not already required by the appropriate jurisdiction's local regulatory programs.	Significant and Unavoidable
Impact UTIL-C-1. Development in the cumulative impact analysis area would result in substantial adverse physical impacts associated with the provision of new or physically altered utility infrastructure, the construction of which could cause significant environmental effects. Cumulative impacts would be significant. The 2050 MTP/SCS contribution to cumulative impacts would be cumulatively considerable.	Mitigation Measures UTIL-1(a) through UTIL-4(d).	Significant and Cumulatively Considerable
Wildfire		
Impact W-1. Proposed transportation improvements and land use projects envisioned by the 2050 MTP/SCS would be located in or near Very High FHSZs, and exposure of people or structures to a significant risks of loss, injury, or death from wildfires could occur. Impacts would be significant and unavoidable.	**W-1 Wildfire Risk Reduction.** If an individual transportation or land use project included in the 2050 MTP/SCS is within or less than two miles from a High or Very High FHSZ in the State Responsibility Area (SRA) as established by California Public Resources Code (PRC) Sections 4201 through 4204, or as High or Very High in the Local Responsibility Area (LRA) designated pursuant to California Government Code, Sections 51175 through 51189, the implementing agency shall require appropriate mitigation to reduce the risk. Examples of mitigation to reduce risk of loss, injury or death from wildlife include, but are not limited to: ▪ Enforce defensible space regulations compliant with PRC Section 4291 or stricter as designated by the local governing body to keep overgrown and unmanaged vegetation, accumulations of trash and other flammable material away from structures. ▪ Provide public education about wildfire risk, fire prevention measures, and safety procedures and practices to allow for safe evacuation and/or options to shelter-in-place during a wildfire emergency. ▪ Ensure sufficient emergency water supply and operations for wildland fire suppression. ▪ Encourage the development of landscaping maintenance schedules to include removal/ treatment of annual invasive species which may contribute to increased fuel loading. ▪ Encourage the use of fire-resistant vegetation native to Santa Cruz, Monterey, and San Benito counties and/or the local microclimate of the project site and discourage the use of fire-prone species especially non-native, invasive species. ▪ Require a fire safety plan be submitted to and approved by the local fire protection agency. The fire safety plan shall include all the fire safety features incorporated into the project and the schedule for implementation of the features. The local fire protection agency may require changes to the plan or may reject the plan if it does not adequately address fire hazards associated with the project as a whole or the individual phase of the project. ▪ Prohibit certain project construction activities with potential to ignite wildfires during red-flag warnings issued by the National Weather Service for the project site location. Example activities that should be prohibited during red-flag warnings include welding and grinding outside of enclosed buildings. ▪ Require fire extinguishers to be on site during construction of projects. Fire extinguishers shall be maintained to function according to manufacturer specifications. Construction personnel shall receive training on the proper methods of using a fire extinguisher. ▪ Encourage the use of external sprinklers for new development mapped within Very High FHSZs.	Significant and Unavoidable

Impact	Mitigation Measure(s)	Impact
Impact W-2. Proposed transportation improvements and land use projects envisioned by the 2050 MTP/SCS would be located in or near Very High FHSZs. This would increase wildfire risk associated with the construction or maintenance of infrastructure such as roads, post-fire landslides and flooding, and wildfire risk to people and structures. Impacts would be significant and unavoidable.	**W-1 Wildfire Reduction.** See Impact W-1 for Mitigation Measure W-1.	Significant and Unavoidable
Impact W-C-1. Development in the cumulative impact analysis area could be located in or near a state responsibility area or a Very High fire hazard severity zone. As significant risk of loss, injury, or death could occur as a result of impairing emergency response and evacuation, exposing project occupants to wildfire, exacerbating fire risk, or exposing project occupants to wildfire-related risks, impacts related to wildfire would be significant. The 2050 MTP/SCS contribution to this impact would be cumulatively considerable.	Mitigation Measure W-1 Wildfire Reduction.	Significant and Cumulatively Considerable

1 Introduction

This Environmental Impact Report (EIR) has been prepared for the 2050 Metropolitan Transportation Plan-Sustainable Communities Strategy (2050 MTP/SCS) for the Association of Monterey Bay Area Governments (AMBAG) and the Regional Transportation Plans (RTPs) for the Counties of Monterey, San Benito, and Santa Cruz.

Section 21000 et seq. of the California Public Resources Code, commonly referred to as the California Environmental Quality Act of 1970 (CEQA), requires the evaluation of environmental impacts associated with all planning programs or development projects proposed. As such, this EIR is an informational document for use by AMBAG, other agencies, and the general public in their consideration and evaluation of the environmental consequences of implementing the proposed 2050 MTP/SCS and RTPs for the Counties of Monterey, San Benito and Santa Cruz.

This section discusses (1) the purpose of this EIR; (2) 2050 MTP/SCS/RTPs and EIR background; (3) the type of environmental document prepared for the 2050 MTP/SCS and county level RTPs; (4) the content and format of the EIR; (5) the environmental review process required under CEQA; and (6) the lead, responsible, and trustee agencies. The proposed project is described in detail in Chapter 2, *Project Description*.

1.1 Background

The Transportation Agency for Monterey County (TAMC), the Council of San Benito County Governments (SBtCOG), and the Santa Cruz County Regional Transportation Commission (SCCRTC) are the state-designated Regional Transportation Planning Agencies (RTPAs) for Monterey, San Benito, and Santa Cruz counties, respectively. Each RTPA prepares a county-level long-range RTP.

As the metropolitan planning organization (MPO) for the tri-county region of Monterey, San Benito, and Santa Cruz counties, AMBAG is charged with developing a Monterey Bay Area Metropolitan Transportation Plan and the Sustainable Communities Strategy, the 2050 MTP/SCS, in compliance with SB 375 (Chapter 728, Statutes of 2008). The MTP is the metropolitan long-range transportation plan for the three counties and is a compilation of the transportation projects included in the Monterey County Regional Transportation Plan (2050 MC-RTP), the 2050 San Benito County Regional Transportation Plan (2050 SBC-RTP), and the 2050 Santa Cruz County Regional Transportation Plan (2050 SCC-RTP). The most recent MTP/SCS was adopted by AMBAG in June 2022. A program environmental impact report (EIR) was prepared for the Monterey Bay 2045 MTP/SCS and the RTPs prepared by the Monterey, San Benito and Santa Cruz County RTPAs.

The 2045 MTP/SCS identifies available transportation funding to 2045 and included lists of programmed and planned transportation projects to improve the transportation system through 2045. Among these listed projects were highway, road and street projects, pedestrian and bikeway projects, aviation projects, rail projects, and transit projects, as well as programs for transportation demand management and intelligent transportation systems. Although several projects from the 2045 MTP/SCS have been completed, many have not. In addition, new projects

have been incorporated into the 2050 MTP/SCS from the RTPs prepared by the Monterey, San Benito, and Santa Cruz RTPAs.

1.1.1 Environmental Impact Report Background

In compliance with the CEQA Guidelines Section 15063, AMBAG, as the Lead Agency responsible for the 2050 MTP/SCS, solicited preliminary public agency comments on the project through distribution of a Notice of Preparation (NOP, included in Appendix A) and receipt of public comments during two virtual scoping meetings held on February 21, 2024 from 12:00 p.m. to 1:30 p.m. and February 22, 2024 from 6:00 p.m. to 7:30 p.m.

The purpose of the NOP and the scoping meetings was to provide information about the proposed project to the public and members of public agencies, and to solicit comments on the scope of the environmental impacts analysis. Pursuant to CEQA Guidelines Section 15063, the NOP was circulated for a minimum of 30 days, with the comment period closing on March 1, 2024. AMBAG also accepted comments submitted after this date.

Table 1-1 summarizes the comments received in response to circulation of the NOP and indicates how and where these comments are addressed in the Draft EIR, as applicable. The table also includes verbal comments pertaining to the EIR that were provided at one or more of the scoping meetings held during the NOP comment period.

Table 1-1 NOP Comments and EIR Response

Commenter	Comment/Request	How and Where Comment Addressed
Agency Comments		
California Department of Fish and Wildlife	Requests that the EIR evaluate wildlife impacts related to water pollution, including sedimentation from erosion caused by project construction.	Refer to Section 4.4, Biological Resources, for an analysis impacts of the proposed 2050 MTP/SCS on wildlife and wildlife habitat, including riparian and aquatic habitat. Water quality impacts, including short-term impacts from construction activities, are evaluated in Section 4.10, Hydrology and Water Quality.
California Department of Fish and Wildlife	Requests that the EIR evaluate potential impacts to migratory nesting birds and birds of prey and potential conflicts with Fish and Game Code 3503 and 3513 protecting these birds.	Refer to Section 4.4, Biological Resources, for an analysis impacts of the proposed 2050 MTP/SCS on wildlife and wildlife habitat, including nesting birds and birds of prey.
California Department of Fish and Wildlife	Provides a list of special-status species with potential to occur in the AMBAG region and requests that the EIR analyze impacts to special-status species. Provides a list of mitigation measures that may reduce impacts to special-status species.	Refer to Section 4.4, Biological Resources, for an analysis impacts of the proposed 2050 MTP/SCS on wildlife and wildlife habitat, including special-status species.
California Department of Fish and Wildlife	Requests that the EIR evaluate potential impacts to regulated waterbodies and discuss Streambed Alteration Agreement regulations as they related to riparian, stream, wetland, and lake impacts. Provides a list of mitigation measures that may reduce impacts to wetlands and waterways.	Refer to Section 4.4, Biological Resources, for an analysis impacts of the proposed 2050 MTP/SCS on wetlands and aquatic habitat. Section 4.4 also discusses regulations and policies pertaining to biological resources, including Streambed Alteration Agreements.
California Department of Fish and Wildlife	Requests that the EIR evaluate cumulative impacts to wildlife. Cumulative impacts of transportation and land development infrastructure in watersheds should be evaluated.	Refer to Section 4.4, Biological Resources, for an analysis of impacts of the proposed 2050 MTP/SCS on wildlife and wildlife habitat and cumulative impacts.
California Department of Fish and Wildlife	Recommends consulting with USFWS and National Marine Fisheries Service on potential impacts to federally listed species.	Refer to Section 4.4, Biological Resources, for an analysis of impacts of the proposed 2050 MTP/SCS on special-status species, including federally listed species. The EIR provides a programmatic analysis of potential impacts to special-status species, as individual transportation projects included in the 2050 MTP/SCS have yet to be designed. When individual projects are designed and proposed, consultation with USFWS

Commenter	Comment/Request	How and Where Comment Addressed
		and/or National Marine Fisheries Service may be required, based on site conditions and project design.
California Department of Fish and Wildlife	Requests information collected during biological baseline surveys be compiled and uploaded to the California Natural Diversity Database.	The EIR analyzes potential impacts of the 2050 MTP/SCS on a program level, as specific transportation projects and land use development site plans have yet to be developed. Because the analysis is programmatic for the entire AMBAG region, baseline surveys for biological resources were unnecessary and impractical for this EIR analysis. As individual projects included in the 2050 MTP/SCS are proposed and designed, project level environmental review may be required, depending on the project and site conditions. At that time, baseline surveys may be required to support the project level analysis.
California Department of Fish and Wildlife	Summarizes requirements for payment of CEQA filing fees.	AMBAG will provide the required filing fees with the Notice of Determination, should the 2050 MTP/SCS be approved.
California Department of Transportation, Aeronautics Program	Acknowledges that several portions of the AMBAG region are located within an Airport Influence Area or safety zone, and recommends reviewing potential land use development for airport land use compatibility.	Refer to Section 4.9, Hazards and Hazardous Materials, and Section 4.12, Noise, for an analysis of impacts related to potential airport safety hazards and impacts related to aircraft noise.
California Department of Transportation, Aeronautics Program	Requests that airport-related noise and safety hazards are addressed and mitigated.	Refer to Section 4.9, Hazards and Hazardous Materials, and Section 4.12, Noise, for an analysis of impacts related to potential airport safety hazards and impacts related to aircraft noise.
Native American Heritage Commission	Notes that AB 52 and SB 18 Native American Consultation requirement may apply to the project, and requests that consultation is conducted, as applicable.	AMBAG has completed the required AB 52 consultation with affected Native American tribes. Please refer to Section 4.16, Tribal Cultural Resources, for a summary of consultation completed. Section 4.16 also provides an analysis of potential impacts of the 2050 MTP/SCS on tribal cultural resources.

Note: Comments in this table are paraphrased versions derived from comment letters. Full comment letters, as well as the NOP, are included as Appendix A to the EIR.

1.2 Purpose and Legal Authority

This EIR has been prepared in compliance with the CEQA Statutes and Guidelines. In general, the purpose of an EIR is to (see CEQA Guidelines Section 15121(a)):

a. Analyze the environmental effects of the adoption and implementation of the Plan;

b. Inform decision-makers, responsible and trustee agencies, and members of the public as to the range of the environmental impacts of the Plan;
c. Recommend a set of measures to mitigate significant adverse impacts; and
d. Analyze a range of reasonable alternatives to the proposed Plan.

As the lead agency for preparing this EIR, AMBAG will rely on the EIR analysis of environmental effects in their review and consideration of the proposed 2050 MTP/SCS prior to approval. Responsible Regional Transportation Planning Agencies will rely on the EIR analysis prior to approval of their respective Regional Transportation Plans.

As discussed in further detail below in Section 1.5.1, SB 375 provides streamlining benefits for certain transit oriented projects consistent with an adopted SCS. Pursuant to these provisions of SB 375, this EIR has also been prepared to allow qualifying projects to streamline their environmental review.

1.3 Scope and Content

This document is a Program EIR. Section 15168(a) of the CEQA Guidelines states that:

> A Program EIR is 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 a 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.

As a programmatic document, this EIR presents a regionwide assessment of the impacts of the proposed 2050 MTP/SCS and the RTPs prepared by the Monterey, San Benito, and Santa Cruz RTPAs. Analysis of site specific impacts of individual projects is not required in a program EIR. Many specific projects are not currently defined to the level that would allow for such an analysis. Individual specific environmental analysis of each project will be undertaken as necessary by the appropriate implementing agency prior to each project being considered for approval. This program EIR serves as a first-tier environmental document under CEQA supporting second-tier environmental documents for:

- Transportation projects developed during the engineering design process; and
- Land use and development projects, including residential or mixed use projects and transit priority projects consistent with the SCS.

Agencies implementing subsequent projects (“implementing agencies”) would undertake future environmental review for projects in the proposed 2050 MTP/SCS. Implementing agencies, as referred to in this document, are the three counties and RTPAs making up AMBAG (Monterey, Santa Cruz, and San Benito), the cities within those counties, and other implementing agencies within the tri-county region. Agencies that would implement a transportation project are also referred to herein as sponsor agencies in this EIR. This would include Caltrans, Amtrak, and transit

agencies operating in the region, among others. All of these agencies, as well as the AMBAG member agencies, would be able to prepare subsequent environmental documents that incorporate by reference the appropriate information from this program EIR regarding secondary effects, cumulative impacts, broad alternatives and other relevant factors. If the lead agency finds that implementation of a later activity would have no new effects and that no new mitigation measures would be required, that activity would require no additional CEQA review. Where subsequent environmental review is required, such review would focus on project specific significant effects peculiar to the project, or its site, that have not been considered in this program EIR (CEQA Guidelines Section 15168).

1.4 Implementation Issues and Future Environmental Review

The 2050 MTP/SCS contains hundreds of transportation projects that will be implemented over time. Implementation of the 2050 MTP/SCS will follow a schedule based on the funding and demand for individual transportation projects and improvements. Implementation of the SCS component of the 2050 MTP/SCS will require cooperation of the AMBAG member agencies and municipalities in the AMBAG region.

Implementation of the projects addressed in the 2050 MTP/SCS must individually demonstrate compliance with the requirements of CEQA and/or the National Environmental Policy Act (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 National Environmental Policy Act 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 EIR as a basis of their assessment of these regional or cumulative impacts. These projects may also be eligible for CEQA streamlining under SB 375, as explained further below.

This program EIR is a first-tier document that addresses the environmental impacts that may affect the three-county AMBAG region from adoption and implementation of 2050 MTP/SCS. “Tiering” generally refers to using the analysis of a broader environmental document that covers the general impacts of a program or larger-scale project so that subsequent environmental documents for a related individual project can be narrowed and focused on unique or unanalyzed issues. CEQA encourages the use of tiering to reduce the time and excessive paperwork involved in the review process by eliminating repetitive analyses of issues that were addressed in the program EIR (CEQA Guidelines Section 15168). SB 375 enables certain qualifying projects to tier off the SCS or alternative planning strategy developed to meet California’s climate change goals. Tiered documents may consist of initial studies or focused EIRs that may incorporate by reference portions of the program EIR from which they are tiered. If the potential environmental effects of subsequent actions are consistent with and adequately addressed by a certified program EIR, additional environmental analysis may be unnecessary.

1.4.1 Streamlining Under SB 375

SB 375 provides streamlining benefits for Transit Priority Projects (TPP) and certain mixed use projects. (See California Public Resources Code [PRC] Sections 21155 et seq.) For details, see the Governor's Office of Land Use and Climate Innovation's flow charts on SB 375 streamlining (LCI; formerly Governor's Office of Planning and Research 2011). A TPP is a project that meets all the criteria summarized below. For the purposes of this EIR, geographic areas that meet the TPP requirements are referred to as Transit Priority Areas.

- Consistent with the general land use designation, density, building intensity, and applicable policies specified for the project area in the SCS;
- Located within half a mile of a major transit stop or high quality transit corridor;
- Comprised of at least 50 percent residential use based on total building square footage, or as little as 26 percent residential use if the project has a floor area ratio of no less than 0.75; and
- Built out with a minimum of 20 dwelling units per acre (PRC Section 21155).

For the purposes of this EIR, geographic areas that meet the TPP requirements are referred to as Transit Priority Areas. One of three potential streamlining benefits may apply to a TPP pursuant to SB 375, as described below.

First, TPPs that meet a detailed list of criteria set forth in PRC Section 21155.1 are termed Sustainable Communities Projects and are statutorily exempt from CEQA. Due to the extensive list of criteria that must be met to achieve this exemption, the exemption may only be available in limited circumstances.

Second, 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 that requires a 30-day public review period (rather than the otherwise available 20-day public review period). 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]).

Third, a TPP that will result in one or more 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 only required to address the significant or potentially significant effects of the TPP on the environment and 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 but do not meet the criteria for TPPs. Projects eligible for streamlining must

incorporate mitigation measures required by an applicable prior environmental document, such as this EIR after it is certified by AMBAG.

Projects that qualify to 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. The streamlining only applies to the CEQA processing of a project.

1.4.2 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 CEQA Guidelines Section 15183.3 (PRC Sections 21094.5[c], 21094.5.5).

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

1.4.3 Streamlining Under SB 743

SB 743 (2013) (PRC Section 21099 and 21555.4) created an exemption from CEQA for certain residential, employment center, and mixed use development projects that are consistent with a Specific Plan (see Public Resources Code Section 21155.4.) (A Specific Plan implements a General Plan within a smaller geographic area, such as a downtown core or along a transit corridor; see Government Code Section 65450 et seq.). The exemption applies if a project meets all the following criteria:

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

The exemption cannot be applied if circumstances requiring preparation of a Subsequent or Supplemental EIR occur, for example 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.

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 (see Public Resources Code Section 21099[d]).

1.4.4 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 EIR for the purposes of other allowed CEQA tiering (PRC Sections 21068.5, 21093-21094, CEQA Guidelines 15152, 15385). Tiering is the

process by which general matters and environmental effects in an EIR prepared for a policy, plan, program or ordinance are relied upon by a narrower second-tier or site specific EIR (PRC Section 21068.5). Moreover, by tiering from this EIR (if certified by AMBAG), 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 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 (PRC Section 21094).

Recent CEQA legislation may also provide tiering opportunities for projects facilitated by the 2050 MTP/SCS. Effective June 30, 2025, AB 130 introduces substantial reforms to streamline housing development under CEQA. The bill establishes a statutory CEQA exemption for qualifying infill housing projects located in urban areas up to 20 acres, provided they meet specific criteria such as adjacency to urban uses and avoidance of historic or environmentally sensitive sites. This exemption is designed to reduce environmental review burdens for projects that align with local zoning and planning standards. Projects identified in the 2050 MTP/SCS that meet these criteria may be eligible for this exemption, offering a pathway for CEQA compliance that reflects consistency with regional planning objectives.

AB 130 also makes permanent several provisions of the Permit Streamlining Act, including timelines for application completeness and project approval, and limits the number of public hearings for qualifying housing projects. In addition, the bill codifies elements of the Housing Accountability Act and SB 330, including protections for vested rights and restrictions on growth control measures. A notable provision is the statewide freeze on residential building code updates from October 1, 2025, through June 1, 2031, which aims to reduce regulatory uncertainty and development costs. Projects identified in the 2050 MTP/SCS that meet these criteria may be eligible for this exemption, offering a pathway for CEQA compliance that reflects consistency with regional planning objectives.

SB 131, effective June 30, 2025, complements AB 130 by focusing on CEQA streamlining for infrastructure and public-serving projects. It introduces a new review pathway for “near miss” projects—those that narrowly fail to qualify for a CEQA exemption due to a single disqualifying condition. Under this provision, CEQA review is limited to the environmental effects of that specific condition, and such projects are exempt from analyzing alternatives or growth-inducing impacts. This approach may be applicable to certain transportation and infrastructure projects included in the MTP/SCS, where project-level review can be focused on specific environmental considerations while maintaining consistency with CEQA requirements.

SB 131 also creates or expands CEQA exemptions for a range of project types, including advanced manufacturing facilities on industrial-zoned land, broadband infrastructure in public rights-of-way, updates to climate adaptation plans, High-Speed Rail maintenance facilities, and local rezoning actions that implement Housing Element commitments. In addition, the bill mandates biennial updates to CEQA Guidelines to improve clarity and address ambiguities. These changes reflect a broader policy shift toward facilitating development while maintaining targeted environmental protections, and they are expected to significantly impact the planning and approval processes for both housing and infrastructure projects across California. These provisions may be relevant to MTP/SCS implementation, particularly where local jurisdictions

pursue projects or planning actions that align with broader state objectives related to climate adaptation, infrastructure modernization, and housing production.

1.5 Lead, Responsible, and Trustee Agencies

The CEQA Guidelines define lead, responsible, and trustee agencies. A lead agency is the public agency with principal responsibility for carrying out or approving a project; the lead agency prepares the CEQA document (CEQA Guidelines Section 15367). A responsible agency is an agency other than the lead agency with responsibility for carrying out or approving a project, and uses the lead agency's CEQA document in its decision-making (CEQA Guidelines Section 15381). A trustee agency is a State agency with jurisdiction over natural resources affected by a project, including California Department of Fish and Wildlife, State Lands Commission, California Parks and Recreation, and University of California (CEQA Guidelines Section 15386).

AMBAG is the lead agency for the 2050 MTP/SCS because it holds principal responsibility for approving the 2050 MTP/SCS. TAMC, SBtCOG, and SCCRTC, are responsible agencies for the 2050 MTP/SCS and will adopt their own RTPs. Project sponsors for individual projects analyzed in this program EIR may include: TAMC, SBtCOG, and SCCRTC; Caltrans; Monterey, San Benito, and Santa Cruz counties; cities within the AMBAG region; transit agencies; and other project sponsors who may implement any of the projects listed in the 2050 MTP/SCS. These agencies are considered responsible agencies for the 2050 MTP/SCS but may be lead agencies for individual transportation or land use projects.

1.6 EIR Content and Format

This document includes discussions of environmental impacts related to several issue areas. The analysis of environmental impacts identifies impacts by category: significant and unavoidable, significant but mitigable, less than significant, and beneficial. It proposes mitigation measures, where feasible, for identified significant environmental impacts to reduce project impacts, identifying when impacts can be reduced to a less than significant level. The responsible agency for each mitigation measure is also identified.

This EIR has been organized into an Executive Summary and eight sections. These are:

0) **Executive Summary.** Provides an overview of the project and a summary of the impacts, mitigation measures, and level of significance after implementation of mitigation.
1) **Introduction.** Provides the project background, description of the type of environmental document and CEQA streamlining opportunities, and information about the EIR content and format.
2) **Project Description.** Presents and discusses the project objectives, project location, and specific project characteristics.
3) **Environmental Setting and Impact Analysis Approach.** Provides a description of the existing physical setting of the AMBAG region, including a description of the regional transportation system, and discusses the EIR baseline and approach to direct and cumulative analyses.

4) **Analysis of Environmental Issues.** Describes existing conditions found in the project area and assesses environmental impacts that may be generated by implementing the proposed project. These project impacts are compared to "thresholds of significance" in order to determine the nature and severity of the direct and indirect impacts. Mitigation measures, intended to reduce adverse, significant impacts below threshold levels, are proposed where feasible. Impacts that cannot be eliminated or mitigated to less than significant levels are also identified.
5) **MTP Consistency with Other Plans Analysis.** Describes consistency with other local and regional plans.
6) **Other CEQA Required Discussions.** Identifies growth inducing impacts that may result from implementation of the proposed MTP/SCS, as well as long-term effects, significant irreversible environmental changes, and cumulative impacts.
7) **Alternatives.** Describes alternatives to the proposed project and compares their impacts to the proposed project's.
8) **References and Preparers.** Lists all published materials, federal, State and local agencies and other organizations and individuals consulted during the preparation of this EIR. It also lists the EIR preparers.

The EIR also includes seven appendices containing relevant and applicable data used to inform or support the analysis in the EIR:

- Appendix A: Notice of Preparation and NOP Response Letters
- Appendix B: 2050 MTP/SCS and RTPs Transportation Project List
- Appendix C: Performance Metric Data
- Appendix D: Special Status Species
- Appendix E: 2050 MTP/SCS Air Quality and GHG Emissions
- Appendix F: AB 52 Consultation
- Appendix G: 2050 MTP/SCS and RTPs Transportation Alternatives Project List

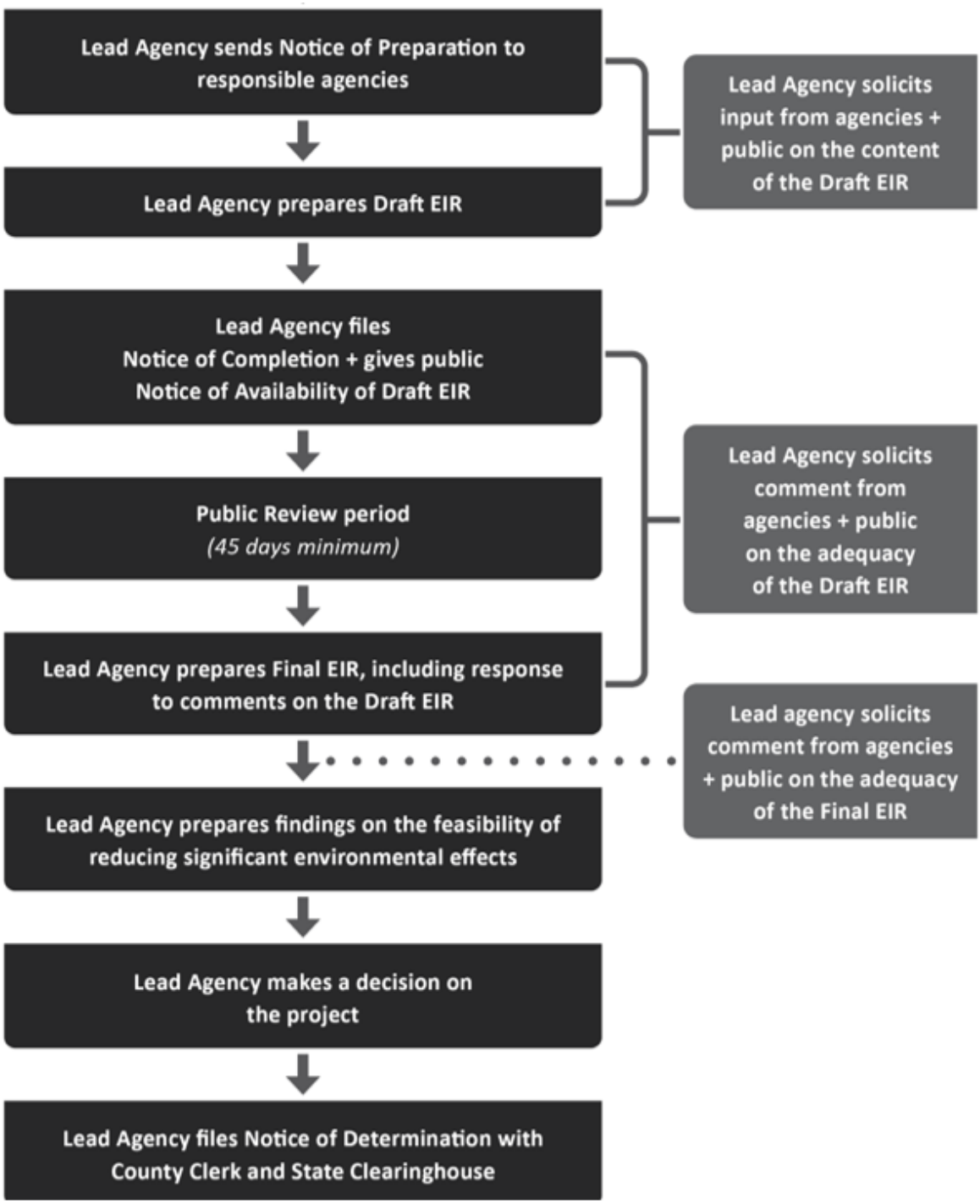
1.7 Environmental Review Process

The environmental impact review process, as required under CEQA, is summarized below and illustrated in Figure 1-1. The steps are presented in sequential order.

1. **Notice of Preparation (NOP).** AMBAG, following CEQA Guidelines Section 15082(a), submitted an NOP to the State Clearinghouse on January 19, 2024, and the State Clearinghouse circulated it to applicable State agencies for a review period that ended on March 1, 2024. Two public scoping meetings were held during the NOP circulation and comment period, as described in Section 1.1.1.
2. **Draft EIR Prepared.** The Draft EIR must contain: a) table of contents or index; b) summary; c) project description; d) environmental setting; e) discussion of significant impacts (direct, indirect, cumulative, growth-inducing and unavoidable impacts); f) a discussion of alternatives; g) mitigation measures; and h) discussion of irreversible changes.

3. **Notice of Availability/Completion (NOA/NOC) and Public Review.** AMBAG, as the lead agency, filed a Draft EIR NOC with the State Clearinghouse and prepared a Draft EIR Notice of Availability (NOA). As the lead agency, AMBAG is soliciting input from other agencies and the public and will respond in writing to all comments received (Public Resources Code Sections 21104 and 21253). The public review period will exceed the minimum of 45 days.
4. **Final EIR.** AMBAG will prepare a Final EIR that includes: a) the Draft EIR; b) copies of comments received during public review; c) list of persons and entities commenting; and d) responses to comments.
5. **Certification of Final EIR.** Prior to making a decision on the proposed MTP/SCS, AMBAG must certify that: a) the Final EIR has been completed in compliance with CEQA; b) the Final EIR was presented to the decision-making body of the lead agency; and c) the decision-making body reviewed and considered the information in the Final EIR prior to approving a project (*CEQA Guidelines* Section 15090). Each RTPA will also approve the EIR and approve their RTPs using the same process (refer to Step 10).
6. **Findings/Statement of Overriding Considerations.** For each significant impact of the project identified in the EIR, AMBAG and the RTPAs must find, based on substantial evidence, that either: a) the project has been changed to avoid or substantially reduce the magnitude of the impact; b) changes to the project are within another agency's jurisdiction and such changes have or should be adopted; or c) specific economic, social, or other considerations make the mitigation measures or project alternatives infeasible (CEQA Guidelines Section 15091). A Statement of Overriding Considerations must be adopted for significant unavoidable impacts that sets forth the specific social, economic, or other reasons supporting the agency's decision (CEQA Guidelines Section 15092).
7. **Mitigation Monitoring Reporting Program.** AMBAG would adopt a reporting or monitoring program for mitigation measures that were adopted or made conditions of project approval to mitigate significant effects.
8. **Lead Agency Project Decision.** AMBAG, as the lead agency, may a) disapprove the project because of its significant environmental effects; b) require changes to the project to reduce or avoid significant environmental effects; or c) approve the project despite its significant environmental effects, if a statement of overriding considerations is adopted (CEQA Guidelines Sections 15092).
9. **Notice of Determination (NOD).** AMBAG will file a NOD after deciding to approve a project for which an EIR is prepared (CEQA Guidelines Section 15094). AMBAG will file the NOD with the applicable County Clerks to be posted for 30 days and sent to anyone previously requesting notice. Posting of the NOD will start a 30-day statute of limitations on CEQA legal challenges (PRC Section 21167[c]).
10. **RTPA Certifications and Project Decisions.** Following AMBAG certification of the Final EIR and project decision, each RTPA must consider the Final EIR for their RTP and adopt a resolution to adopt CEQA findings, a statement of overriding considerations, and a MMRP related to the EIR certified by AMBAG.

Figure 1-1 Environmental Review Process



2 Project Description

This section describes the proposed Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) and Regional Transportation Plans (RTPs), including the project objectives, project location and characteristics, 2050 MTP/SCS transportation projects and discretionary actions needed for approval.

2.1 Project Applicant

Association of Monterey Bay Area Governments
24580 Silver Cloud Court
Monterey, California 93940
(831) 883-3750

2.2 Lead Agency Contact Person

Heather Adamson, Director of Planning
Association of Monterey Bay Area Governments
24580 Silver Cloud Court
Monterey, California 93940
(831) 883-3750

2.3 Project Purpose

The 2026 Monterey County RTP (MC-RTP), the 2050 San Benito County RTP (SBC-RTP), the 2050 Santa Cruz County RTP (SCC-RTP), and the 2050 MTP/SCS (hereafter referred to as the 2050 MTP/SCS) have been prepared to comply with the current California Transportation Commission (CTC) Regional Transportation Plan Guidelines, pursuant to Government Code Section 14522, to prepare a regional transportation plan, a long-range transportation planning document which will provide policy guidelines regarding the planning and programming of transportation projects within each respective County through 2050. Furthermore, Government Code Sections 65050, 65400, 65584.01-04, 65587, 65588 and Public Resources Code Section 21155 were amended in January 2009 when Senate Bill (SB) 375 became law, requiring coordinated planning between regional land use and transportation plans to increase efficiency and reduce greenhouse gas (GHG) emissions. The following sections describe the legislative requirements and project objectives associated with the 2050 MTP/SCS and the RTPs for Monterey, San Benito, and Santa Cruz counties.

2.3.1 General Legislative Requirements

Regional transportation planning in California is a dynamic process. It involves the interaction of federal, state, regional, and local agencies and the consideration of multiple plans and programs. As the state-designated Regional Transportation Planning Agencies (RTPAs), the Transportation

Agency for Monterey County (TAMC), the Council of San Benito County Governments (SBtCOG), and the Santa Cruz County Regional Transportation Commission (SCCRTC) are tasked with developing RTPs for their respective counties to provide a basis for the allocation of state and federal transportation funds to transportation projects within each county over a long-range time frame.

The Association of Monterey Bay Area Governments (AMBAG), as the federally-designated metropolitan planning organization (MPO) for Monterey, San Benito and Santa Cruz counties, is required by both federal and state law to prepare a long-range (at least 20-year) transportation planning document known as an MTP. The MTP contains a compilation of the fiscally constrained projects proposed in the RTPs prepared by TAMC, SBtCOG, and SCCRTC as the state-designated RTPAs for Monterey, San Benito and Santa Cruz counties, respectively. The MTP is a document used to achieve a coordinated and balanced regional transportation system for the Monterey Bay region.

AMBAG is also responsible for preparing a Sustainable Communities Strategy (SCS) as part of the MTP, pursuant to the requirements of California SB 375 as adopted in 2008 (discussed further below).The SCS sets forth a forecasted development pattern for the region, which, when integrated with the transportation network and other transportation measures and policies, is intended to reduce GHG emissions from passenger vehicles and light duty trucks to achieve the regional GHG reduction targets set by the California Air Resources Board (CARB).

The CTC's document *2024 California Regional Transportation Plan Guidelines for MPOs* serves as the guidance for RTP development (California Transportation Commission 2024a). In preparing the MTP/SCS, AMBAG followed the 2024 RTP Guidelines for the 2050 MTP/SCS. Under both federal and State law, the RTPAs and MPOs must update the RTPs and MTP every four years.[1] AMBAG adopted its most recent MTP/SCS in June 2022. The 2022 MTP/SCS covered a 23-year period between 2022 and 2045.

2.3.2 SB 375 Requirements

The Sustainable Communities Strategy and Climate Protection Act, SB 375 (codified at CAL. GOVT CODE §§ 14522.1, 14522.2, 65080.01, 65080, 65400, 65583, 65584.01, 65584.02, 65584.04, 65587, 65588; CAL. PUB. RES. CODE §§2161.3, 21155, 21159.28), is a law passed in 2008 by the California legislature that requires each MPO to demonstrate, through the development of an SCS, how its region will integrate transportation, housing and land use planning to meet the GHG reduction targets set by CARB. In addition to creating requirements for MPOs, it also creates requirements for CTC and CARB. Some of the requirements include the following:

[1] 23 C.F.R. §450.322(c); Gov. Code §65080(d).

- CTC must maintain guidelines for the travel demand models that MPOs develop for use in the preparation of their RTPs or MTPs.
- CARB must develop regional GHG emission reduction targets for automobiles and light duty trucks for 2020 and 2035 by September 30, 2010. These targets were approved on September 23, 2010. CARB is tasked to update the regional targets every eight years, with the option of revising them every four years. The latest targets went into effect October 1, 2018.
- Each MPO must prepare an SCS as part of its RTP or MTP to demonstrate how it will meet the regional GHG targets.
- Each MPO must adopt a public participation plan for development of the SCS that includes informational meetings, workshops, public hearings, consultation and other outreach efforts.
- If an SCS cannot achieve the regional GHG target, the MPO must prepare an Alternative Planning Strategy showing how it would achieve the targets with alternative development patterns, infrastructure, or transportation measures and policies.
- Each MPO must prepare and circulate a draft SCS at least 55 days before it adopts a final RTP or MTP.
- After adoption, each MPO must submit its SCS to CARB for review.
- CARB must review each SCS to determine whether, if implemented, it would meet the GHG targets. CARB must complete its review within 60 days.

AMBAG reduction target from CARB is a six percent per capita reduction from 2005 levels by 2035 (CARB 2021). This target applies to the entire AMBAG region for all on-road light duty trucks and passenger vehicles emissions. The 2050 MTP/SCS includes the year for which the regional target is required (2035) as well as the additional scenario year of 2050 to comply with federal law. The 2050 MTP/SCS meets the 2035 GHG target.

SB 375 specifically states that nothing in the law changes local governments local land use authorities. The 2050 MTP/SCS provides a regional policy foundation that local governments may build upon, if they so choose. The 2050 MTP/SCS includes and accommodates the growth projections for the region. SB 375 also requires that forecasted development patterns for the region be consistent with the eight-year regional housing needs as allocated to member jurisdictions through the Regional Housing Needs Allocation (RHNA) process under State housing law.[2]

In addition, this 2050 MTP/SCS EIR lays the groundwork for the streamlined review of qualifying development projects. Qualifying projects that meet statutory criteria and are consistent with the 2050 MTP/SCS are eligible for streamlined environmental review pursuant to CEQA under SB 375 and other laws; see Section 1.6.1.

[2] The RHNA was last updated as part of the 2045 MTP/SCS and will be updated for the next MTP/SCS scheduled for adoption in 2030.

2.3.3 Infrastructure Investment and Jobs Act

The Infrastructure Investment and Jobs Act (IIJA)(Public Law 117-58), was signed into law on November 15, 2021. The IIJA reauthorizes surface transportation programs through fiscal year 2026 and builds upon the policy framework and performance-based planning provisions established under Moving Ahead for Progress in the 21st Century Act and the Fixing America's Surface Transportation Act. The IIJA maintains the core metropolitan and statewide transportation planning requirements under 23 U.S. Code § 134 and § 135, while expanding the scope of planning to further address climate change, equity, resiliency, and infrastructure modernization. In the development of the MTP and RTPs, the IIJA continues to require MPOs and RTPAs to:

- Coordinate with officials responsible for other types of planning activities affected by transportation, such as land use, housing, economic development, environmental protection, freight, and emergency management.
- Engage traditionally underserved and disadvantaged communities to ensure equitable access to transportation planning and project benefits.
- Incorporate consideration of climate change, environmental justice, and resilience, particularly regarding the impact of extreme weather and natural disasters on transportation infrastructure.
- Improve infrastructure condition, safety, and system efficiency, while supporting economic vitality, freight mobility, and multimodal connectivity.

The IIJA adds emphasis on:

- Reducing greenhouse gas emissions through transportation planning and investments.
- Increasing resilience to natural hazards and climate-related events.
- Investing in complete streets, bicycle/pedestrian infrastructure, and multimodal transportation.
- Strengthening public involvement and interagency coordination, including with housing and health agencies.
- Supporting equitable access to transportation options for disadvantaged communities.

The 2050 MTP/SCS prepared by AMBAG, along with the RTPs prepared by the Monterey, San Benito, and Santa Cruz RTPAs, have been developed to comply with the planning requirements of the IIJA and its associated regulations under 23 CFR Part 450.

2.3.4 Environmental Justice

AMBAG and the RTPAs are required to address social equity and environmental justice in the 2050 MTP/SCS and the county level RTPs. The legal basis for environmental justice stems from the Civil Rights Act of 1964, along with Executive Order 12898 (February 1994), which states that "each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or

environmental effects of its programs, policies, and activities on minority populations and low income populations." AMBAG and the RTPAs must evaluate how the 2050 MTP/SCS and the county level RTPs might impact minority and low income populations and must ensure that the 2050 MTP/SCS and RTPs does not have a disproportionate adverse impact on such populations. The MTP and the county level RTPs meet EO 12898 and Title VI requirements which are further discussed in Chapter 5 of the 2050 MTP/SCS.

In addition, per 23 C.F.R. Section 450.316(a)(1)(vii), the public participation plan that AMBAG must develop and use must describe explicit procedures, strategies, and desired outcomes for "[s]eeking out and considering the needs of those traditionally underserved by existing transportation systems, such as low income and minority households, who may face challenges accessing employment and other services."

2.3.5 Metropolitan/Regional Transportation Plans

The procedures for developing Regional Transportation Plans (RTPs) – also referred to as Metropolitan Transportation Plans (MTPs) – are provided in the California Transportation Commission's *2024 Regional Transportation Plan Guidelines for Metropolitan Planning Organizations* (California Transportation Commission 2024a) and the *2024 California Regional Transportation Plan Guidelines for Regional Transportation Planning Agencies* (California Transportation Commission 2024b). Because the AMBAG document encompasses three RTPs, it is referred to as a MTP as AMBAG is the MPO overseeing the tri-county area. The MPO guidelines set forth requirements also applicable to RTPAs, which include:

- Provide an assessment of current modes of transportation and the potential of new travel options within the region;
- Project/estimate the future needs for travel and goods movement;
- Identify and document specific actions necessary to address the region's mobility and accessibility needs;
- Guide and document public policy decisions by local, regional, state and federal officials regarding transportation expenditures and financing;
- Identify needed transportation improvements in sufficient detail to serve as a foundation for:
  - Development of the Federal Transportation Improvement Program (FTIP) and the Interregional Transportation Improvement Program (ITIP);
  - Facilitation of the National Environmental Protection Act (NEPA)/404 integration process; and
  - Identification of project purpose and need.
- Employ performance measures that demonstrate the effectiveness of the transportation improvement projects in meeting the intended goals;
- Promote consistency between the California Transportation Plan, the regional transportation plan and other transportation plans developed by cities, counties, districts, Native American Tribal Governments and State and Federal agencies in responding to statewide and interregional transportation issues and needs;

- Provide a forum for 1) participation and cooperation, and 2) facilitating partnerships that reconcile transportation issues which transcend regional boundaries; and
- Involve community-based organizations as part of the public, Federal, State and local agencies, Native American Tribal Governments, as well as local elected officials, early in the transportation planning process so as to include them in discussions and decisions on the social, economic, air quality and environmental issues related to transportation.

RTPs and MTPs must include long-term horizons (at least 20 years) that reflect regional needs, identify regional transportation issues/problems and develop and evaluate solutions that incorporate all modes of travel. RTPs and MTPs must also recommend a comprehensive approach that provides direction for programming decisions to meet the identified regional transportation needs. RTPs and MTPs must be consistent with the applicable requirements of the IIJA and other federal laws and regulations, including conformity with the 1990 Clean Air Act Amendments and consistency with the FTIP. Because the 2050 MTP/SCS is a compilation of three RTPs, consistency among the documents is achieved through the MTP.

2.3.6 CEQA Project Objectives

The purpose of the 2050 MTP/SCS and the county level RTPs is to coordinate and facilitate the planning, programming and budgeting of all transportation facilities and services within the Monterey Bay region through 2050 and demonstrate how the region will integrate transportation and land use planning to meet the GHG reduction targets established by CARB. In developing the 2050 MTP/SCS and county level RTPs, AMBAG and the respective RTPAs followed the IIJA requirements that the RTP planning process provide for consideration of projects and strategies that will:

- Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity and efficiency;
- Increase the safety and security of the transportation system for motorized and non-motorized users;
- Increase the accessibility and mobility options available to people and freight;
- Protect and enhance the environment, promote energy conservation, improve the quality of life and promote consistency between transportation improvements and State and local planned growth and economic development patterns;
- Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
- Promote efficient system management and operation;
- Emphasize the preservation of the existing transportation system;
- Improve resiliency and reliability of the transportation system and reduce or mitigate stormwater impacts; and
- Enhance travel and tourism.

For purposes of this EIR, the primary objective of the 2050 MTP/SCS and the county level RTPs is to comply with applicable regulatory requirements, including CTC Guidelines and SB 375, including SB 375's regional GHG reduction targets. AMBAG's specific objectives for the 2050 MTP/SCS are to additionally ensure that the SCS and the transportation system planned for the AMBAG region accomplishes the following:

- Serves regional goals, objectives, policies, and plans.
- Responds to community and regional transportation needs.
- Promotes energy efficient, environmentally sound modes of travel and facilities and services.
- Promotes equity and efficiency in the distribution of transportation projects and services.

2.4 Project Location

The 2050 MTP/SCS covers the entire area of Monterey, San Benito, and Santa Cruz counties and includes all the incorporated cities and unincorporated communities contained therein (see Figure 2-1). The three RTPs each cover the entire areas of their respective county. Capital improvement projects identified in the 2050 MTP/SCS and each of the county level RTPs are located on State highways, county roads and locally owned streets, as well as on transit district property, and public utility lands.

2.5 Project Characteristics

The 2050 MTP/SCS and county level RTPs are an update to the 2045 MTP/SCS/RTPs which were adopted in June 2022. The updates from the 2045 MTP/SCS and county level RTPs consisted of updating the growth forecasts from 2015/2020-2045 to 2022-2050; updating project cost estimates; updating revenue assumptions; and minor changes to transportation project lists. The MTP/SCS vision, policies, and goals have also been updated as well as the performance measures.

The 2050 MTP/SCS and county level RTPs plans address how the AMBAG region will meet its transportation needs for the period through 2050, considering existing and projected future land use patterns as well as population and job growth. The 2050 MTP/SCS estimates nearly $16 billion in revenues expected to be available to the region from all transportation funding sources over the course of the planning period. It identifies and prioritizes expenditures of this anticipated funding for transportation projects of all transportation modes: highways, streets and roads, transit, rail, bicycle and pedestrian, aviation, as well as transportation demand management measures (TDM) and transportation systems management (TSM).

The 2050 MTP/SCS is based on a preferred land use and transportation scenario which defines a pattern of future growth and transportation system investment for the region emphasizing a transit oriented development and infill approach to land use and housing. Population and job growth are allocated principally within existing urban areas near public transit. Table 2-1 shows the current and projected population growth within the AMBAG region.

Figure 2-1 Project Location



Table 2-1 AMBAG Population Growth 2022-2050

Jurisdiction	Actual[1] 2022	Projected[2] 2030	Projected[2] 2040	Projected[2] 2050	Percent Change (2022 – 2050)
Monterey County	**436,033**	**446,857**	**454,652**	**461,279**	**6%**
Carmel-By-The-Sea	3,115	2,881	3,018	3,082	-1%
Del Rey Oaks	1,560	1,670	1,850	1,958	26%
Gonzales	8,404	11,430	11,555	11,647	39%
Greenfield	19,853	21,149	21,498	21,633	9%
King City	13,419	14,871	14,975	15,158	13%
Marina	21,646	27,568	31,706	34,305	58%
Monterey	28,332	28,714	29,995	30,859	9%
Pacific Grove	14,846	15,223	15,602	15,894	7%
Salinas	160,587	161,947	163,127	164,615	3%
Sand City	375	1,025	1,092	1,121	199%
Seaside	32,390	30,507	31,521	32,626	1%
Soledad	26,730	26,061	26,176	25,292	-5%
Unincorporated Monterey County	104,776	103,811	102,537	103,089	-2%
San Benito County	**65,642**	**68,913**	**69,977**	**71,030**	**8%**
Hollister	42,681	45,633	45,745	45,884	8%
San Juan Bautista	2,068	2,035	2,066	2,098	1%
Unincorporated San Benito County	20,893	21,245	22,166	23,048	10%
Santa Cruz County	**264,495**	**268,914**	**278,507**	**281,399**	**6%**
Capitola	9,609	10,070	11,029	11,395	19%
Santa Cruz	62,809	68,057	74,839	75,950	21%
Scotts Valley	11,943	12,322	12,887	13,235	11%
Watsonville	51,096	51,475	52,005	52,251	2%
Unincorporated Santa Cruz County	129,038	126,990	127,747	128,568	0%
AMBAG Total	**766,170**	**784,684**	**803,136**	**813,708**	**6%**

[1] Source: California Department of Finance 2024.

[2] Source: AMBAG 2024.

The preferred land use and transportation scenario are based on the most recent planning assumptions, and consider local general plans and other factors such as updated specific plans and recently completed transportation planning studies.

Transportation projects and the preferred land use pattern that are included in the 2050 MTP/SCS for the year 2050 are shown in Figure 2-2 through Figure 2-8. Chapter 4 of the 2050 MTP/SCS describes the proposed SCS, with Chapter 5 identifying the metrics to quantify the transportation, environmental, economic and equity benefits of the Plan. Appendix G of the 2050 MTP/SCS highlights the performance of the MTP/SCS for 2050. The performance of the Revenue Constrained network is compared in Appendix G to other network scenarios, such as 2022 Baseline and 2050 No Project.

Figure 2-2 MTP Projects Monterey County (2050)



Figure 2-3 SCS Land Use Monterey County: North (2050)

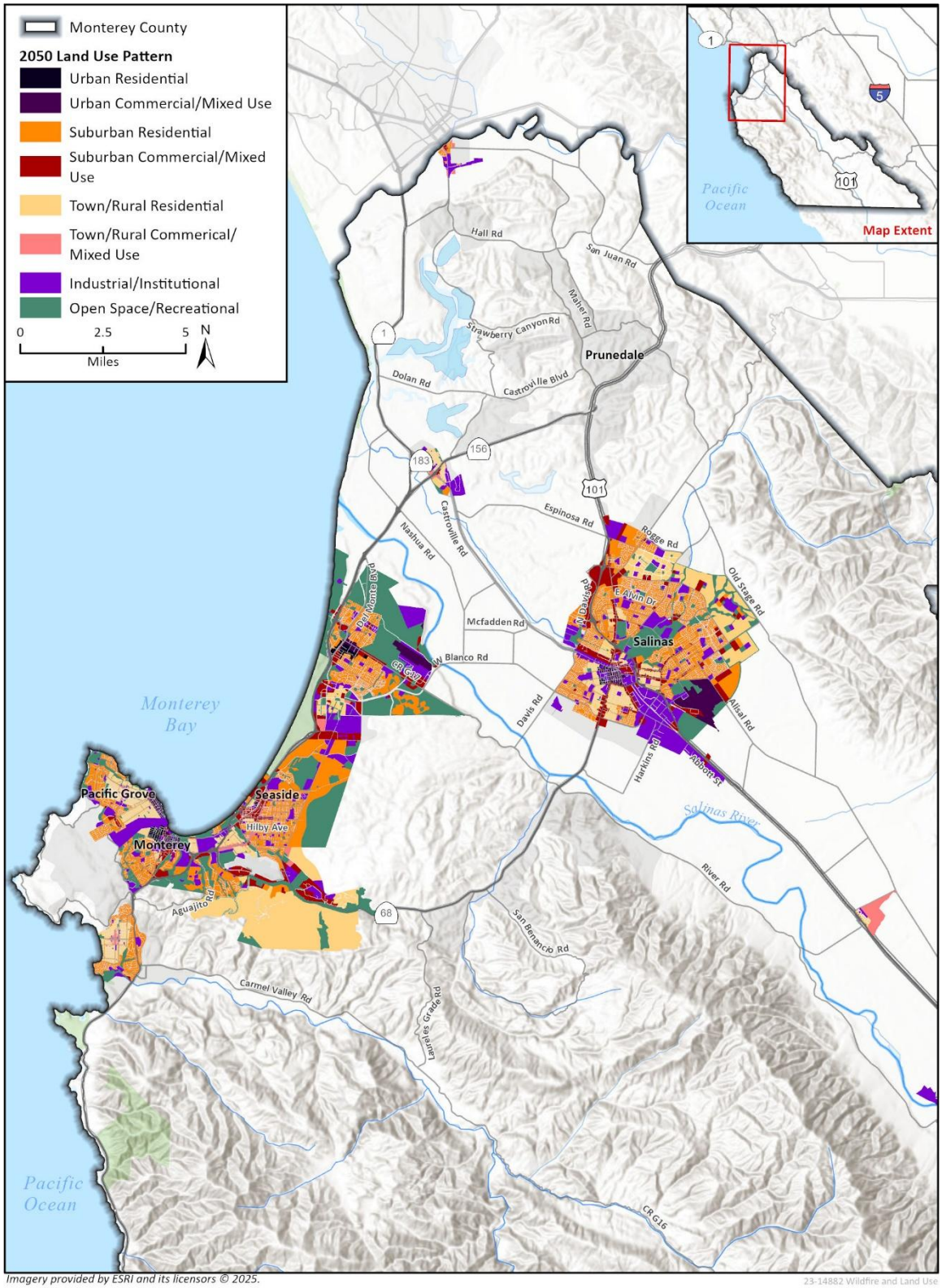


Figure 2-4 SCS Land Use Monterey County: South (2050)

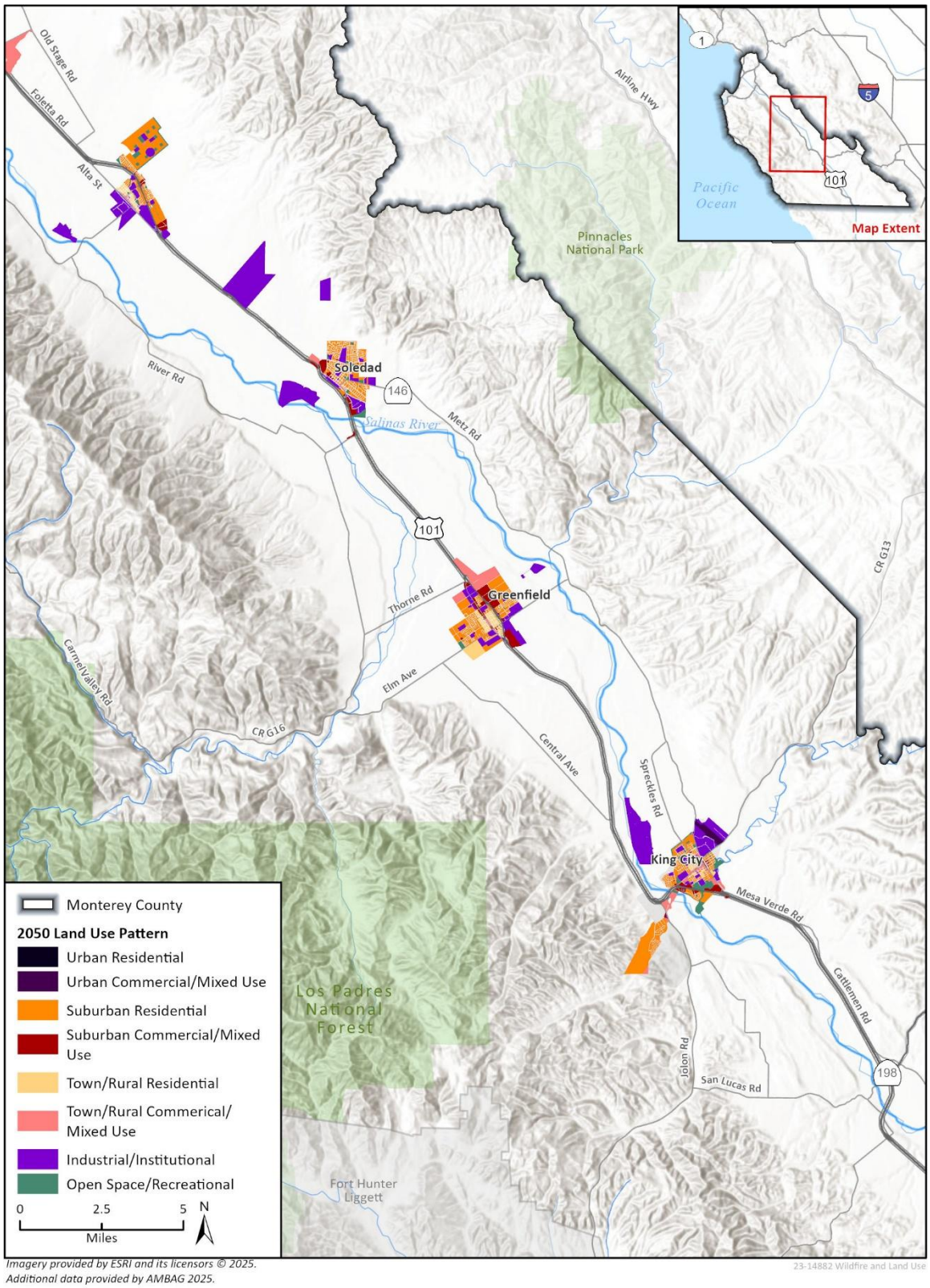


Figure 2-5 MTP Projects San Benito County (2050)

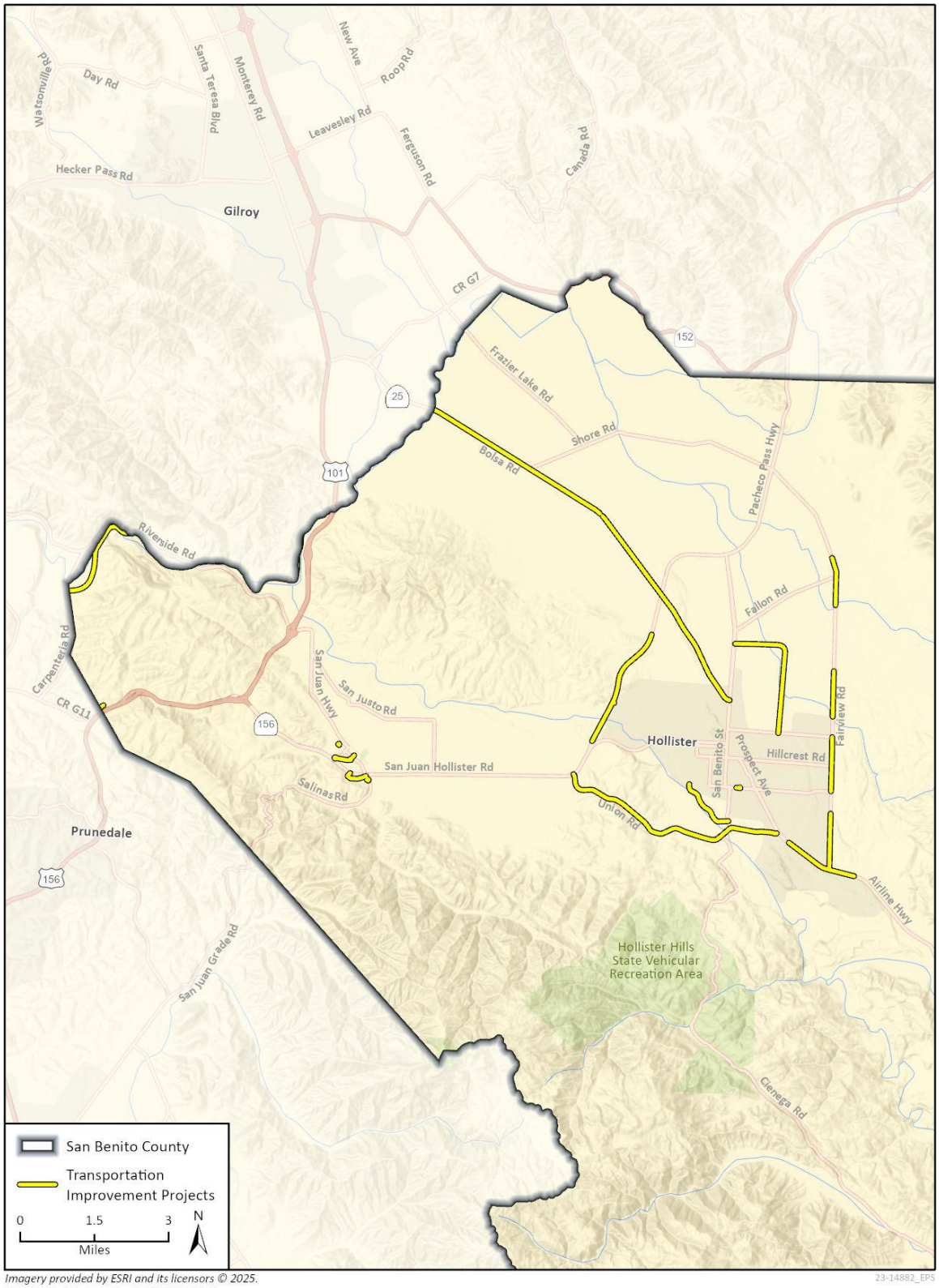


Figure 2-6 SCS Land Use San Benito County (2050)

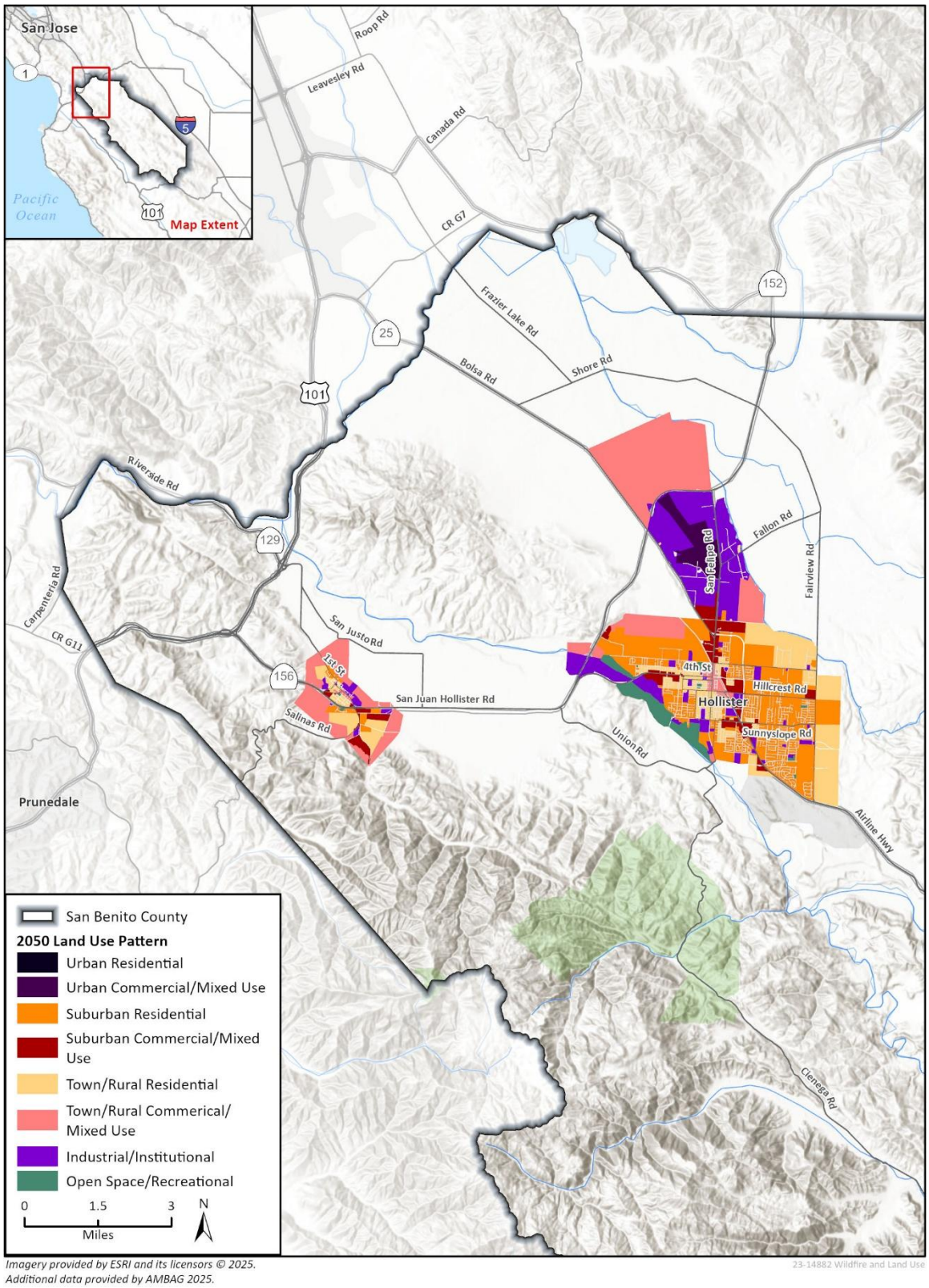
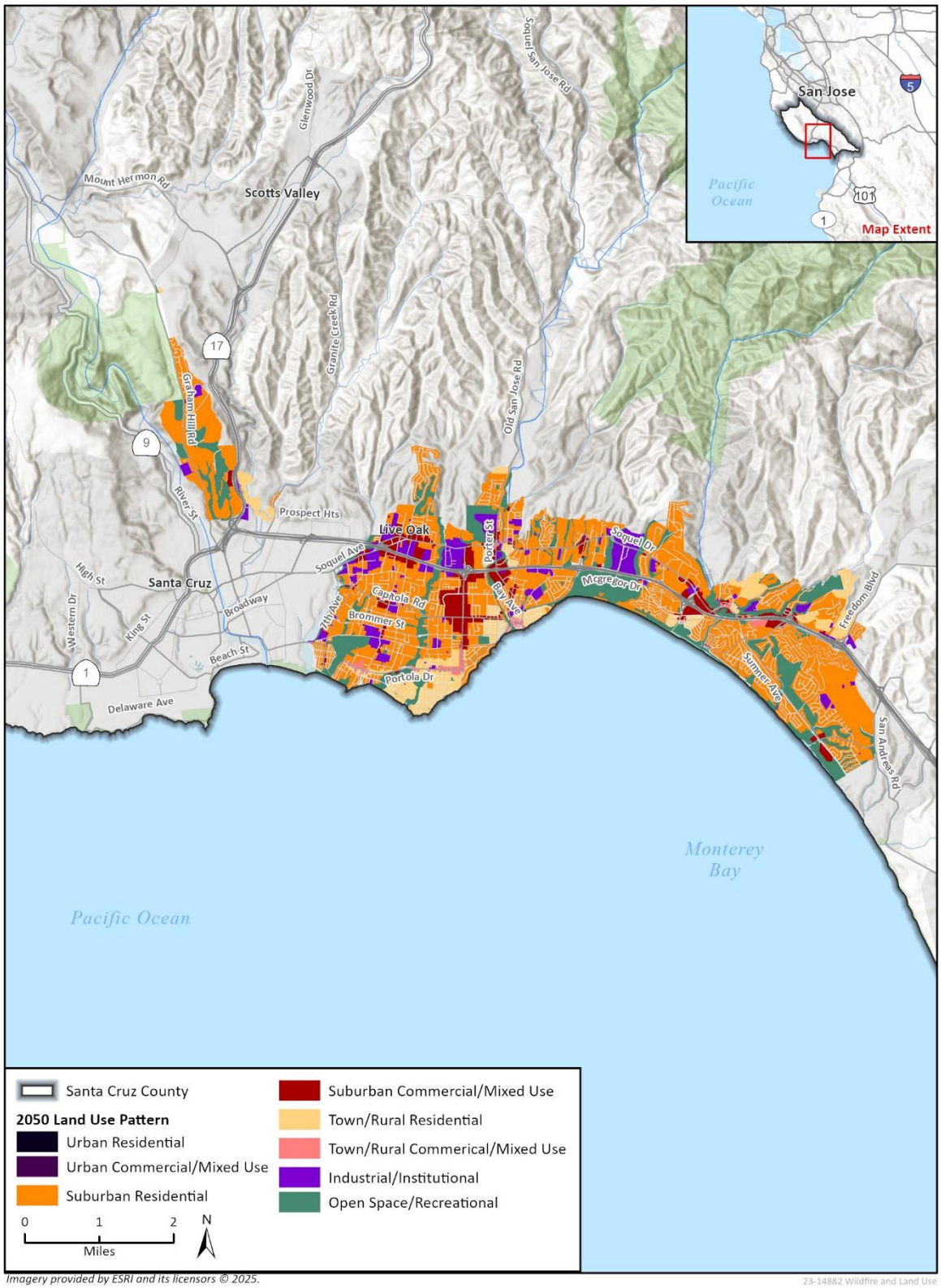


Figure 2-7 MTP Projects Santa Cruz County (2050)



Figure 2-8 SCS Land Use Santa Cruz County (2050)



The 2050 MTP/SCS preferred scenario consists of an intensified land use distribution approach that concentrates the forecasted population and employment growth in urban areas. The transportation network includes additional highway capacity, local street improvements, active transportation, and transit investments, as well as transportation demand management and system management to serve a more concentrated urban growth pattern.

The 2050 MTP/SCS is organized into seven chapters plus an Executive Summary:

- *Executive Summary*. Includes an overview of the 2050 MTP/SCS, the preferred scenario and its performance, an explanation of the planning process and the allocation of transportation funding.
- *Chapter 1 – Vision*. Discusses legal authority, the overall purpose of the 2050 MTP/SCS and transportation-related issues and challenges faced by the region.
- *Chapter 2 – Transportation Investments*. Defines how to make the most out of the existing transportation system by investing in system preservation and maintenance, along with strategic system expansion and travel demand and system management strategies. The transportation investments are intended to provide safer and efficient travel choices for the region's residents, businesses, and visitors.
- *Chapter 3 – Financial Plan*. The financial plan presents funding strategies that are reasonably available by 2050.
- *Chapter 4 – Sustainable Communities Strategy*. Describes how the SCS was developed, identifies the land use and transportation connection, identifies the transportation system and programs, discusses resource areas and farmland, methods to accommodate the region's housing needs, how AMBAG will meet GHG reduction targets, and implementation strategies.
- *Chapter 5 – Outcomes*. Introduces the concept of performance measures as they relate to accomplishing the 2050 MTP/SCS goals while meeting social equity responsibilities.
- *Chapter 6 – Public Participation*. Provides a public participation process including methods for engaging the community and local jurisdictions in the development of the 2050 MTP/SCS.
- *Chapter 7 – Glossary*. Identifies key terms and their definitions.
- *Appendices*. The appendices include the following:
  A. Regional Growth Forecast
  B. Financial Plan
  C. Project Lists
  D. Public Participation
  E. SCS Documentation
  F. Travel Demand Model and Land Use Model Documentation
  G. Performance Measures
  H. Complete Streets Policy
  I. SCS Maps
  J. MTP Checklist

Of these seven chapters, the Vision Element, Transportation Investments, Financial Plan, and Sustainable Communities Strategy (Chapters 1, 2, 3, and 4) are the four components that include provisions with the potential to create physical changes to the environment and are the primary focus for analysis in this EIR. These chapters are described in more detail below.

2.5.1 Vision

The 2050 MTP/SCS serves as a blueprint for addressing the mobility and sustainability challenges faced in the region. The vision of the 2050 MTP/SCS is an accessible and connected region for a safe, resilient, and equitable future.

The 2050 MTP/SCS is built on a set of integrated policies, strategies, and investments to maintain and improve the transportation system to meet the diverse needs of the region through 2050. AMBAG began developing the 2050 MTP/SCS by confirming the following goals and policy objectives:

- **Mobility.** Build and maintain a safe and robust multimodal transportation network.
- **Environment.** Create a sustainable and healthy region for all.
- **Communities.** Develop, engage, connect, and sustain communities that are livable and thriving.
- **Economic**. Support a sustainable, efficient, and productive regional economic environment that provides opportunities for all.
- **Equitable.** Plan for people of all ages, abilities, and backgrounds.

It is AMBAG's intent that the goals and policy objectives be supported by the individual RTPs prepared by Monterey, San Benito, and Santa Cruz counties. The goals, policies, and objectives that create the framework for each RTP that comprise the MTP are summarized below.

2.5.1.1 2026 Monterey County RTP

The 2026 MC-RTP Policy Element is intended to address transportation issues affecting Monterey County. For each issue, a goal to address that issue is adopted, and then policies/objectives are adopted to accomplish that goal. Goals for the 2026 MC-RTP include:

- **Goal 1: Access and Mobility.** Deliver a reliable and accessible transportation system that promotes viable transportation alternatives for all users.
- **Goal 2: Safety and Health.** Create a safe transportation system that fosters county-wide health and wellbeing through promoting active lifestyles.
- **Goal 3: Climate Resilience.** Protect and enhance the County's built and natural environment and promote energy conservation.
- **Goal 4: Equity.** Promote social and geographic equity and improve quality of life through transportation planning, engineering, and design.
- **Goal 5: Economic Vitality.** Foster an economically viable, efficient and sustainable transportation system that supports the regional economy.

2.5.1.2 2050 San Benito County RTP

The 2050 SBC-RTP Policy Element is intended to address transportation issues affecting San Benito County. For each issue, a goal to address that issue is adopted, and then policies/objectives are adopted to accomplish that goal. Goals for the 2050 SBC-RTP include:

- **Goal 1: Mobility.** Build and maintain a safe and robust multimodal transportation network.
- **Goal 2: Environment.** Create a sustainable and healthy region for all.
- **Goal 3: Communities.** Develop, engage, connect, and sustain communities that are livable and thriving.
- **Goal 4: Economic.** Support a sustainable, efficient, and productive regional economic environment that provides opportunities for all.
- **Goal 5: Equitable.** Plan for people of all ages, abilities, and backgrounds.

2.5.1.3 2050 Santa Cruz County RTP

The 2050 SCC-RTP Policy Element is intended to address transportation issues affecting Santa Cruz County. For each issue, a goal to address that issue is adopted, and then policies and objectives are adopted to accomplish that goal. Goals for the 2050 SCC-RTP include:

- **Goal 1:** Reduce vehicle miles traveled (VMT) in order to establish livable communities that improve people's access to their regular needs.
- **Goal 2:** Eliminate transportation related fatalities and serious injuries for all transportation modes.
- **Goal 3:** Deliver transportation improvements and maintenance cost effectively and responsive to the needs of all users of the transportation system.
- **Goal 4:** Establish a climate-resilient transportation system that anticipates, adapts to, and mitigates the impacts of climate change.
- **Goal 5:** Ensure that plans, investments, policies, and transportation decisions will reduce disparities for historically and systemically marginalized, underserved, and excluded populations.

This framework of goals and policy objectives was used to guide the development of the 2050 MTP/SCS and specifically the performance measures developed by AMBAG to evaluate how well the 2050 MTP/SCS and alternatives perform. For reference, the performance objectives are provided in the 2050 MTP/SCS and addressed in more detail in Section 7, *Alternatives*.

2.5.2 Transportation Investments

Chapter 2 sets forth the proposed investments and strategies within the 2050 MTP/SCS. The investments discussed in the chapter are intended to optimize the performance and to strategically expand the existing transportation system as shown on Figure 2-2, Figure 2-5, and Figure 2-7. The investments address transportation system preservation, roadway, rail, bus, airport, bicycle and pedestrian facilities and demand and systems management. The Monterey

Bay region has invested and placed a high priority on protecting the area's existing multimodal transportation system to ensure that the system is operating efficiently, safely, and effectively as possible. Transportation investment strategies have not changed in this 2050 MTP/SCS update. As described previously, project cost estimates and revenue assumptions have been updated, along with some minor changes to the transportation project lists.

One of the primary goals of the 2050 MTP/SCS is to reduce per capita GHG emissions over the next approximately 25 years. A strategic transportation system expansion would provide the region with mobility and accessibility by targeting expansion around bus transit, rail, key roadways, and active transportation. The 2050 MTP/SCS provides more than $8 billion for highway, local streets and roads investments which include corridor improvements, roadway widenings and extensions, new roads, and maintenance/repair. A significant portion of local streets and road investments also include bicycle and pedestrian improvements.

Another focus of the 2050 MTP/SCS is providing more than $4 billion for a long-term public transit network that meets the region's mobility needs. The remaining transit funding is separated between maintenance and operation costs, as well as adding new transit vehicles and infrastructure.

The 2050 MTP/SCS emphasizes active transportation 2050, which refers to bicycle and pedestrian facilities. Since one of the primary goals of the 2050 MTP/SCS is to reduce GHG emissions, active transportation plays a large role in reducing congestion, increasing health and improving overall quality of life. The 2050 MTP/SCS intends to make active transportation more attractive, safe and feasible for all different users in the region, and the 2050 MTP/SCS has provided more than $1 billion for active transportation projects. These investments and improvements include addition of bike lanes, widenings and extensions, sidewalks, and trails. These investments are in addition to the active transportation improvements included as part of the local streets and roads investments. These efforts are consistent with the Complete Streets Act of 2008 (AB 1358).

The 2050 MTP/SCS also considers airport improvements which would improve regional and state system capacity and safety. AMBAG is not responsible for approving improvements to airports.

The transportation network is crucial for the region as the network provides the access and means of travel for the agricultural products grown in the region. The health of all the major roads, highways and railways is vital to the success and safety of the region. Finally, the 2050 MTP/SCS also includes TDM and TSM programs and projects which intend to improve the efficiency and effectiveness of the transportation network. The strategies employed by these management programs would reduce vehicular demand and congestion, which is directly in line with the goal of reducing GHG emissions. The 2050 MTP/SCS allocates more than $160 million to TDM strategies which include vanpool and telecommuting. The 2050 MTP/SCS allocates more than $90 million to TSM projects and programs which include, but are not limited to, autonomous vehicles, shared vehicles, incident management, ramp metering, and traffic signal synchronization.

The 2050 MTP/SCS transportation projects are further described in Section 2.4, below. A complete discussion of 2050 MTP/SCS transportation investments and plans is provided in Chapter 2 of the 2050 MTP/SCS.

The 2050 MTP/SCS includes financially constrained projects which identify the programs and projects proposed by RTPAs, local and county government, public transit operators and airport operators in the tri-county region for which funding will likely be available. These include a full range of programs and projects intended to improve roadway capacity/vehicular flow, enhance transit operations, improve safety, support transportation planning and travel demand management, promote high occupancy vehicle use, encourage active transportation travel and improve multimodal and intermodal facilities.

The 2050 MTP/SCS does not provide project designs or a construction schedule. Adoption of the 2050 MTP/SCS would not represent an approval action for any of the individual transportation programs and projects listed in the financially constrained Plan. Detailed site specific alignment, location, design and scheduling of the improvement projects which are included in the 2050 MTP/SCS are not fixed by the 2050 MTP/SCS, and these individual projects may be modified substantially from their initial description in the 2050 MTP/SCS at the time they are considered for implementation.

2.5.3 Financial Plan

The Financial Plan identifies how much money is available to support the region's surface transportation investments, including transit, highways, local road improvements, system preservation and demand management goals. It also addresses the need for investment in goods movement infrastructure. The projects included in the 2050 MTP/SCS are "financially constrained," which means there is a plan in place to secure the funding. In most cases, future programming action will be required.

The financial forecasts in the 2050 MTP/SCS are based on reasonably foreseeable revenues. The projections are calculated using a combination of historical averages, current trends and/or state and federal actions. Actual revenues will vary from year to year. The financial projections and estimation methods used in the 2050 MTP/SCS were developed collectively with the transportation planning, state and local agencies in the Monterey Bay region including AMBAG, TAMC, SBtCOG, SCCRTC, the California Department of Transportation (Caltrans), Monterey-Salinas Transit (MST), the Santa Cruz Metropolitan Transit District (SC METRO), the three counties, and 18 cities.

The Financial Plan identifies major federal, state, and regional/local funding sources anticipated to be available during the life of the 2050 MTP/SCS. Most federal revenue is projected to come from the Highway Bridge Program, FEMA funding for emergency road repairs, the Urbanized Area Formula Program (Section 5307), the FAA Airport Improvement Program, and the Regional Surface Transportation Program. State revenue sources include the State Highways Operation and Protection Program, State Transportation Improvement Program and Senate Bill 1 (SB 1) funding. Local revenue sources include the Transportation Development Act/Local Transportation Fund, gas tax, transit fares and developer fees. In November 2016, TAMC and SCCRTC passed local sales tax measures, Measure X and Measure D respectively, to fund transportation projects of all modes in their respective counties. In addition, SBtCOG passed Measure G, a local sales tax measure in November 2018 to fund transportation projects in San Benito County. This significant

local investment in transportation will provide a stable funding source for local road maintenance, transit operations, active transportation investments and other congestion reducing projects. Together, these measures are expected to generate roughly $1.5 billion over 25 years.

Total revenue is projected to be $16 billion in current year dollars. A complete discussion of the 2050 MTP/SCS financial plan is provided in Chapter 3 of the 2050 MTP/SCS.

2.5.4 Sustainable Communities Strategy

The SCS ultimately consists of the preferred land use and transportation scenario selected by AMBAG as best capable of meeting MTP objectives, including regional GHG reduction targets set by CARB. The 2050 MTP/SCS simultaneously addresses the region's transportation needs and encourages infill development near transit investments to reduce VMT and overall GHG emissions. This strategy selectively increases residential and commercial land use capacity within transit corridors in existing urban areas, shifting a greater share of future growth to these corridors.

The SCS, as outlined in Chapter 4 of the 2050 MTP/SCS, includes a preferred land use scenario, SCS toolkits, opportunity areas, programs and strategies, protection of natural resources, and implementation strategies, as described below:

- **SCS Toolkits.** The SCS toolkits consist of examples of projects and best practices to help achieve regional and local sustainability goals and emission reduction targets through efforts to provide housing, jobs and services in proximity to one another and better linking them by transit, and safe and convenient bicycle and pedestrian access. The tools are grouped in separate Infill Housing, Economic Development and Transportation sections of the toolkit.
- **Opportunity Areas.** SB 375 includes provisions for CEQA streamlining for developments that meet a specific set of criteria specified in California Public Resources Code Section 21155 et seq. At a minimum, these criteria include proximity to high quality transit. Areas that qualify for streamlining are called "opportunity areas."
- **Programs and Strategies.** This section describes programs and strategies that are generally less costly than infrastructure improvements to the transportation network, but that can improve traffic flow as well as the effectiveness of the whole transportation system. These programs and strategies include TSM measures, such as ramp metering, and TDM measures, such as promoting telecommuting and expanding vanpool services.
- **Protection of Natural Resources.** The SCS incorporates adopted habitat mitigation plans as well as the conservation of other sensitive resource lands such as steep slopes, wetlands, and floodplains as reflected in plans by local jurisdictions. These local and regional plans ensure the conservation of plant and animal species, and natural habitats through low density zoning, conservation easements, and land purchases.
- **Implementation Strategies.** This section provides a list of strategies that AMBAG, RTPAs, local jurisdictions and other stakeholders may consider to successfully implement the SCS.

The transportation projects, programs, and strategies contained in the 2050 MTP/SCS are major components of the SCS. However, the SCS also focuses on the general land use growth pattern for the region, because the geographic relationships between land uses, including density and intensity, help determine travel demand. Thus, to meet requirements of SB 375, the SCS:

- Identifies existing and future land use patterns;
- Establishes a future land use pattern to meet GHG emission reduction targets;
- Identifies transportation needs and the planned transportation network;
- Considers statutory housing goals and objectives;
- Identifies areas to accommodate long-term housing needs;
- Identifies areas to accommodate eight-year housing needs;
- Considers resource areas and farmland;
- Presents implementation strategies; and
- Complies with federal law for developing an MTP.

Overall, the land use scenario in the SCS provides a diverse mixture of land uses, such as commercial and retail uses, in combination with residential uses that have been shown to reduce vehicle miles traveled and thereby reduce GHG emissions. Combining mixed use development with infill development, rather than building on the fringes of urbanized areas, reduces GHG emissions by reducing the distance that people must travel to meet their basic needs. The SCS land use scenario assumes increased density via infill development and mixed use in existing commercial corridors in combination with high quality transit service that includes bus service with headways of 15 minutes or less during the peak period or rail service. By combining increased density and accessibility to transit there is a higher likelihood that people will choose to use transit rather than drive, maximizing VMT reduction. Figure 2-2 through Figure 2-8 show the SCS preferred land use scenario, as well as location of the MTP projects.

In developing the SCS scenario alternatives, AMBAG created a set of place types which established a set of land use designations common to general plans for the three counties and 18 cities in the region. The following metrics and characteristics were established as the primary determinants of place type designations:

- **Density.** The general density of a particular land use, expressed as floor to area ratio and/or as dwelling units per acre
- **Setting.** The surrounding land use and development context
- **Character.** The urban and built form, including building placement, street pattern and pedestrian or auto-orientation
- **Transportation.** The level of transit access, quality of the pedestrian environment and presence of bicycle infrastructure

The SCS preferred scenario is consistent with the region's RHNA and has enough housing capacity to accommodate the current (6th Cycle) RHNA. The 6th Cycle regional housing need determination (RHND) for AMBAG is 33,274 units and for SBtCOG is 5,005 units. AMBAG and

SBtCOG each approved its respective 6th RHNA Plan in October 2022. In addition to accommodating the RHNA, the SCS identifies areas in the AMBAG region sufficient to house all the population of the region, including all economic segments of the population over the course of the planning period through 2050. Housing in the AMBAG region is further discussed in Section 4.13, *Population and Housing.*

The SCS does not create a mandate for land use policies at the local level. In fact, SB 375 specifically states that the SCS cannot dictate local land use policies (see Government Code Section 65080(b)(2)(K)). Rather, the SCS is intended to provide a regional policy foundation that local governments may build upon as they choose.

2.6 2050 MTP/SCS and County Level RTP Transportation Projects

The types of transportation projects comprising the MTP and county level RTPs are summarized below. All projects by type and jurisdiction are shown in Appendix B.

- **Active Transportation.** These projects are focused on improvements designed to benefit pedestrians and bicyclists. They include the construction of Class I-III bicycle lanes, sidewalk gap closures, Americans with Disabilities Act (ADA) accessible ramps and sidewalks, pedestrian bridges, widening shoulders, maintenance, rehabilitation and repair projects, installation of traffic calming devices, roundabouts, new lighting, and trail access. Within Monterey County, specific projects include: the Fort Ord Regional Trail and Greenway, which would include approximately 28 miles of bike and pedestrian trails connecting the City of Marina, California State University Monterey Bay campus, and City of Seaside; citywide intersection ADA upgrades in the City of Monterey; and installation of bikeways on numerous local streets, such as Williams Road in Salinas, Bluff Road near Moss Landing, Castro Street in Monterey, and Central Avenue in Monterey. Within San Benito County, some specific projects include construction of a portion of the San Benito River Recreational Trail and installation of bike lanes along McCray Street, Cerra Vista Road, Hawkins Street, Clearview Drive, Steinbeck Drive, Meridian Road, Airline Highway, Highway 156, and Valley View Drive in Hollister. In Santa Cruz County, specific projects include several segments of the Monterey Bay Sanctuary Scenic Trail Network, installation of bicycle lanes and pedestrian sidewalks on State Routes (Highway) 9 through Felton, and installation of a bicycle path along the levee of the Pajaro River.
- **Highway Improvements.** These projects are generally focused on U.S. 101 and the state highway system throughout each of the three counties. They include the development of new infrastructure such as new interchanges, new and widened roadway lanes, ramp improvements, new overcrossings, roundabouts, and other modifications designed to improve safety and relieve congestion. Specific projects in Monterey County include the safety improvements south of Salinas and construction of frontage roads along U.S. 101 in South County. In San Benito County, improvements to Highway 25 are planned. Specific projects in Santa Cruz County include the construction of auxiliary lanes on Highway 1 from State Park Drive to Bay Avenue/Porter Street and from Freedom Boulevard to State Park Drive.

- **Highway Operations, Maintenance and Rehabilitation**. These projects focus on operational improvements to use existing highway system infrastructure more safely and efficiently. These include resurfacing, restriping, signal modifications and other improvements. Representative actions include funding the State Highway Operations and Protection Program and safety projects in all three counties; operational relief improvements, such as turn pockets and shoulder widening, to Highway 218 in Monterey County; Highway 156/Fairview Road Intersection Improvements in San Benito County; and replacement of the Highway 1 bridge over San Lorenzo River in Santa Cruz County.
- **Local Street and Road Improvements**. These projects are generally focused on county and local streets and roadways. They include the development of new infrastructure such as street widening, realignments, extensions and related improvements designed to improve safety. Representative improvements include road widening projects along the Marina-Salinas Corridor, including Davis Road and Imjin Parkway, in Monterey County; widening Fairview Road from McCloskey Road to Highway 25 in south San Benito County and intersection modifications and widening along the Bay Street Corridor from Mission Street to Escalona Drive in Santa Cruz County.
- **Local Street and Road Operations, Maintenance and Rehabilitation**. These projects focus on improvements to existing county and local streets and roadway infrastructure. These include resurfacing, restriping, signal modifications, streetscapes and other improvements designed to maintain and more efficiently and effectively use existing facilities. Specific projects in Monterey County include the Broadway corridor improvement project in Seaside and routine rehabilitation and maintenance of paved roadways. Specific projects in San Benito County include system preservation and maintenance within unincorporated San Benito County and the City of Hollister. Projects in Santa Cruz County include ongoing maintenance, repair, and operation of the street system within unincorporated Santa Cruz County and the cities of Santa Cruz, Watsonville, Capitola, and Scotts Valley.
- **Rail Projects**. The only regular rail passenger train currently operating in the region is provided by Amtrak, the Coast Starlight. It connects Los Angeles to Seattle and stops in Salinas, the only Amtrak rail station in the region. This route operates one train in each direction daily. In the future, Amtrak plans to expand service by offering the Coast Starlight service with stations in Soledad and King City. There is also bus service in the region for connections to the Capital Corridor route between San Jose and Sacramento. TAMC and Caltrain have collaborated to establish an extension of the Caltrain system from Gilroy to Salinas, with future stations planned for King City. This will provide a critical passenger rail connection from the Monterey Bay region to San Jose, Silicon Valley, San Francisco, and all connecting interregional and local transit routes.

- **Other Projects.** These projects are primarily focused on the construction of various improvements at public airports within the study area. This EIR focuses on ground transportation projects that improve access to airports. Future project-specific environmental review will be required for these projects, to be completed by the applicable airport district. Other projects in San Benito County include COG planning and administration. Other projects in Santa Cruz County include constructing multimodal infrastructure improvements associated with the Sustainable Santa Cruz County Plan, RTC administration and planning, and Measure D administration and implementation.
- **Transportation Demand Management.** Within Monterey County, these projects are focused on administering the Monterey County Go831 Travel Demand Management Program. In Santa Cruz County, projects are focused on administering the Cruz511 Traveler Information and GO Santa Cruz County commuter incentive programs. Funds would cover the existing vanpool program within Monterey County and the commute solutions rideshare program in Santa Cruz County. TDM projects include a rideshare/commute alternatives program in Monterey County and various vanpool, bicycling, and commuter incentive programs designed to reduce VMT in Santa Cruz County. TDM projects in San Benito County focuses on improving travel reliability and rideshare alternatives along SR 25 and SR 156 corridor as part of the long-term improvements for those corridors.
- **Transit ADA.** These funds would cover paratransit services and related requirements in Monterey and Santa Cruz counties. In Monterey County, this also includes administration of the Countywide Senior & Disabled Transportation Program, a grant program funded through Measure X and Monterey-Salinas Transit's implementation of Measure Q, Mobility Management services. San Benito County Local Transportation Authority (LTA) proposes to increase transit ADA services to respond to increasing demand from an aging population, including an innovative use of demand-response shuttles that improve mobility and access for ADA eligible riders in the county.
- **Transit Improvements.** These projects include improvements such as the purchase of rolling stock, bus rehabilitation, purchase of communication equipment, bus shelters and ancillary equipment used to rehabilitate/upgrade existing transit stops/stations. Specific improvements would include a rail extension and bus rapid transit projects in Monterey County. A new transit mobility hub in Hollister to support additional transit service in San Benito County is planned. Specific projects in Santa Cruz County include bus on shoulder on Highway 1 between interchanges and on the outside shoulder through interchanges.
- **Transit Operations.** Funds would cover transit operations and preventative maintenance projects. Within Monterey, San Benito, and Santa Cruz counties, the majority of funds would cover transit operations. Within Monterey County, funds would cover fixed route and public demand response services; within San Benito County, funds would cover general transit operations and transit planning and technology improvements; within Santa Cruz County, funds would cover operations and maintenance for exiting bus services.

- **Transit Rehabilitation**. Within Monterey County, these projects include bus preventative maintenance, bus station rehabilitation, and renovations. In San Benito County, these projects include transit vehicle replacement, transit system technology improvements, and bus stop improvements. In Santa Cruz County, these projects include bus replacement and maintenance, transit system technology improvements and bus stop improvements.
- **Transportation System Management.** These projects include signal adaptive system and upgrades to signals within the Pacific, Franklin, and Munras corridors in the City of Monterey; emergency call boxes and intelligent transportation systems in San Benito County; and freeway service patrols on Highways 1 and 17, call box system maintenance and transit priority queues in Santa Cruz County.

2.7 Intended Use of EIR

2.7.1 Agencies Expected to Use EIR in Decision-making

The *State CEQA Guidelines* (Section 15124(d)) require EIRs to identify the agencies that are expected to use the EIR in their decision-making and the approvals for which the EIR will be used to the extent known at the time the EIR is released. This EIR will inform AMBAG, in addition to other responsible agencies, persons, and the public, of the environmental effects of the proposed 2050 MTP/SCS, MC-RTP, SC-RTP, and SB-RTP and the identified alternatives. AMBAG will use the EIR for the purposes of review and approval of the 2050 MTP/SCS and the RTPAs will use the EIR for the purposes of review and approval of the county level 2050 RTPs.

The lead agencies for projects analyzed in this program EIR may use it as the basis for first-tier analyses of topics such as regional growth, regional transportation and land use alternatives and cumulative impacts. RTPAs may incorporate information provided in this EIR into future transportation plans such as congestion management programs, countywide transportation plans, or county bicycle and pedestrian plans. Other agencies expected to use the EIR include: Caltrans, RTPAs, transit providers in the region (such as MST, SC METRO and San Benito County LTA), the Monterey Bay Air Resources District, cities, and counties.

2.7.2 Project Permits and Approvals

To complete the 2050 MTP/SCS and county level RTPs process, AMBAG will first certify the EIR and then consider adopting the 2050 MTP/SCS. Subsequently, TAMC, SBtCOG, and SCCRTC will consider adopting the EIR and their RTPs. Additional environmental review will be conducted by implementing agencies, as the lead agency for the individual projects contained within the 2050 MTP/SCS, prior to project implementation.

Depending on the location of the project, individual transportation projects identified in the 2050 MTP/SCS, MC-RTP, SC-RTP, and SB-RTP would have to be approved by one or more of the following agencies:

- California Department of Transportation
- Monterey Bay Air Resources District

- California Coastal Commission
- Transportation Agency for Monterey County
- Council of San Benito County Governments
- Santa Cruz Regional Transportation Commission
- Monterey-Salinas Transit
- Santa Cruz Metropolitan Transit District
- San Benito County Local Transportation Authority
- Cities and counties in the AMBAG region (which are also responsible for approving land use projects)
- Airports
- California Department of Fish and Wildlife
- Regional Water Quality Control Board
- California Public Utilities Commission
- California Coastal Commission

Caltrans would be a Responsible Agency for all projects planned within its rights-of-way. Any public agencies or private developers contemplating work within a Caltrans right-of-way are required to obtain an approved encroachment permit from Caltrans prior to beginning that work.

2.8 Relationship with Other Plans and Programs

The 2050 MTP/SCS and the RTPs prepared by the Monterey, San Benito, and Santa Cruz RTPAs have been evaluated for consistency with the goals, policies and objectives currently being implemented by municipal and county planning agencies within the region as well as the Local Area Formation Commissions for Monterey, San Benito, and Santa Cruz counties. This discussion is provided in Chapter 5**,** *MTP Consistency with Other Plans Analysis*.

The 2050 MTP/SCS would be implemented with several other existing AMBAG programs designed to reduce adverse impacts to transportation resources, air quality, GHG emissions and energy. As the MPO for the Monterey Bay region, AMBAG strives to provide leadership in the areas of transportation, environmental, and economic planning. One of the ways AMBAG improves the transportation system, while at the same time improving air quality and stimulating the local economy, is to provide commuters with viable options to driving alone. AMBAG works closely with regional partner agencies such as TAMC, SBtCOG, SCCRTC, MST, SC METRO, SB County LTA, the Monterey Bay Air Resources District, Caltrans, and local jurisdictions on various transportation and land use planning projects and activities. AMBAG staff provides technical and program related assistance to partner agencies for project and/or program implementation. The following is a summary of programs that AMBAG and partner agencies support:

1. **AMBAG Sustainability Program.** AMBAG partners with public agencies and non-government organizations to promote sustainability throughout the region and help reduce energy use through energy efficiency. The AMBAG Sustainability Program is currently implementing the following initiatives:

a. Providing technical assistance and support for AMBAG jurisdictions pursuing climate action plans.
b. Providing energy efficiency technical support to public sector customers throughout the region.
c. Providing Proposition 39 technical assistance services to all school districts in the AMBAG region.
d. Implementing the Central California Rural Regional Energy Network to bring new energy efficiency programs to the AMBAG region.

2. **Monterey Bay Electric Vehicle Climate Adaptation and Resiliency Framework.** AMBAG, working with a coalition of stakeholders composed of local jurisdictions, RTPAs, transit agencies, special districts, and community based organizations, created the Monterey Bay Electric Vehicle Climate Adaptation and Resiliency (Monterey Bay EV CAR) Framework. This collaborative planning effort creates a roadmap for the Monterey Bay region to assess current charging infrastructure vulnerability to climate change and implement strategies to ensure the build-out of EV charging infrastructure increases equity and resiliency in the face of climate change.

   AMBAG worked with the Santa Barbara County Association of Governments and the San Luis Obispo Council of Governments to develop the Central Coast Zero Electric Vehicle Strategy (CCZEVS). The CCZEVS identified gaps and opportunities to implement ZEV infrastructure on the Central Coast, including on or near the State Highway System, major freight corridors, and transit hubs. This strategy is important as it will seek to accelerate large scale, affordable, and equitable ZEV development across all altitudes of the public sphere in the wake of Governor Newsom's Executive Order N-79-20. This strategy will directly advance the goals outlined in the 2050 MTP/SCS as well as the goals of California State Transportation Agency's Climate Action Plan for Transportation Infrastructure. The CCZEVs was completed in July 2023.
3. **Complete Streets Planning & Design Guidelines.** The AMBAG region has recognized the importance of multimodal streets to improve accessibility, safety, and equity for all users of the transportation system. In August 2013, AMBAG adopted its Monterey Bay Area Complete Streets Guidebook, providing resources and procedures for developing an interconnected, safe, and accessible active transportation network in the Monterey Bay region to meet the needs of all travel modes, ages, and abilities. In addition, AMBAG recognizes their partner agencies and local jurisdictions have prioritized creating a safe, accessible, efficient, and coordinated transportation network that accommodates all roadway users within their communities. AMBAG's Complete Streets Policy, adopted in May 2024, builds upon these previous efforts by promoting a transportation system that is designed to be multimodal to safely and comfortably accommodate users of all ages and abilities.

4. **Rideshare.** RTPAs provide rideshare and commute alternatives, rideshare and emergency services, and develop park & ride lots. SCCRTC provides ride matching services, multi-modal trip planning, and traveler information via the Cruz511 and GO Santa Cruz County programs.

   TAMC oversees the Go831 Program in Monterey County. The purpose of the Go831 Program is to reduce vehicle miles travelled, traffic and greenhouse gas emissions in Monterey County through the implementation of TDM strategies. The Go831 Program works directly with major employers, schools and visitor-serving businesses to provide planning assistance, tools and support to these institutions so they can establish and manage their own "smart commute" programs. The core travel demand management strategies promoted through the Go831 Program are:

   - Re-mode (try carpool, vanpool, transit, walking, bicycling or teleworking);
   - Re-time (travel at a different time);
   - Reduce (number of trips via telecommuting); and
   - Re-route (choose alternative route) when possible.

   Additional strategies include providing ongoing incentives, challenges, communications, and social networking opportunities to create norms around smart commuting.

5. **Bike to School Day and Bike to Work Day Program.** International programs supported by AMBAG and RTPAs to promote students and residents to bicycle to school and work. More information can be found at: www.walkbiketoschool.org
6. **Safe Routes to School Program.** This program aims to improve the health of kids and the community by making walking and bicycling to and from school safer, easier, and more enjoyable.
   - TAMC's Safe Routes to Schools Program addresses both planning for safe routes, and educational programs on how to safely walk and bike to school formally classified under the names "Bike Smart," "Walk Smart," and "Evaluation." The Evaluation program includes the development of safe routes to school plans, data collection, and reporting. TAMC recently completed development and adoption of the Safe Routes to School Plan for the cities of Seaside and Marina and is actively developing the Salinas Safe Routes to School Plan. TAMC submitted a grant application to develop a Salinas Valley Safe Routes to Schools Plan in 2021, which includes the cities of Gonzales, Greenfield, King City, and Soledad. After plan adoption, TAMC works with the local jurisdiction and community members to pursue funding to implement the identified improvements.
7. **Monterey Bay Natural and Working Lands Climate Mitigation and Resiliency Study.** The study includes an inventory of natural and working lands carbon stock in the AMBAG region by jurisdiction, a carbon forecast, and a list of adaptation and mitigation strategies, each with recommended implementation actions. These strategies are intended to locally support the implementation of the treatments listed in the CARB 2022 scoping plan. The strategies are organized by the broad land use categories: urban forests and parks, forests, conservation open space, and agriculture lands.

8. **Freeway Service Patrol and Motorist Assistance Program.** The Freeway Service Patrol is a joint program provided by Caltrans, the California Highway Patrol, and the local transportation agency. The Freeway Service Patrol program is a free service of privately owned tow trucks that patrol designated routes on congested urban California freeways.
9. **Seniors & Accessible Transportation Services.** Focused transportation services to meet the unique needs of seniors and other individuals with accessibility issues.

This page intentionally left blank.

3 Environmental Setting

This section provides a general overview of the environmental setting for the 2050 MTP/SCS and the county level RTPs, including a regional setting, sub-regional setting, and a description of the regional transportation system. This section also outlines the EIR baseline and approach to both direct and cumulative impact analyses. More detailed descriptions of the environmental setting for each environmental issue area can be found in Chapter 4, *Environmental Impact Analysis*. The EIR uses an existing conditions baseline year of 2022.

3.1 Regional Setting

The AMBAG region is comprised of Monterey, San Benito, and Santa Cruz counties. These counties are located along the Central Coast of California and generally surround Monterey Bay. Monterey Bay is located south of the San Francisco Bay area and north of San Luis Obispo County. San Mateo and Santa Clara counties are located to the north; Merced and Fresno counties are located to the east. Monterey County shares a short border segment with Kings County to the southeast. The combined area encompasses approximately 3.3 million acres, incorporating the Pajaro and Salinas River Valleys, adjacent coastal lowland, and surrounding mountains. Terrain within the region is varied. The Santa Cruz, Gabilan, and Santa Lucia mountain ranges and the Diablo range are located along the eastern border of the tri-county region. The highest elevation is the Junipero Serra Peak (5,685 feet above sea level), located in Monterey County. The Pajaro and Salinas Valleys contain some of the most productive agricultural soils in the United States.

3.2 Sub-Region Descriptions

Monterey County covers approximately 2.1 million acres with a population of approximately 436,033 people according to AMBAG's 2026 Regional Growth Forecast. San Benito County covers approximately 890,000 acres with a population of approximately 65,642 people. Santa Cruz County covers approximately 285,000 acres with a population of approximately 264,495 people (AMBAG 2024).

The total population within the AMBAG region is estimated at approximately 766,170 people as of 2022. Most of the population is concentrated within the coastal plain that extends from the Santa Cruz/Capitola area in the north and the Monterey Peninsula to the south. The largest city in Monterey County is Salinas, with an estimated population of 160,587 people or approximately 21 percent of the total population within the AMBAG region (AMBAG 2024). Other urban or centralized population centers include the Cities of Monterey, Carmel-by-the-Sea, Pacific Grove, Marina, Sand City, Seaside and Del Rey Oaks. The Cities of Gonzales, Soledad, Greenfield, and King City are in the Salinas River Valley southeast of Salinas. Monterey County contains several unincorporated communities, including Bradley, Carmel Valley, Del Monte Forest, Pine Canyon, Castroville, Elkhorn, Las Lomas, Pajaro, Prunedale and San Ardo. The Cities of Hollister and San Juan Bautista are the only incorporated cities in San Benito County and are generally the only urbanized areas. Within Santa Cruz County, the population is concentrated in the Cities of

Capitola, Santa Cruz, Scotts Valley, and Watsonville. Unincorporated communities include Aptos, Freedom, Live Oak and Soquel.

The tri-county economy is primarily based on agriculture. Tourism also is important, particularly in Santa Cruz and Monterey during summer months. Cities such as Santa Cruz, Scotts Valley, Hollister, and unincorporated areas located in the northern portion of the region serve as bedroom communities for people working in Silicon Valley and Santa Clara County to the north.

3.3 Regional Transportation System

3.3.1 Monterey County

Monterey County owns and maintains approximately 1,240 miles of roads. In addition, there are 575 miles of private roads, two minor highways (25 and 146) and six highways that include State Routes 1, 68, 101, 156, 183 and 218.

Within northern Monterey County, U.S. 101 is a rural four-lane highway with left-turn channelization at most intersections. In southern Monterey County, U.S. 101 is the primary north-south corridor through the Salinas Valley, between Salinas and the Cities of Gonzales, Soledad, Greenfield, and King City. This four-lane freeway/expressway provides connections to State Routes 198 and 146 in southern parts of the County. U.S. 101 is critical for interregional transportation needs, including goods movement and tourism.

State Route 68 is a designated scenic route that connects the Monterey Peninsula to U.S. 101 and the Salinas Valley, spanning approximately 20 miles. State Route 218, locally known as Canyon Del Rey Boulevard, runs 2.85 miles from State Route 1 in the west to State Route 68 in the east, traversing the Cities of Seaside and Del Rey Oaks and provides a major west-east route for the area.

State Route 1 in Monterey County traverses through the coastal region of Big Sur and through the Monterey Peninsula, connecting at the south to San Luis Obispo County and north to Santa Cruz County.

State Route 183 is 10 miles in length, beginning at the junction of U.S. 101 in Salinas and continuing westerly to the junction of State Route 1 in Castroville. State Route 156 is a two-lane highway, serving as an east-west connector from U.S. 101 to State Route 1 and the Monterey Peninsula. State Route 146 is a two-lane highway beginning in Soledad and continuing to the junction of State Route 25 in San Benito County. This is a primary access route to the Pinnacles National Park.

State Route 198 is a 25.8-mile, two-lane conventional highway, beginning at U.S. 101 just west of San Lucas and continuing east to the Fresno County line. State Route 25 is a two-lane rural highway, beginning at the junction of State Route 198 and continuing north to the San Benito County line. It primarily serves interregional traffic between Monterey, San Benito, and Santa Clara counties.

Both passenger and freight rail service are available in Monterey County. Amtrak provides rail services twice daily via a station stop in Salinas. Four freight stations are located at Castroville, Gonzales, Salinas, and Watsonville Junction (Pajaro Community Area). Public transit services are provided by Monterey-Salinas Transit (MST). MST is a publicly owned and operated system providing service to the greater Monterey and Salinas areas with routes also serving unincorporated areas in northern and southern Monterey County. Greyhound provides intercity passenger service between Monterey Peninsula cities, Salinas, and Salinas Valley cities, connecting to destinations across California and nationally.

Monterey County has approximately 887 miles of bicycle and pedestrian routes. One of the major continuous bicycle paths in the county is the Monterey Bay Coastal Recreation Trail, which is approximately 29 miles long stretching from Castroville to the Monterey Peninsula and parts of Pebble Beach. The Monterey Bay Coastal Recreation Trail runs adjacent to the Fort Ord Dunes State Park located between the Cities of Marina and Seaside. The state park also contains its own bike path that is accessible on both ends of the Fort Ord Dunes Park from the Monterey Coastal Recreation Path. Sections of the Monterey Bay Sanctuary Scenic Trail Network have been completed in Monterey County between Pacific Grove and Monterey, between Sand City and Seaside and between Marina and Castroville. Most of these sections are Class I bikeways, but short sections are Class II and Class III. The Monterey Bay Sanctuary Scenic Trail Network will connect to trail sections that have either been constructed or will be constructed in Santa Cruz County.

Monterey County is served by four airports: Monterey Regional Airport, Salinas Municipal Airport, Marina Municipal Airport, and Mesa Del Rey Airport (King City). The Monterey Regional Airport is owned and operated by the Monterey Peninsula Airport District and is served by commercial air carriers. Currently, flights from the Monterey Regional Airport connect to several major cities or destinations in the western United States, including Burbank, California; Dallas, Texas; Denver, Colorado; Las Vegas, Nevada; Los Angeles, California; Orange County, California; Phoenix, Arizona; Portland, Oregon; San Diego, California; San Francisco, California; and Seattle, Washington.

Agriculture is the largest land use in Monterey County and represents about 56 percent of the total land area in the county. The second largest land use, about 23.5 percent of the total land area, consists of public and quasi-public land uses such as parks, military facilities, recreational, and community facilities. Approximately 4.8 percent of Monterey County (including the incorporated cities) is developed with residential, commercial, and industrial land uses. The remaining 16 percent is in resource conservation or other land uses. Most of the urban development is concentrated in the northern one-third of the county, near several incorporated cities including Salinas, Marina and Monterrey. Likewise, most of the county's population is concentrated in the incorporated cities located in the northern one third of the county (County of Monterey 2010).

3.3.2 San Benito County

San Benito County owns and maintains approximately 432 miles of roads with approximately 90 miles of state highways (Caltrans 2019). Within unincorporated San Benito County, there are approximately 540 miles of local county roadways. Caltrans maintains five state highways in San Benito County: State Route 25, 129, 146, 156, and U.S. 101.

State Route 25 traverses the entire length of San Benito County from the southern county boundary north through Paicines, Tres Pinos, and Hollister to the northern county boundary near Gilroy, where it connects to U.S. 101 in Santa Clara County.

State Route 129 extends from Santa Cruz County into the northwestern portion of San Benito County connecting to U.S. 101 approximately 2.6 miles from the Santa Cruz-San Benito County line. State Route 129 is a two-lane rural road providing access to Santa Cruz and Monterey County beaches.

State Route 156 traverses northern San Benito County from U.S. 101 west of San Juan Bautista through San Juan Bautista and Hollister to the San Benito/Santa Clara County Line where it connects with State Route 152 in Santa Clara County.

U.S. 101 passes through the northwestern portion of San Benito County for 7.4 miles and serves primarily inter-regional traffic.

San Benito County Express is the primary public transit provider in the county with services in Hollister and countywide via intercounty routes. The County Express system currently provides a Tripper services in the City of Hollister, complementary ADA paratransit service, and a public Dial-A-Ride program. There is currently no passenger rail service in San Benito County. The County Express provides a connection to commuter and regional rail service in Gilroy, in south Santa Clara County. Freight rail service to Hollister and northern San Benito County is provided by the Union Pacific Hollister Branch Line.

Bicycle facilities in the county are generally concentrated in and around Hollister. Within San Juan Bautista, a short section of San Juan Highway in the northern part of town has designated bike lanes. The Juan Bautista de Anza National Historic Trail traverses San Juan Bautista and the western part of the county. The Cities of Hollister and San Juan Bautista generally have continuous sidewalks on most streets in their central and core areas and in newer neighborhoods. Pedestrian sidewalks in unincorporated areas of the county are generally provided in discontinuous segments or are non-existent.

San Benito County has one public airport (Hollister Municipal Airport), one private airpark (Frazier Lake Airpark). Regional airport services are provided by Norman Y. Mineta San Jose International Airport and Monterey Regional Airport (San Benito County 2015).

San Benito County occupies over 890,000 acres or 1,391 square miles, of which approximately 882,675 acres or 99.5 percent is unincorporated (San Benito County 2015). Agriculture, which includes grazing, is the predominant use, totaling approximately 734,826 acres or 83.2 percent of the unincorporated county. The incorporated Cities of Hollister and San Juan Bautista account for roughly 4,044 acres, or approximately 0.5 percent of the land within the County (San Benito

County 2015). There are also several historic unincorporated communities in the County, including Aromas, Paicines, Panoche, Ridgemark, Tres Pinos, and New Idria.

3.3.3 Santa Cruz County

There are six state highways in Santa Cruz County. State Route 1 runs north/south through the entire county. State Route 17 traverses the Santa Cruz Mountains connecting the county with the San Jose/San Francisco Bay Area. State Route 9 is a mountainous road connecting Santa Cruz to towns in the San Lorenzo Valley, as well as providing another route over the Santa Cruz Mountains to Los Gatos and Saratoga in Santa Clara County. State Route 236 connects Boulder Creek to Big Basin Redwoods State Park and State Route 152 and State Route 129 connecting Watsonville in south Santa Cruz County. There are 1,137 total miles of roadway in the county. Arterial roads comprise approximately 15 percent of the roadway miles.

The Santa Cruz Metropolitan Transit District (or METRO) provides essential bus transit services for all residents, including students, State Route 17 commuters, and transit dependent and choice riders. METRO's network of local and express bus routes includes transit centers in Felton, Scotts Valley, Santa Cruz, Capitola, and Watsonville. METRO buses serve 479 miles of road throughout the county and cover most arterial and collector routes. Transit to Monterey County is provided at the Watsonville Transit Center via connections with MST. Greyhound provides service from Santa Cruz to surrounding regions.

Freight rail service, once operated by Southern Pacific Railroad, then by Union Pacific and now by Saint Paul & Pacific Railroad (SPPR), has been a historically important form of transportation within Santa Cruz County. There are currently three rail lines in or adjacent to Santa Cruz County. The Santa Cruz Branch rail line extends from Watsonville Junction in Pajaro north to Davenport and passes through much of the county's urban area. The Felton Branch rail line is owned and operated by the private Santa Cruz Big Trees & Pacific Railway Company and primarily provides summertime and holiday excursions between Felton and the Beach Boardwalk in Santa Cruz. The line is also occasionally used for freight. The Coast Rail Route is the Union Pacific main coastal line extending from San Jose to San Diego. A stop for the proposed Amtrak Coast Daylight service is planned at the Pajaro Station located at the Watsonville Junction.

Santa Cruz County has at least 215 miles of bikeways, with approximately 190 of them (bi-directional) bike lanes and approximately 25 of those are separated paths. Sidewalks and pedestrian infrastructure are located throughout the urbanized areas of the county and considered in all new project designs.

The Watsonville Municipal Airport, developed in 1942, is the only public use airport in Santa Cruz County. There are also three private airstrips within the county, located in Bonny Doon, at the Monterey Bay Academy and Las Trancas/Big Creek. The closest scheduled air service is available at Monterey Regional Airport and Norman Y. Mineta San Jose International Airport (Santa Cruz County 2024).

Santa Cruz County is 441 square miles in size and is comprised of four incorporated cities and several unincorporated towns. The largest is the City of Santa Cruz, with a population of 62,809 people. The remaining three incorporated cities within the County are Watsonville which has a

population of 51,096 people, Scotts Valley with a population of 11,943 people, and Capitola has a population of 9,609 people (AMBAG 2024). Unincorporated areas include Aptos, Ben Lomond, Bonny Doon, Boulder Creek, Brookdale, Corralitos, Davenport, Felton, Freedom, La Selva Beach, Rio Del Mar, Soquel and Zayante. The State of California owns and maintains 42,334 acres of parks in the coastal and mountainous areas of the County. The County maintains an additional 1,593 acres of parks, not including the numerous parks also found within the cities (Santa Cruz County 2024).

3.4 Plan Consistency

CEQA Guidelines Section 15125(d) requires an EIR to discuss any inconsistencies between the proposed project and applicable general plans, specific plans, and regional plans. This analysis is presented in Section 5, *MTP Consistency with Other Plans Analysis*, as well as in several topical analyses in Chapter 4, in particular Section 4.11, *Land Use and Planning*. In addition, consistency of the proposed project with applicable regional plans prepared for specific resources is discussed in other Chapter 4 subsections, which analyze the impacts on specific resources.

4 Environmental Impact Analysis

This section discusses the possible environmental effects of the 2050 Association of Monterey Bay Area Governments (AMBAG) Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) for the specific issue areas that were identified through the scoping process as having the potential to experience significant effects. A "significant effect" as defined by the *CEQA Guidelines* Section 15382:

> means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether the physical change is significant.

The assessment of each issue area begins with a discussion of the environmental and regulatory setting related to the issue, which is followed by the impact analysis. In the impact analysis, the first subsection identifies the methodologies used and the "significance thresholds," which are those criteria identified by AMBAG, universally recognized, or developed specifically for this analysis to determine whether effects are significant. The next subsection describes each impact of the proposed project, mitigation measures for significant impacts, and the level of significance after mitigation. Each effect under consideration for an issue area is separately listed in bold text with the discussion of the effect and its significance. Each bolded impact statement also contains a statement of the significance determination for the environmental impact as follows:

- **Significant and Unavoidable.** An impact that cannot be reduced to below the threshold level given reasonably available and feasible mitigation measures.
- **Less than Significant with Mitigation Incorporated.** An impact that is significant, but can be reduced to below the threshold level given feasible mitigation measures.
- **Less than Significant.** An impact that may be adverse but does not exceed the threshold levels and does not require mitigation measures.
- **No Impact.** The proposed project would have no effect on environmental conditions or would reduce existing environmental problems or hazards.

Following each environmental impact discussion is a list of mitigation measures (if required) and the residual effects or level of significance remaining after implementation of the measure(s). In cases where the mitigation measure for an impact could have a significant environmental impact in another issue area, this impact is discussed. The impact analysis concludes with a discussion of cumulative effects, which evaluates the impacts associated with the proposed project in conjunction with other projects listed in Chapter 3, *Environmental Setting*.

Mitigation Approach, EIR Baseline, Approach for Impact Analyses

Mitigation Approach

This EIR includes proposed mitigation measures to reduce impacts and identifies agencies for implementation of those mitigation measures. AMBAG, the Transportation Agency for Monterey County (TAMC), the Council of San Benito County Governments (SBtCOG), and the Santa Cruz Regional Transportation Commission (SCCRTC), have lead or responsible agency status; and therefore, authority to enforce mitigation measures for projects for which they have discretionary authority. However, AMBAG, TAMC, SBtCOG, and SCCRTC do not have authority to require recommended mitigation measures be implemented by other implementing agencies (e.g., Caltrans, counties, cities, transit agencies) that are responsible agencies for this EIR, but will be lead agencies for future transportation and land use development projects. It is the responsibility of the lead agency implementing specific 2050 MTP/SCS projects to conduct environmental review consistent with CEQA and where applicable, incorporate mitigation measures provided herein and developed specifically for the project. Project specific environmental documents may adjust the mitigation measures identified in this EIR as necessary to respond to site specific conditions.

EIR Baseline

Under CEQA, the impacts of a proposed project must be evaluated by comparing expected environmental conditions after project implementation to conditions at a point in time referred to as the baseline. *CEQA Guidelines* Section 15125 states that an EIR should describe physical environmental conditions of the project as they exist at the time the Notice of Preparation (NOP) is published, or if no NOP is published, at the time environmental analysis is commenced, from both a local and regional perspective. This environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant.

As *CEQA Guidelines* Section 15125 states, ordinarily the appropriate baseline will be the actual environmental conditions existing at the time of CEQA analysis, typically when NOP is published. However, the *CEQA Guidelines* also contemplate times when a deviation from the use of the NOP date to establish the baseline is appropriate to present an accurate description of the expected environmental impacts of a proposed project.

Although the NOP for this EIR was released in 2024, the environmental baseline year used for analysis is 2022. The 2022 baseline is the most practical because AMBAG's Regional Transportation Demand Model (RTDM) was utilized to model 2022 baseline conditions for the 2050 MTP/SCS. Additionally, the availability of updated datasets, including the 2022 National Household Travel Survey and new census data, supports the use of 2022 as a consistent and validated baseline across resource areas. The 2022 baseline also represents a more stable post-COVID condition than earlier years and reflects a return to more typical patterns, while still capturing residual shifts such as increased remote work.

Interim Timeframes

2050 is the horizon year of the proposed 2050 MTP/SCS. While the 2050 MTP/SCS would be implemented gradually over the planning period, this EIR does not analyze interim time frames because the four-year update cycle of the MTP/SCS and the Regional Transportation Plans prepared by the TAMC, SBtCOG, and SCCRTC already requires short-term adjustments to the Plan. The one exception to this approach is in Section 4.8, *Greenhouse Gas Emissions/Climate Change*, which examines impacts for 2035 and 2045 in addition to 2050, as well as a comparative baseline of both 1990 and 2005, to satisfy statutory requirements and address state target related to greenhouse gas emissions.

Approach for Direct Impact Analysis

The programmatic nature of the 2050 MTP/SCS necessitates a general approach to the evaluation of existing conditions and impacts associated with the proposed project. As a programmatic document, this EIR presents a regionwide assessment of the impacts of the 2050 MTP/SCS. These impacts are examined for both transportation network improvements and the regional growth and land use changes forecasted. Because the EIR is a long-term document intended to guide actions over 25 years into the future, program-level and qualitative evaluation is involved. Regional quantitative analyses are provided where applicable with available information. During future stages in planning and implementation of specific elements of the 2050 MTP/SCS, including land development resulting from regional growth and transportation improvements identified in the 2050 MTP/SCS, project specific CEQA documents will be prepared by the appropriate project implementation agency.

This page intentionally left blank.

4.1 Aesthetics

This section evaluates the aesthetics and visual resource impacts of the proposed 2050 MTP/SCS.

4.1.1 Setting

a. Visual Character

AMBAG's planning area is predominantly rural, with urban development clustered along the Monterey Bay coastline and in agricultural inland valleys. The specific visual characteristics of Monterey, San Benito, and Santa Cruz counties are discussed below.

Monterey County

Monterey County is characterized by a scenic ocean coastline along its western and northern borders, with rugged coastal mountains inland along its eastern boundary. The most substantial visual resources are located along the County's approximately 100-mile-long coastline. Monterey County includes dramatic shoreline scenery along the Big Sur coast, which is bounded on the east by the steep Santa Lucia Mountain range. Other scenic resources within Monterey County include the Fort Ord National Monument in western Monterey County and Pinnacles National Park located east of Soledad. Elevations in Monterey County range from sea level at the coastline to nearly 5,700 feet above sea level at Junipero Serra Peak.

The Conservation and Open Space Element of the Monterey County General Plan also identifies the Gabilan Mountain Range, the Salinas and Carmel Valleys, Elkhorn Slough, the beaches of Carmel and Monterey Bays, and the rocky shores and cliffs of the Monterey Peninsula and Big Sur coast as prominent features (County of Monterey 2020). The 130-mile-long Salinas Valley stretches the length of the County and offers the greatest visual expanse within inland Monterey County which includes primarily agricultural areas. Development in the valleys originated with the agricultural industry and is located along major travel corridors such as U.S. 101. Cities and unincorporated communities within the valleys include Castroville, Salinas (the largest city in the County), Gonzales, Soledad, Greenfield, King City and Carmel Valley. Foreground, middle ground and background views of agriculture fields/pastures and the surrounding ranges and hills comprise the viewshed. The majority of urban development is concentrated in northern Monterey County, in the upper Salinas Valley and around the Monterey Bay.

San Benito County

In contrast to the other two counties in the Monterey Bay region, San Benito County has no coastline. It is characterized by the Diablo and Gabilan Mountain Ranges and their associated inland agricultural valleys. Elevations range from 80 feet above sea level near Aromas in the northwest portion of the County to more than 5,200 feet above sea level at the peak of San Benito Mountain in the southeast. Prominent elements of San Benito County's scenic landscape include views of mountains, undeveloped rangelands, large agricultural fields and croplands, natural ridgelines along the Diablo and Gabilan Ranges and annual grasslands (County of San

Benito 2015). Agricultural land and rangeland account for approximately 75 percent of all land in San Benito County and commonly form the foreground of scenic views. Urban development is concentrated in the City of Hollister, which is characterized by a commercial downtown with low density residential areas to the west, south, and east and industrial areas to the north (County of San Benito 2015).

Santa Cruz County

Santa Cruz County is characterized by scenic ocean coastlines along its western and southern borders, open agricultural lands along the northern coasts and in South County, redwood forests, and the rolling hillsides and ridgetops of the Santa Cruz Mountains (County of Santa Cruz 2024). Additionally, rivers, watersheds, reservoirs, special geologic formations such a sandhill outcroppings and vegetative communities serve as scenic resources within the County (County of Santa Cruz 2024). A large portion of the County's population is located in the mid-County coastal terraces, while the alluvial south County is mainly in agricultural use. The aesthetic character of urban areas in the coastal terraces between the Santa Cruz and Aptos is influenced by coastal vistas and stream valleys running southward from the Santa Cruz Mountains. Elevations in Santa Cruz County range from sea level to more than 3,200 feet above sea level at Mt. Bielawski, which is located near the Santa Cruz-Santa Clara County line.

b. Primary View Corridors

Monterey County

The following roadway segments within Monterey County have been officially designated as "State Scenic Highways" under the California Scenic Highway System (California Department of Transportation [Caltrans] 2025):

- State Route (SR) 1 from San Luis Obispo County to SR 68
- SR 25 from SR 198 to the San Benito County line
- SR 68 from SR 1 in Monterey to the Salinas River
- SR 156 from one mile east of Castroville to U.S. 101 near Prunedale

Portions of other highways traversing Monterey County are eligible for "Scenic Highway" designation (Caltrans 2019). The eligible highways are:

- SR 1 from SR 68 to the San Mateo County line
- SR 68 from the Salinas River to U.S. 101 near Salinas
- U.S. 101 from SR 156 northeasterly to the San Benito County line
- SR 198 from U.S. 101 near San Lucas to the Fresno County line

In addition to the designated and eligible State Scenic Highways listed above, the Monterey County General Plan includes existing and proposed County Scenic Routes (County of Monterey 2010). These roadways are shown in Figures 13 through 16 of the Monterey County General Plan. The following roadways are designated as County Scenic Routes:

- Old Stage Road
- San Benancio Road
- Corral de Tierra Road
- Laureles Grade Road
- Robinson Canyon Road

The following roadways in Monterey County are proposed for designation as County Scenic Routes:

- Carmel Valley Road
- Reservation Road
- River Road
- Corral de Cielo Road
- Underwood Road
- Crazy Horse Canyon Road
- San Juan Grade Road
- San Miguel Canyon Road

Additionally, SR 1 is a National Scenic Byway that is within Monterey County (Federal Highway Administration [FHWA] 2021).

San Benito County

The following roadways in San Benito County have been identified as eligible for inclusion in the California Scenic Highway System (Caltrans 2019):

- SR 25 from the Monterey County line to SR 156
- SR 156 from the Monterey County line to the Santa Clara County line
- SR 198 from the Monterey County line to the Fresno County line
- U.S. 101 from the Monterey County line to SR 156

The Natural and Cultural Resources Element of the San Benito County 2035 General Plan (County of San Benito 2015) also designates the following roadways as Scenic Highways and describes the widths of the associated Scenic Corridors:

- U.S. 101 (entire length within San Benito County - the Scenic Corridor width includes all land 400 feet on either side of the centerline of the road)
- SR 129 from its intersection with U.S. 101 to the San Benito County boundary (the SR Corridor width includes all land within 340 feet on either side of the centerline of the road)

- SR 146 between SR 25 and the Monterey County line (the Scenic Corridor width includes all land 340 feet on either side of the centerline of the road). Caltrans has relinquished SR 146 to the County of San Benito since the County's adopted its General Plan.

Santa Cruz County

Although no State Scenic Highways have been designated in Santa Cruz County, the following roadways (Caltrans 2019) are eligible for designation as such:

- SR 1 from the Monterey to San Mateo County line
- SR 9 from SR 1 near Santa Cruz to the Santa Clara County line
- SR 17 from SR 1 near Santa Cruz to the Santa Clara County line
- SR 35 from SR 17 to the Santa Clara County line
- SR 152 from SR 1 to the Santa Clara County line at Hecker Pass
- SR 236 from SR 9 near Boulder Creek to SR 9 northeast of Big Basin Redwoods State Park

In addition to the above scenic routes eligible for State Scenic Highway designation, the Santa Cruz County General Plan and Local Coastal Program (County of Santa Cruz 2024) identifies the following routes and County roads as, "[valued] for their vistas":

- SR 1 from San Mateo to Monterey County lines
- SR 9 from SR 1 to Santa Clara County line
- SR 17 from SR 1 to Santa Clara County line
- SR 35 from SR 17 to San Mateo County line
- SR 129 from SR 1 to San Benito County line
- SR 152 from SR 1 to Santa Clara County line
- SR 236 from SR 9 in Boulder Creek to SR 9 at Waterman Gap
- Amesti Road from Varni Road to Browns Valley Road
- Beach Road from SR 1 to Palm Beach
- Bonita Drive and San Andreas Road from SR 1 to Beach Road
- Bonny Doon Road from SR 1 to Pine Flat Road
- Browns Valley Road from Eureka Canyon Road to Hazel Dell Road
- Buena Vista Drive from San Andreas Road to Larkin Valley Road
- Casserly Road from mile marker 1.75 to SR 152
- Corralitos Road from Freedom Boulevard to Browns Valley Road
- Empire Grade from the Santa Cruz City limits to the end of Empire Grade
- East Cliff Drive from 33rd Avenue to 41st Avenue
- Eureka Canyon Road from Highland Way to Corralitos
- Graham Hill Road from Lockwood Lane to SR 9
- Hazel Dell Road from Browns Valley Road to Mt. Madonna Road

- Highland Way from Summit Road to Eureka Canyon Road
- Ice Cream Grade
- Martin Road from Pine Flat to Ice Cream Grade
- Mt. Hermon Road from Scotts Valley City limits to Graham Hill Road
- Mt. Madonna Road from Gaffey Road to Hazel Dell Road
- Pine Flat Road from Bonny Doon Road to Empire Grade
- Sand Dollar Drive
- Smith Grade
- Summit Road from SR 17 to Highland Way
- Sunset Beach and Shell Road
- Swanton Road from SR 1 at Davenport Landing to SR 1 at Greyhound Rock

4.1.2 Regulatory Setting

a. Federal Laws, Regulations, and Policies

National Scenic Byway Program

The National Scenic Byway Program was established to preserve and protect the nation's scenic and less-traveled roads in an effort to promote tourism. For designation as a National Scenic Byway, a road must have one of the following six intrinsic qualities: scenic, natural, historic, cultural, archeological, or recreational. Within California, there are eight federally-designated byways (FHWA 2021). The Big Sur Coast Highway – Route 1 is a National Scenic Byway that is within Monterey County.

Wild and Scenic Rivers Act

The Wild and Scenic Rivers Act of 1968 was established to preserve designated rivers in their free-flowing condition and to protect their scenic, recreational, geologic, fish and wildlife, historic, and cultural values. Rivers designated under this Act are classified as wild, scenic, or recreational based on the condition of the river, the amount of development near the river, and the degree of accessibility by road or trail at the time of designation. A 19.5 mile stretch of the Big Sur River within AMBAG's planning area is designated under this law as a wild river (Caltrans 2007).

Federal Land Policy and Management Act

The Federal Land Policy and Management Act was established to authorize the Bureau of Land Management to own and manage public lands across the United States. Fort Ord National Monument is located within AMBAG's planning area and is managed by the Bureau of Land Management (BLM) through the Federal Land Policy and Management Act. The former Fort Ord military installation closed in 1994 and portions were subsequently transferred to BLM.

National Trails System Act

The National Trails System Act was established to create a national system of recreation, scenic, and historic trails. This act establishes four classes of trails: national scenic trails, national historic trails, national recreation trails, and side and connecting trails. Under this law, national historic trails recognize original trails or routes of travel of national historic significance. Juan Bautista de Anza National Historic Trail in San Benito County is located within the AMBAG planning area.

U.S. Department of Transportation Act, Section 4(f)

Section 4(f) of the Department of Transportation Act (DOT Act) of 1966 (49 United States Code 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 the FHWA, Federal Transit Administration (FTA), and Federal Aviation Administration (FAA) that involve the use, or interference with use, of the following types of land:

- Public park lands;
- Recreation areas;
- Wildlife and waterfowl refuges; and
- 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 U.S. 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 the by 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 or projects that have only minimal impacts on lands affected by Section 4(f). Under the new provisions, the U.S. Secretary of Transportation may find such a minimal impact if consultation with the State Historic Preservation Officer (SHPO) 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.

b. State Laws, Regulations, and Policies

California Scenic Highway Program

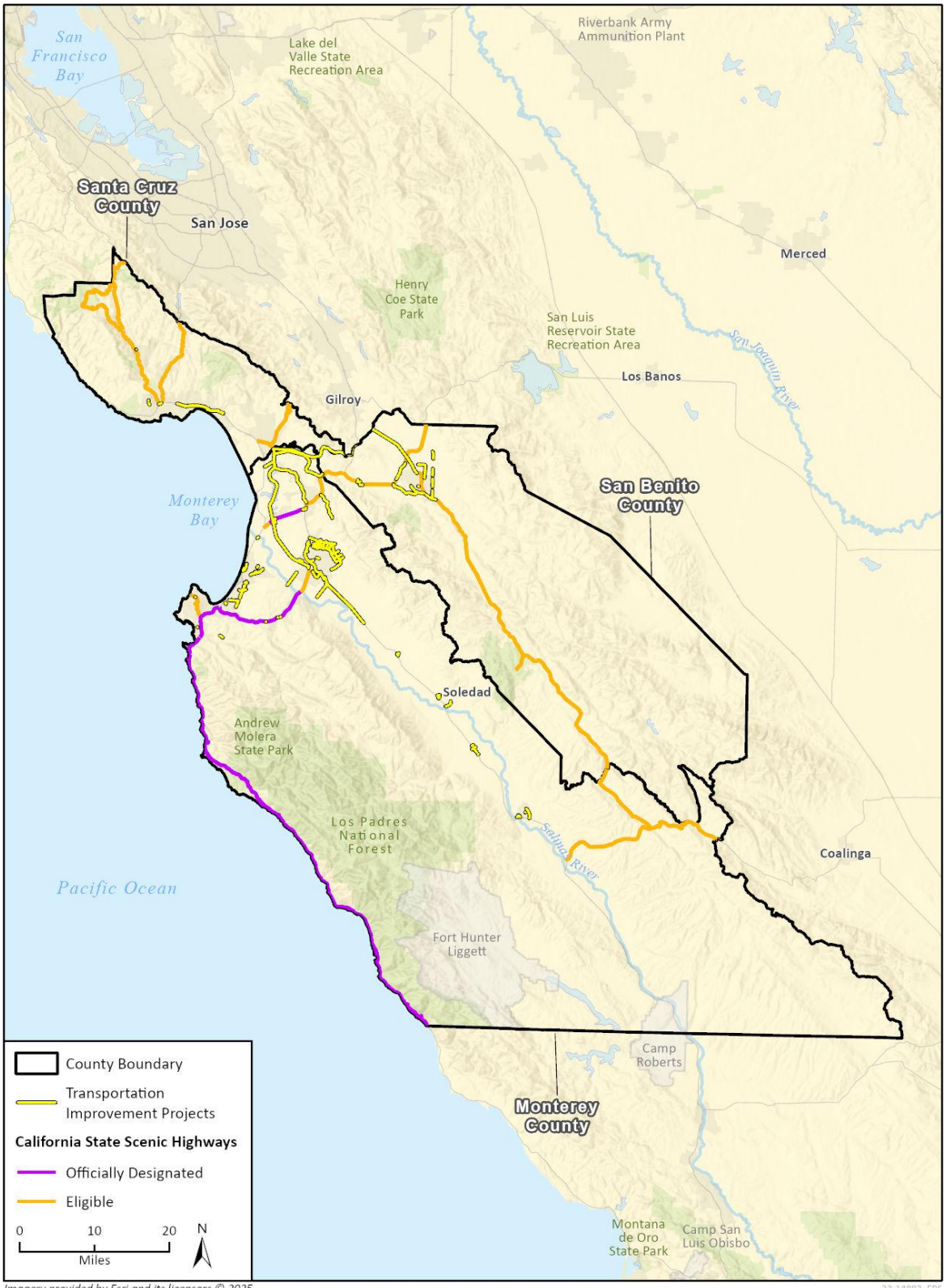
Recognizing the value of scenic areas and view from roads in such areas, the State Legislature established the California Scenic Highway Program in 1963 (Streets and Highways Code Sections 260 et seq). This legislation preserves and protects scenic highway corridors from changes that would diminish the aesthetic value of lands adjacent to highways. The goal of the Scenic Highway Program is to preserve and enhance the natural beauty of California. Under this program, a number of State Routes have been designated as eligible for inclusion as scenic routes. Once the local jurisdiction through which the roadway passes have established a corridor protection program and the Departmental Transportation Advisory Committee recommends designation of the roadway, the State may officially designate roadways as scenic routes. Interstate highways, State Routes and county roads may be designated as scenic under the program. The Master Plan of State Highways Eligible for Official Scenic Highway Designation maps designated highway segments, as well as those that are eligible for designation. Changes to the map require an act of the State Legislature.

As noted, a corridor protection program must be adopted by the local governments with land use jurisdiction over the area through which the roadway passes as the first step in moving a road from “eligible” to “designated” status. Each designated corridor is monitored by the State and designation may be revoked if a local government fails to enforce the provisions of the corridor protection program. While there are no restrictions on scenic highway projects, local agencies and Caltrans must coordinate on transportation and development projects and ensure the protection of the corridor’s scenic value to the greatest extent possible, including undergrounding all visible electric distribution and communication utilities within 1,000 feet of a Scenic Highway. In some cases, local governments have their own land use and site planning regulations in place to protect scenic values along a designated corridor. At a minimum, each corridor protection program must include:

- Regulation of land use and density of development;,
- Detailed land and site planning;
- Control of outdoor advertising devices;
- Control of earthmoving and landscaping; and
- Regulation of the design and appearance of structures and equipment.

The Master Plan of State Highways Eligible for Official Scenic Highway Designation requires that proposed realignments and route improvements be evaluated for their impact on the scenic qualities of the corridor. The Plan area includes numerous designated or eligible State Scenic Highways, which can be seen below in Figure 4.1-1.

Figure 4.1-1 Designated State Scenic Highways in the AMBAG Planning Area



California Coastal Act

The California Coastal Act of 1976 (Public Resources Code [PRC] Section 30000 et seq.) establishes policies guiding development and conservation along the California coast. Section 30001 of the Coastal Act finds:

- That the California coastal zone is a distinct and valuable natural resource of vital and enduring interest to all the people and exists as a delicately balanced ecosystem.
- That the permanent protection of the state's natural and scenic resources is a paramount concern to present and future residents of the state and nation.
- That to promote the public safety, health and welfare and to protect public and private property, wildlife, marine fisheries and other ocean resources and the natural environment, it is necessary to protect the ecological balance of the coastal zone and prevent its deterioration and destruction.
- That existing developed uses and future developments that are carefully planned and developed consistent with the policies of this division, are essential to the economic and social well-being of the people of this state and especially to working persons employed within the coastal zone.

According to the California Coastal Act Policy 30251, the scenic and visual qualities of coastal areas shall be considered and protected as resources of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas and, where feasible, to restore and enhance visual quality in development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.

California Building Energy Efficiency Standards

California Code of Regulations Title 24, Part 6 contains California's Energy Efficiency Standards for Residential and Non-residential Buildings. California Building Energy Efficiency Standards were established by CEC in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption and provide energy efficiency standards for residential and nonresidential buildings. The 2025 Energy Code contains standards to reduce energy consumption for outdoor lighting application in residential and non-residential developments, which can reduce light and glare from lighting in new development.

Caltrans Adopt-a-Highway Program

To improve and maintain the visual quality of California highways, Caltrans administers the Adopt-a-Highway program, which was established in 1989. The program provides an avenue for individuals, organizations, or businesses to help maintain sections of roadside within California's State Highway System. Groups have the option to participate as volunteers or to hire a maintenance service provider to perform the work on their behalf. Adoptions usually span a two-mile stretch of roadside, and permits are issued for five-year periods. Since 1989, more than

120,000 California residents have kept 15,000 shoulder miles of state roadways clean by engaging in litter removal, tree and flower planting, graffiti removal and vegetation removal.

c. Local Laws, Regulations, and Policies

City and County General Plans and Zoning Ordinances

The general plans and zoning ordinances of the cities within the Monterey Bay area regulate design and the built environment within those communities, while the general plans for each county perform the same function within unincorporated areas. In all cases, the general plans and zoning typically prescribe visual resource policies and, in some cases, require design review of projects. In general, little direction is provided regarding the design of roadways, which are typically subject to adopted Caltrans or local engineering standards related to safety and capacity, rather than aesthetics**.**

Local jurisdictions in the Monterey Bay area have policies for the protection of scenic corridors. In the Monterey County General Plan (County of Monterey 2010), Policy C-5.6 requires "special scenic treatment and design within the rights-of-way of officially designated State Scenic Highways and/or County Road." The San Benito County 2035 General Plan (County of San Benito 2015) Policy NCR-8.1 in Natural and Cultural Resources Element states that "[t]he County shall endeavor to protect the visual characteristics of certain transportation corridors that are officially designated as having unique or outstanding scenic qualities." Additionally, Policy ARC-5.1.3 of the Conservation and Open Space Element in the Santa Cruz County General Plan and Local Coastal Program (County of Santa Cruz 2024) requires the protection of public vistas and scenic asses including the implementation of screening landscaping for development that is "unavoidably sited within these vistas." Individual cities within the AMBAG region have similar policies pertaining to scenic corridors, visual character, and lighting.

Furthermore, several local jurisdictions have "dark sky" ordinances or other exterior lighting standards intended to reduce light pollution and glare, and to protect the nighttime visual environment. For example, Monterey County has specific design guidelines for exterior lighting to require that exterior lighting be unobtrusive, reduce off-site glare, and only light an intended area. The design guidelines establish criteria for the location and direction of fixtures, number of fixtures, and design of fixtures (Monterey County 2016). Chapter 19.31 of the San Benito County Code (Development Lighting) establishes three lighting zones and outlines specific lighting restrictions within each zone, with Zone I imposing the strictest regulations and Zone III imposing the least restrictive (County of San Benito 2017). In Santa Cruz County, Section 13.10.363 of the County Code requires that all exterior lighting in the Public and Community Facilities District include cut-offs that prevent light from extending beyond the boundaries of the property, while Section 13.10.581 outlines restrictions for illuminated signs (County of Santa Cruz 2017). Many cities also have similar types of ordinances. For example, the City of Seaside's Municipal Code contains Chapter 17.30.070, Outdoor Lighting, which limits the maximum height, energy efficiency, position, and maximum illumination, among other parameters, to reduce lighting and glare impacts.

In addition, many local jurisdictions within the region have adopted design guidelines to ensure new development is built to meet city or county design objectives. An example of this is the Santa Cruz County Design Guidelines, which include required best practices to ensure new development is aligned with the County's design objectives (County of Santa Cruz 2022).

4.1.3 Impact Analysis

a. Methodology and Significance Thresholds

Environmental assessment of a proposed project's impacts to the aesthetic and visual resources of a site begins with identification of the existing visual resources on and off that site, including the site's physical attributes, its relative visibility, and its relative uniqueness. The assessment of aesthetic impacts involves a qualitative analysis that is inherently subjective in nature. Different viewers react to viewsheds and aesthetic conditions differently. This evaluation measures the existing visual resource against the proposed action, analyzing the nature of the change.

It is important to distinguish between public and private views. Private views are those views seen from privately-owned land, including views from private residences and are typically enjoyed by individuals. Public views are experienced by the collective public. These include views of significant landscape features such as the Monterey Bay, as seen from public viewing space, not privately-owned properties. California Environmental Quality Act (CEQA) (PRC Section 21000 et seq.) case law has established that only public views, not private views, need be analyzed under CEQA. See *Association for Protection etc. Values v. City of Ukiah (1991) 2 Cal. App. 4th 720* and *Topanga Beach Renters Assn. v. Department of General Services (1976) 58 Cal. App. 3d 188.* Therefore, for this analysis, only public views will be considered when analyzing the visual impacts of implementing the 2050 MTP/SCS.

Appendix G of the *CEQA Guidelines* identifies the following criteria for determining whether a project's impacts would have a significant impact related to aesthetics/visual resources:

1. Have a substantial adverse effect on a scenic vista;
2. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
3. In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site or its surroundings; if the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality; or
4. Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

b. Project Impacts and Mitigation Measures

The following section describes aesthetic and visual resource impacts associated with the transportation improvements and future land use scenario in the 2050 MTP/SCS. Table 4.1-1 included in Section 4.1.3(c), below, summarizes the specific transportation projects that may result in aesthetics impacts. Specific applicable regulations which would apply throughout the AMBAG region are described in Section 4.1.2, Regulatory Setting, above. In general,

implementation of proposed transportation improvements and future projects under the land use scenario envisioned by the 2050 MTP/SCS would result in the aesthetics impacts as described in the following sections.

Threshold 1: Would the project have a substantial adverse effect on a scenic vista?

IMPACT AES-1 PROPOSED TRANSPORTATION IMPROVEMENT PROJECTS AND LAND USE PROJECTS ENVISIONED BY THE 2050 MTP/SCS WOULD HAVE A SUBSTANTIAL ADVERSE EFFECT ON SCENIC VISTAS. IMPACTS WOULD REMAIN SIGNIFICANT AND UNAVOIDABLE.

As discussed in Section 4.1.1, *Setting*, there are several scenic vistas and scenic resources within the AMBAG Region such as views of the coastline within Monterey County, views of the Diablo and Gabilan Mountain Ranges and their associated inland agricultural valleys in San Benito County, and redwood forests and the Santa Cruz Mountains in Santa Cruz County. While most transportation and land use projects would not result in significant impacts to scenic vistas, some projects would change existing visual conditions of the area within which they are proposed through modification or removal of existing vegetation. In the long-term, implementation of the 2050 MTP/SCS would generally result in modification of existing transportation facilities within existing highway, roadway, or railroad rights-of-way. Further, many of the proposed projects are at-grade with the surrounding environment. As such, most of the road and highway investments are not likely to result in massive obstructions or blockages of surrounding views nor modify or substantially alter existing scenic resources viewed from a scenic vista or state scenic highway.

In some areas, higher density infill development would obstruct scenic views of mountains or the coastline from urban-area roadways[1]. However, land use development envisioned by the 2050 MTP/SCS would be focused primarily in urban infill areas. Scenic vistas and designated scenic highways are generally located in undeveloped, rural areas, such that most future land use development envisioned in the 2050 MTP/SCS would not block or substantially alter scenic vistas.

Mitigation Measures

For transportation projects under their jurisdiction, the Transportation Agency for Monterey County (TAMC), the Council of San Benito County Governments (SBtCOG) and the Santa Cruz County Regional Transportation Commission (SCCRTC) shall implement, and transportation project sponsor agencies can and should implement, the following mitigation measures developed for the 2050 MTP/SCS program where applicable for transportation projects that would degrade scenic vistas or scenic resources within a state scenic highway, and where feasible and necessary based on project and site specific considerations. Cities and counties in the AMBAG

[1] Although some of the 2050 MTP/SCS projects would result in significant impacts to scenic vistas, it should be noted that the 2050 MTP/SCS includes several active transportation projects that would create new viewpoints from which the public would enjoy a scenic vista. Specifically, the construction of the San Benito River Recreation Trail in San Benito County would provide regional multi-use trails in rural and highly scenic areas, such as the San Benito River. This trail, and all active transportation projects included within the 2050 MTP/SCS would introduce paving and some signage into scenic areas, but would not include structures or other features that would substantially detract from existing views. Rather, these active transportation projects would improve public access to scenic areas, thus creating new public viewpoints from which existing scenic vistas can be viewed.

region can and should implement these measures, where relevant to land use projects implementing the 2050 MTP/SCS.

AES-1(a) Discouragement of Architectural Features that Block Scenic Views

Implementing agencies shall, or can and should, design projects to minimize contrasts in scale and massing between the project and surrounding natural forms and development. Setbacks and acoustical design of adjacent structures shall be preferentially used as mitigation for noise impacts arising from increased traffic volumes associated with adjacent land development. The use of sound walls, or any other architectural features that could block views from the scenic highways or other view corridors, shall be discouraged to the extent possible. Where use of sound walls is found to be necessary, walls shall incorporate offsets, accents and landscaping which resemble the surrounding landscape to visually integrate the wall with the surrounding environment, reduce visual monotony, and help maintain the quality of views from scenic highways or other view corridors. In addition, sound walls shall be complementary in color and texture to surrounding natural features.

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for transportation projects are Regional Transportation Planning Agencies (RTPAs) and transportation project sponsor agencies. Implementing agencies for land use projects are cities and counties. This mitigation measure shall, or can and should, be applied during permitting and environmental review.

AES-1(b) Tree Protection and Replacement

New roadways and extensions and widenings of existing roadways shall avoid the removal of existing mature trees to the extent possible. If avoidance is not possible, the implementing agency of a particular 2050 MTP/SCS project shall, or can and should, replace any trees lost at a minimum 2:1 basis and incorporate them into the landscaping design for the roadway. The implementing agency also shall ensure the continued vitality of replaced trees through periodic maintenance.

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for transportation projects are RTPAs and transportation project sponsor agencies. This mitigation measure shall, or can and should, be applied during permitting and environmental review, and implemented during construction where appropriate.

Significance After Mitigation

Although identified mitigation would help reduce impacts related to state-designated scenic highway corridors and scenic resources, individual transportation infrastructure projects as well as land use development included in the 2050 MTP/SCS would still result in obstructions to panoramic views and views of important landscape features or landforms (mountains, oceans, rivers, bays, or important man-made structures) as seen from public viewing areas. Given the extent of planned land use development under the 2050 MTP/SCS and the potential for site specific visual obstructions from future land use and transportation projects, impacts related to

the obstruction of scenic vistas from public viewing areas and impacts to state-designated scenic highway corridors and scenic resources would be significant and unavoidable.

Threshold 2:	Would the project substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

IMPACT AES-2 PROPOSED TRANSPORTATION IMPROVEMENT PROJECTS AND LAND USE PROJECTS ENVISIONED BY THE 2050 MTP/SCS WOULD SUBSTANTIALLY DAMAGE SCENIC RESOURCES WITHIN A STATE SCENIC HIGHWAYS. IMPACTS WOULD REMAIN SIGNIFICANT AND UNAVOIDABLE.

There are numerous County-designated scenic view corridors in the AMBAG region. Visual resource impacts from construction on or adjacent to these roadways would include: blockage of views by construction equipment and staging areas; disruption of views by temporary signage; and exposure of slopes and removal of vegetation. These effects would be temporary during the construction phase.

While most transportation and land use projects would not result in significant impacts to scenic resources within a State Scenic Highway, some projects would result in substantial adverse effects including projects such as construction of an interchange for SR 156 (an eligible scenic highway) and U.S. 101 (a designated scenic highway), widening of SR 25 (a designated scenic highway) from San Felipe Road to Hudner Lane and from Hudner Lane to Bloomfield Road, and construction of turn lanes on SR 156 (an eligible scenic highway) at Fairview Road. Additionally, the project includes SR 68 corridor improvements, widening of on and off ramps for SR 1, and several improvements along U.S. 101, all of which are officially designated State scenic highways

Development near state-designated scenic highway corridors would be minimized to some extent through compliance with the Caltrans Corridor Protection Program, which requires that the local jurisdiction adopt ordinances, zoning and/or planning policies to preserve the scenic quality of the state-designated scenic highway corridor, or document such regulations that already exist in various portions of local codes. Many local jurisdictions also have their own general plan policies relating to the protection of scenic vistas. These policies would limit the amount or type of development in designated scenic corridors or require special design guidelines when developing in certain areas. However, because scenic vistas and scenic resources are protected unevenly among the various jurisdictions in the AMBAG region, the 2050 MTP/SCS would result in a substantial adverse effect on a scenic vista or substantially damage scenic resources within a state scenic highway.

Mitigation Measures

For transportation projects under their jurisdiction, TAMC, SBtCOG, and SCCRTC shall implement, and transportation project sponsor agencies can and should implement, the following mitigation measures developed for the 2050 MTP/SCS program where applicable for transportation projects that would degrade scenic vistas or scenic resources within a state scenic highway, and where feasible and necessary based on project and site specific considerations. Cities and counties in the AMBAG region can and should implement these measures, where relevant to land use projects implementing the 2050 MTP/SCS.

AES-1(a) Discouragement of Architectural Features that Block Scenic Views

See Impact AES-1 for Mitigation Measure AES-1(a).

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for transportation projects are RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects are cities and counties. This mitigation measure shall, or can and should, be applied during permitting and environmental review.

AES-1(b) Tree Protection and Replacement

See Impacts AES-1 for Mitigation Measure AES-1(b).

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for transportation projects are RTPAs and transportation project sponsor agencies. This mitigation measure shall, or can and should, be applied during permitting and environmental review, and implemented during construction where appropriate.

Significance After Mitigation

Although identified mitigation would help reduce impacts related to state-designated scenic highway corridors and scenic resources, individual transportation infrastructure projects as well as land use development included in the 2050 MTP/SCS would still result in impacts to resources within a state scenic highway. Given the extent of planned land use development under the 2050 MTP/SCS and the potential for site specific visual obstructions from future land use and transportation projects, impacts related to the obstruction of scenic vistas from public viewing areas and impacts to state-designated scenic highway corridors and scenic resources would be significant and unavoidable.

Threshold 3:	In non-urbanized areas, would the project substantially degrade the existing visual character or quality of public views of the site or its surroundings; if the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

Impact AES-3 PROPOSED TRANSPORTATION IMPROVEMENT PROJECTS AND LAND USE PROJECTS ENVISIONED BY THE 2050 MTP/SCS WOULD SUBSTANTIALLY DEGRADE EXISTING VISUAL CHARACTER IN THE AMBAG REGION. IMPACTS WOULD REMAIN SIGNIFICANT AND UNAVOIDABLE.

The proposed MTP/SCS includes improvements to existing facilities such as road widenings, intersection or interchange improvements, auxiliary and transition lanes, highway maintenance and other improvements. The 2050 MTP/SCS would include some new road and highway facilities such as new interchanges, lane widening, new roadways and overcrossings, and road extensions. Most road and highway projects would occur in areas where transportation infrastructure is already a dominant feature of the landscape. Such transportation projects would not likely degrade the existing visual character of the region because transportation infrastructure is

already a dominant feature of the landscape in those areas. In less developed areas of the region, adding new transportation infrastructure would add an element of urban character to previously undeveloped lands. Ancillary facilities constructed along new or existing roads (such as lighting, bus shelters, and signs) would further contribute to the trend toward a more suburban visual character. Depending on the design and siting of transportation projects, this would degrade the visual character or quality of an area.

It should be noted that the majority of the projects included in 2050 MTP/SCS would occur in developed areas or adjacent to urban environments. In addition, the land use scenario envisioned by the 2050 MTP/SCS is intended to encourage infill development and development near existing transportation corridors, which are generally located in urbanized areas of cities and unincorporated communities. Infill development can be favorable in terms of visual character, as it occurs in areas already designated for and receiving growth and precludes growth in undeveloped and/or agricultural and rural areas. However, when compared to existing conditions, the 2050 MTP/SCS land use scenario would intensify the built environment within existing urban areas through the implementation of infill and transit oriented development (TOD) projects, thereby resulting in an overall change in the character of existing urbanized areas to a denser development pattern. In addition, land use projects that occur in rural or agricultural areas would introduce urban development to areas that were previously undeveloped. Depending on the design and siting of these projects, the resulting change could degrade the visual character or quality of their surroundings. A complete listing of transportation projects with potential to alter the rural character of the AMBAG region is included Table 4.1-1.

In any scenario, projects implemented under the 2050 MTP/SCS would be subject to existing regulations and required to comply with applicable zoning standards or acquire an approved zoning amendment, both of which would be subject to separate environmental review and would help to minimize impacts to visual character. For example, in visually sensitive areas, local land use agencies would apply development standards and guidelines to maintain compatibility with surrounding natural areas, including site coverage, building height and massing, building materials and color, landscaping, and site grading. Nevertheless, even with compliance with these standards, the overall visual effect of planned roadway projects and envisioned land use projects would contribute to an incremental, but irreversible transformation in visual character from rural or semi-rural to more urban or suburban throughout the AMBAG region. Therefore, the impact on visual character resulting from implementation of the 2050 MTP/SCS would be significant.

Mitigation Measures

For transportation projects under their jurisdiction, TAMC, SBtCOG, and SCCRTC shall implement, and transportation project sponsor agencies can and should implement, the following mitigation measure developed for the 2050 MTP/SCS program where applicable for transportation projects that would substantially degrade visual character, and where feasible and necessary based on project and site specific considerations. Cities and counties in the AMBAG region can and should implement this measure, where relevant to land use projects implementing the 2050 MTP/SCS. Project specific environmental documents may adjust these mitigation measures as necessary to respond to site specific conditions.

AES-3 Design Measures for Visual Compatibility

The implementing agency shall, or can and should, require measures that minimize contrasts in scale and massing between the project and surrounding natural forms and developments, including:

- Siting or designing projects to minimize their intrusion into important viewsheds;
- Avoiding large cuts and fills when the visual environment (natural or urban) would be substantially disrupted;
- Ensuring that re-contouring provides a smooth and gradual transition between modified landforms and existing grade;
- Developing transportation systems to be compatible with the surrounding environments (e.g., colors and materials of construction material; scale of improvements);
- Protecting or replacing trees in the project area based on local regulations and ordinances applicable to individual projects;
- Designing and installing landscaping to add natural elements and visual interest to soften hard edges, as well as to restore natural features along corridors where possible after widening, interchange modifications, re-alignment, or construction of ancillary facilities. The implementing agency shall provide a performance security equal to the value of the landscaping/irrigation installation to ensure compliance with landscaping plans; and
- Designing new structures to be compatible in scale, mass, character, and architecture with existing structures.

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for transportation projects are RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects are cities and counties. This mitigation measure shall, or can and should, be applied during permitting and environmental review, and implemented during construction where appropriate.

Significance After Mitigation

Implementation of the above mitigation measure would reduce project-specific impacts to the extent feasible. Nevertheless, the incremental alteration of current rural or semi-rural character to a more suburban environment is considered a significant and unavoidable impact.

Threshold 4: Would the project create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?

Impact AES-4 PROPOSED TRANSPORTATION IMPROVEMENT PROJECTS AND LAND USE PROJECTS ENVISIONED BY THE 2050 MTP/SCS WOULD CREATE NEW SOURCES OF SUBSTANTIAL LIGHT OR GLARE THAT WOULD ADVERSELY AFFECT DAY OR NIGHTTIME VIEWS IN THE AREA. IMPACTS WOULD REMAIN SIGNIFICANT AND UNAVOIDABLE.

New or intensified lighting from land use development envisioned in the 2050 MTP/SCS, which is focused on infill and TOD development, would be concentrated in areas with existing sources of light and glare. In these infill areas, such increases would not adversely affect nighttime views because existing sources of light, glare and shadow are already a dominant feature of the urban landscape. However, the intensity of light and glare in these urban areas would increase as a result of infill and TOD projects under the 2050 MTP/SCS, depending on site specific conditions and lighting design associated with new structures. Exterior lighting in some areas would be limited by compliance with existing lighting regulations, as discussed in Section 4.1.2, *Regulatory Setting*. For example, Chapter 19.31 of the San Benito County Code (Development Lighting) (County of San Benito 2025) and Chapter 17.30.070 of the City of Seaside's Municipal Code (City of Seaside 2025) contain limitations to the maximum height, energy efficiency, position, and maximum illumination of new lighting fixtures, among other parameters, to reduce lighting and glare impacts. However, not all jurisdictions have adopted dark sky ordinances or similar restrictions, and because the restrictiveness of these regulations varies throughout the region, impacts from land use development on the potential for increased lighting affecting nighttime views would be significant.

Improvements to existing roadways and highways would not significantly increase the amount of light and glare in an area, as these improvements would take place on existing facilities that have existing sources of light and glare. Increases in light and glare from new reflective signage, streetlights, intersection control devices and other improvements would be relatively minor compared to existing conditions. However, the expansion of existing roadways or construction of new roadways would allow a greater volume of vehicles to travel through a given segment of roadway or highway throughout the day, or introduce vehicles into a new area, which would have the potential to introduce new or additional vehicle headlights as new light sources. In addition, some of the new transportation facilities included in the 2050 MTP/SCS would directly introduce light, including the construction of additional Monterey County Rail Extensions in Gilroy and Salinas and the construction of the Pajaro Station in Watsonville. The introduction of light and glare would adversely affect day or nighttime views.

Overall, light and glare impacts from transportation improvements and infill and TOD development envisioned under the 2050 MTP/SCS would be significant because there would be new sources of substantial light or glare.

Mitigation Measures

For transportation projects under their jurisdiction, TAMC, SBtCOG, and SCCRTC shall implement, and transportation project sponsor agencies can and should implement, the following mitigation measures for transportation projects that would result in light and glare impacts, and where feasible and necessary based on project and site specific considerations. Cities and counties in the AMBAG region can and should implement these measures, where relevant to land use projects implementing the 2050 MTP/SCS. Project specific environmental documents may adjust these mitigation measures as necessary to respond to site specific conditions.

AES-4(a) Roadway Lighting

Roadway lighting shall be minimized, consistent with safety and security objectives and shall not exceed the minimum height requirements of the local jurisdiction in which the project is proposed. This may be accomplished through the use of hoods, low intensity lighting and using as few lights as necessary to achieve the goals of the project.

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for transportation projects are RTPAs and transportation project sponsor agencies. This mitigation measure shall, or can and should, be applied during permitting and environmental review and implemented during construction, as applicable.

AES-4(b) Lighting Design Measures

As part of planning, design and engineering for projects, implementing agencies shall, or can and should, ensure that projects proposed near light-sensitive uses avoid substantial spillover lighting. Design measures include, but are not limited to, the following:

- Lighting shall consist of cutoff-type fixtures that cast low angle illumination to minimize incidental spillover of light into adjacent properties and undeveloped open space. Fixtures that project light upward or horizontally shall not be used.
- Lighting shall be directed away from habitat and open space areas adjacent to the project site.
- Light mountings shall be downcast and the height of the poles minimized to reduce potential for backscatter into the nighttime sky and incidental spillover of light onto adjacent private properties and undeveloped open space. Light poles will be 20 feet high or shorter. Luminary mountings shall have non-glare finishes.
- Exterior lighting features shall be directed downward and shielded in order to confine light to the boundaries of the subject project. Where more intense lighting is necessary for safety purposes, the design shall include landscaping to block light from sensitive land uses, such as residences.

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for transportation projects are RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects are cities and counties. This mitigation measure shall, or can and should, be applied during permitting and environmental review and implemented during construction, as applicable.

AES-4(c) Glare Reduction Measures

Implementing agencies shall, or can and should, minimize and control glare from transportation and infill development projects near glare-sensitive uses through the adoption of project design features such as:

- 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;
- Landscaping off-street parking areas, loading areas and service areas;
- 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 where feasible;
- Complying with applicable general plan policies or local controls related to glare; and
- Tree species planted to comply with this measure shall provide substantial 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.

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for transportation projects are RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects are cities and counties. This mitigation measure shall, or can and should, be applied during permitting and environmental review and implemented during construction, as applicable.

Significance After Mitigation

In the absence of regulations specifically addressing light and glare impacts, the aforementioned mitigation measures would limit the use of reflective building materials and the potential spillage of light both upward and onto adjacent properties from exterior lighting fixtures. However, this impact would remain significant and unavoidable.

c. Specific MTP/SCS Projects That May Result in Impacts

Table 4.1-1 identifies transportation projects with the potential to cause or contribute to direct or indirect impacts to aesthetics and visual resources such as those discussed above. Program-level impact determinations were provided for the overall 2050 MTP/SCS Project above. This section is not intended to provide project-specific impact determinations under CEQA. Rather, the projects identified in Table 4.1-1 are representative of projects that may result in project-level impacts with or without mitigation and were selected based on their potential scope and likelihood to result in the aesthetic impacts identified above. The intent of this summary is to support potential future streamlining efforts as a screening tool to facilitate early identification of projects likely to result in the impacts identified above. Streamlining opportunities are discussed in Section 1.5, *Implementation Issues and Future Environmental Review*, in Chapter 1, *Introduction*.

Table 4.1-1 2050 MTP/SCS Projects That May Result in Aesthetic Impacts

AMBAG Project No.	Project	Location	Potential Impact
MON-CT011-CT-2026	Scenic Route 68 Corridor Improvements	Monterey County	AES-1
MON-CT023-CT-2026	State Route 156 and US 101 Interchange	Monterey County	AES-2
MON-CT030-SL-2026	US 101 - Salinas Corridor	Monterey County	AES-2
MON-GRN008-GR-2026	US 101 - Walnut Avenue Interchange	Monterey County	AES-2
MON-MYC288-UM-2026	SR 1 - Carmel River FREE	Monterey County	AES-2, AES-3
MON-PGV010-PG-2026	SR 68 - Bishop to Sunset	Monterey County	AES-4
MON-TAMC003-TAMC-2026	Monterey County Rail Extension Kick Start	Monterey County	AES-4
MON-TAMC014-TAMC-2026	Pajaro Station	Monterey County	AES-4
SB-CT-A44-2026	SR 25 Corridor Improvement Project, Phase I	San Benito County	AES-2
SB-CT-A45-2026	SR 25 Corridor Improvement Project, Phase II	San Benito County	AES-2
SB-CT-A43-2026	State Highway Operation and Protection Program	San Benito County	AES-2
SB-CT-A02-2026	SR 156/Fairview Road Intersection Improvements	San Benito County	AES-2
SB-SJB-A27-2026	Eastbound SR 156 Right Turn Lane onto southbound The Alameda	San Benito County	AES-2
SB-SBC-A09-2026	Fairview Road Widening: McCloskey to SR 25	San Benito County	AES-2
SB-SBC-A57-2026	Limekiln Road Bridge	San Benito County	AES-1, AES-2
SB-SBC-A58-2026	Rocks Road Bridge	San Benito County	AES-2, AES-3
SC-RTC-24e-RTC-2026	3 - Hwy 1 Auxiliary Lanes & Bus on Shoulders (State Park to Bay/Porter) & Mar Vista Bike/ Ped Xing	Santa Cruz County	AES-2
SC-RTC-24f-RTC-2026	2 - Hwy 1 Auxiliary Lanes & Bus on Shoulders (41st Ave to Soquel Ave) & Chanticleer Bike/ Ped Bridge	Santa Cruz County	AES-2

AMBAG Project No.	Project	Location	Potential Impact
SC-RTC-24g-RTC-2026	4 - Hwy 1 Auxiliary Lanes & Bus on Shoulders (Freedom Blvd to State Park Dr) & Trail Segment 12	Santa Cruz County	AES-2
CO-36SC-2026	Seacliff Village Streetscape Improvements	Santa Cruz County	AES-1, AES-4
SC-CO-P11-USC-2026	Freedom Blvd Multimodal Improvements (Bonita Dr to City of Watsonville)	Santa Cruz County	AES-1, AES-2
SC-SC-37-SCR-2026	Murray Street Bridge Seismic Retrofit	Santa Cruz County	AES-1
SC-WAT-P45-WAT-2026	Green Valley Rd Rehabilitation	Santa Cruz County	AES-1
SC-WAT-45-WAT-2026	Freedom Blvd Reconstruction (Alta Vista to Green Valley)	Santa Cruz County	AES-1, AES-4

4.1.4 Cumulative Impacts

a. Methodology

The cumulative analysis presented below primarily relies on a projections-based approach, using regional land use and growth forecasts for the AMBAG region and adjoining counties to evaluate cumulative conditions. The project is assessed within the existing and foreseeable future environmental setting, and a determination is made as to whether its incremental contribution would be cumulatively considerable when considered alongside both the overall envisioned land use scenario and specific large-scale planned projects. Refer to Section 6.4, *Cumulative Impacts*, in Chapter 6, *Other CEQA Required Discussions*, for a detailed description of the cumulative impact methodology.

b. Impact Analysis

Some types of impacts to aesthetic resources are localized and not cumulative in nature. For example, the creation of glare or shadows at one location is not worsened by 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 project and location where they are created. 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. However, from some vantage points, such as mountain ridges or open valley floors, the viewshed can span for miles. Because development may be seen from distances or into the distance from some locations, the cumulative impact analysis area for aesthetics includes the AMBAG region and adjoining counties.

IMPACT AES-C-1 DEVELOPMENT IN THE CUMULATIVE IMPACT ANALYSIS AREA WOULD HAVE A SUBSTANTIAL ADVERSE EFFECT ON A SCENIC VISTA, SUBSTANTIALLY DAMAGE SCENIC RESOURCES WITHIN A STATE SCENIC HIGHWAY, DEGRADE EXISTING VISUAL CHARACTER, OR ADVERSELY AFFECT NIGHT SKY LIGHTING. CUMULATIVE IMPACTS WOULD BE SIGNIFICANT AND THE CONTRIBUTION OF THE 2050 MTP/SCS WOULD BE CUMULATIVELY CONSIDERABLE.

There are two types of aesthetic impact that may be additive in nature and thus cumulative: overall changes in the visual environment as the result of increasing urbanization of large areas, and night sky lighting.

Development in one area, such as a relatively large city adjoining agricultural land like Salinas, would increase and possibly expand over time and meet or connect with development in an adjoining ex-urban area. This type of growth and expansion would adversely affect a scenic vista. Although growth envisioned in the 2050 MTP/SCS is primarily focused on infill areas, development outside of those geographies with long-distance views would result in impacts to scenic vistas, if such development does in fact occur. Additionally, development in infill areas and outside of those geographies may be located within the viewshed of a state scenic highway. Projects envisioned as part of the 2050 MTP/SCS that would block surrounding views or modify or substantially alter existing scenic resources viewed from a scenic vista or state scenic highway would result in localized impacts.

Regarding the visual environment experienced throughout the cumulative impact analysis area (AMBAG region and adjoining counties), as planned cumulative development occurs over time the overall visual environmental will change and existing visual character could be degraded. The combination of forecasted development in the AMBAG region and planned development in neighboring counties will result in a different visual environment than currently exists.

Cumulative development in the AMBAG region would also affect night sky lighting. Development in one area, such as a relatively large city adjoining agricultural land like Salinas, would increase and possibly expand over time and meet or connect with development in an adjoining ex-urban area. This type of growth and expansion would affect night sky lighting experienced both within and outside of the region and lighting may increase in the form of larger and/or more intense nighttime glow in the viewshed. Although growth envisioned in the 2050 MTP/SCS is primarily focused on infill areas, 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 because of projected development under the 2050 MTP/SCS.

The cumulative impacts to visual character and night sky lighting are considered significant, and the contribution of the 2050 MTP/SCS to these impacts is cumulatively considerable. Implementation of Mitigation Measures AES-1(a), AES-1(b), AES-3 and AES-4(a), AES-4(b), and AES-4(c) would reduce potential impacts to aesthetic resources. However, even with implementation of mitigation measures, cumulative impacts to visual resources would be significant, and the proposed Plan's contribution to the impact would be cumulatively considerable.

This page intentionally left blank.

4.2 Agriculture and Forestry

This section evaluates the agriculture and forestry resource impacts of the proposed 2050 MTP/SCS.

4.2.1 Setting

AMBAG's planning area includes expansive agricultural lands as well as forestry resources. The specific agriculture and forestry resources of Monterey, San Benito, and Santa Cruz counties are discussed below.

a. Definitions

Important Farmland

To characterize the environmental baseline for agricultural resources, Important Farmland Maps produced by the California Department of Conservation's (DOC) Farmland Mapping and Monitoring Program (FMMP) were reviewed. Unless otherwise expressed, the future use of "Important Farmland" specifically includes the following definitions provided by the DOC (DOC 2025):

Prime Farmland

Farmland with the best combination of physical and chemical features able to sustain long term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

Unique Farmland

Farmland of lesser quality soils used for the production of the state's leading agricultural crops. This land is usually irrigated but may include nonirrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the four years prior to the mapping date.

Farmland of Statewide Importance

Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the four years prior to the mapping date.

Within the AMBAG region, the Farmland Mapping and Monitoring Program has identified 291,230 acres of land as Farmland (Prime Farmland, Unique Farmland, and Farmland of Statewide Importance) in 2020, which represents approximately nine percent of the region's 3,295,663 acres of inventoried land area.

Forestry Resources

The AMBAG region has forestry resources, primarily within northern Santa Cruz County and parts of Monterey and San Benito counties. Forestry resources include forestland, timberland, and timberland production zones. Definitions used for forest land and timberland are those found in the California Public Resources Code (PRC) Sections 12220(g) and 4789.2(g) and California Government Code (CGC) Section 51104(g). These sections define forestland, timberland, and timberland production zones as follows:

Forest Land

Forest land is land that can support, under natural conditions, 10 percent native tree cover of any species, including hardwoods, and that allows for the preservation or management of forest-related resources such as timber, aesthetic value, fish and wildlife, biodiversity, water quality, recreational facilities, and other public benefits (PRC Section 12220(g)).

Timberland

Timberland means land, other than land owned by the federal government and land designated by the board as experimental forest land, which is available for, and capable of, growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees. Commercial species are determined by the board on a district basis (PRC Section 4526(g)).

Timberland Production Zones

Timberland production zones or "TPZ" means an area which has been zoned pursuant to Section 51112 or 51113 and is devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, as defined in subdivision (h) (CGC Section 51104).

b. Existing Conditions

Farmland Trends

According to the DOC, irrigated farmland in California decreased by 56,186 net acres between 2016 and 2018. The highest quality farmland, known as Prime Farmland, decreased by 38,683 net acres, coupled with a Farmland of Statewide Importance decrease of 30,052 net acres. Partially offsetting these losses was the addition of 12,549 net acres of irrigated crops on lesser quality soils, mapped as Unique Farmland (DOC 2019a). Although this farmland conversion was partially caused by urbanization, long-term land idling was the largest factor contributing to irrigated land decreases over this time period. Land idling, where irrigated land was converted to non-irrigated land due to a lack of irrigation over time or conversion to dry farming, was responsible for 77 percent of this type of conversion. Irrigated land conversions due to idling are often associated with water resource limitations, market conditions, and salinity-related land

idling. Land was removed from irrigated categories at a rate of 19 percent higher than compared with the prior update (128,105 acres in 2016 and 156,627 acres in 2018) (DOC 2019a).[1]

As shown in Table 4.2-1, between 2018 and 2020, total Farmland in the counties of Monterey, San Benito, and Santa Cruz saw a net decrease of 1,843 acres. Monterey County and Santa Cruz County experienced a net decrease of 1,630 and 296 acres, respectively, while San Benito County experienced a net increase of 83 acres, respectively (DOC 2020a, DOC 2020b, DOC 2020c).

Table 4.2-1 Farmland Conversion by County 2018-2020

Land Use Category	Total Acreage Inventoried 2018	Total Acreage Inventoried 2020	Total Acreage Inventoried Acres Lost (-)	Total Acreage Inventoried Acres Gained (+)	Total Acreage Inventoried Total Acreage Changed	Total Acreage Inventoried Net Acreage Changed
Monterey County Farmland[1]	236,995	235,365	2,877	1,247	4,124	-1,630
San Benito County Farmland[1]	37,172	37,255	658	741	1,399	+83
Santa Cruz County Farmland[1]	18,906	18,610	386	90	476	-296
Total	**293,073**	**291,230**	**3,921**	**2,078**	**5,999**	**-1,843**

[1] Farmland represents all Prime Farmland, Farmland of Statewide Importance, and Unique Farmland within the given County.

Source: California Department of Conservation 2020a-c.

Agricultural Productivity

Monterey County

Agriculture consisting of crop farming and livestock grazing is the largest industry in Monterey County and contributes a substantial amount of money to Monterey County's economy. The County's gross agricultural production in 2023 totaled approximately $4.3 billion, representing a 6.1 percent increase in value over the previous year (County of Monterey 2023). The most productive and lucrative farmlands in the County are located in the North County, Greater Salinas and Central Salinas Valley Planning Areas (County of Monterey 2010). The main type of crop production in the County consists of cool season vegetables, strawberries, wine grapes and nursery crops.

As noted previously, 235,365 acres in Monterey County were designated under the FMMP as containing Farmland in 2020. According to the FMMP, between the years 2018 and 2020, 828 acres of Farmland were converted to Grazing Land, 261 acres were converted to Urban and Built-Up Land, and 1,766 acres were converted to Other Land in the County (DOC 2020a). Figure 4.2-1 compares the locations of Farmland to the locations of transportation projects included in the 2050 MTP/SCS in Monterey County.

[1] At the time of preparation of the Draft Environmental Impact Report, the 2016-2018 Farmland Conversion Report represents the most current public data available.

San Benito County

The San Benito River Valley supports some of the most productive farmland in the State. Agriculture makes a substantial contribution to the County economy and accounts for an overwhelming amount of the privately-owned land in the County. The primary crops are fruits and nuts, vegetables and other row crops and small grains, and County lands also support the livestock industry, namely beef cattle (County of San Benito 2023).

The County's gross agricultural production in 2023 totaled approximately $360 million, representing a nearly 0.41 percent decrease in value over the previous year (County of San Benito 2023). According to the 2023 Crop Report, the highest grossing agricultural commodity was vegetable and row crops, representing approximately 65 percent of total agricultural sales, followed by fruit and nut crops at 17 percent, field crops at 10 percent, cattle at seven percent and other livestock and poultry at one percent. As noted previously in Table 4.2-1, 37,255 acres in San Benito County were designated under the FMMP as containing Farmland in 2020. According to the FMMP, between the years 2018 and 2020, 363 acres of Farmland were converted to Grazing Land, 40 acres were converted to Urban and Built-Up Land, and 153 acres were converted to Other Land in the County (DOC 2020b). Figure 4.2-2 compares the locations of Farmland to the locations of transportation projects included in the 2050 MTP/SCS in San Benito County.

Santa Cruz County

The top ten revenue crops that were produced in Santa Cruz County in 2023 included strawberries, nursery stock, raspberries, blackberries, broccoli and miscellaneous vegetables, lettuce head and leaf, cut flowers and cut greens, apple and miscellaneous fruit, brussels sprouts, poultry, livestock, and animal products (County of Santa Cruz 2023). The most common crop types (by acreage) in Santa Cruz County include strawberries, raspberries, apples, lettuce, brussels sprouts, and miscellaneous vegetables. As noted previously in Table 4.2-1, 18,610 acres in Santa Cruz County were designated under the FMMP as containing Farmland in 2020. According to the FMMP, between the years 2018 and 2020, 297 acres of Farmland were converted to Grazing Land and 89 acres were converted to Other Land in the County; no Farmland was converted to Urban and Built-up Land between the years 2018 and 2020 (DOC 2020c). Figure 4.2-3 compares the locations of Farmland to the transportation projects included in the 2050 MTP/SCS in Santa Cruz County.

Santa Cruz County has a large concentration of organic farms. There are approximately 160 organic growers in Santa Cruz County with over 9,000 acres in organic crops and pasture. These crops have an estimated value of over $147 million and represent approximately 23 percent of the total gross production value of Santa Cruz County agricultural commodities (County of Santa Cruz 2023).

Figure 4.2-1 Farmland in Monterey County (2020)

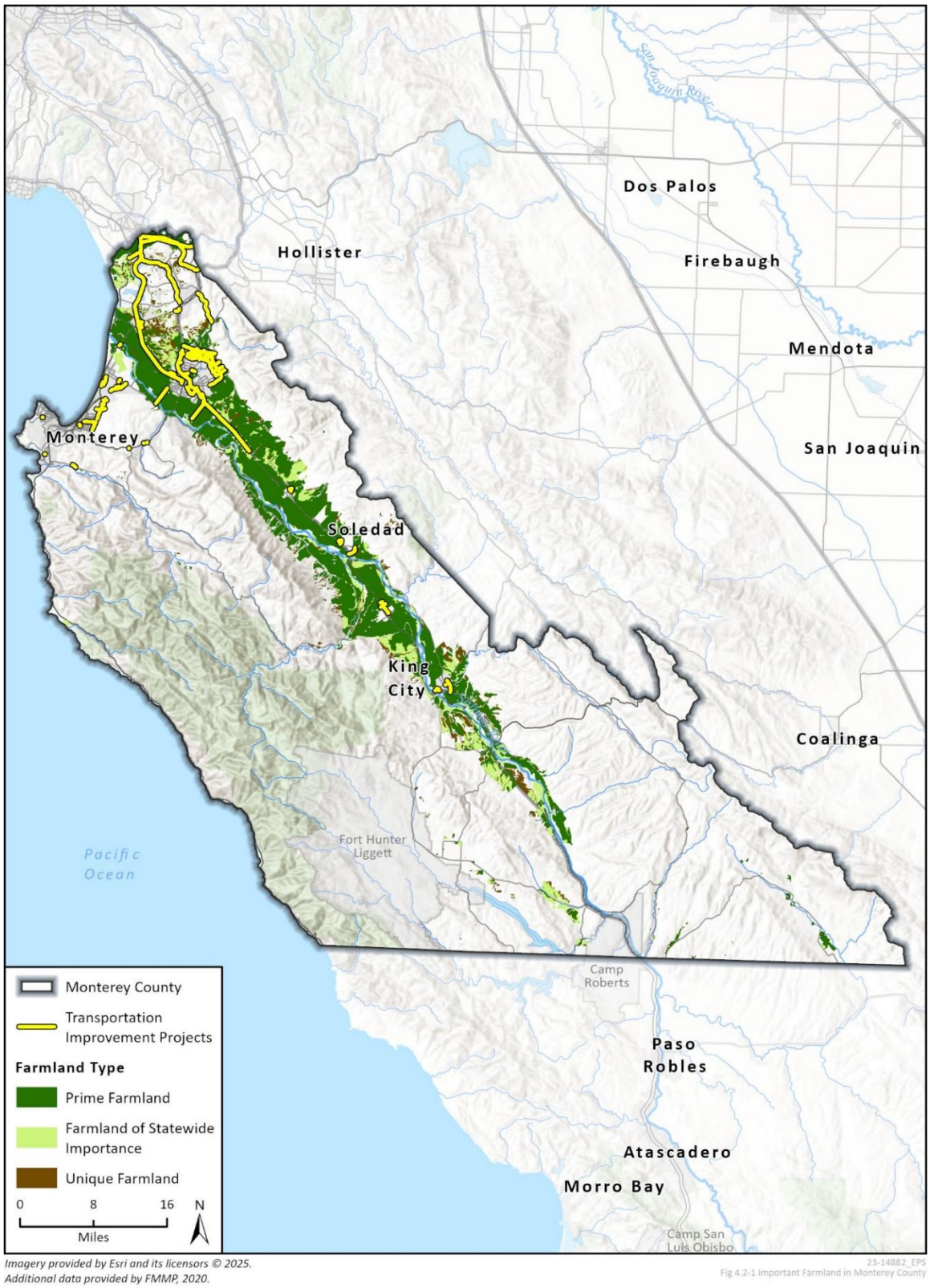


Figure 4.2-2 Farmland in San Benito County (2020)

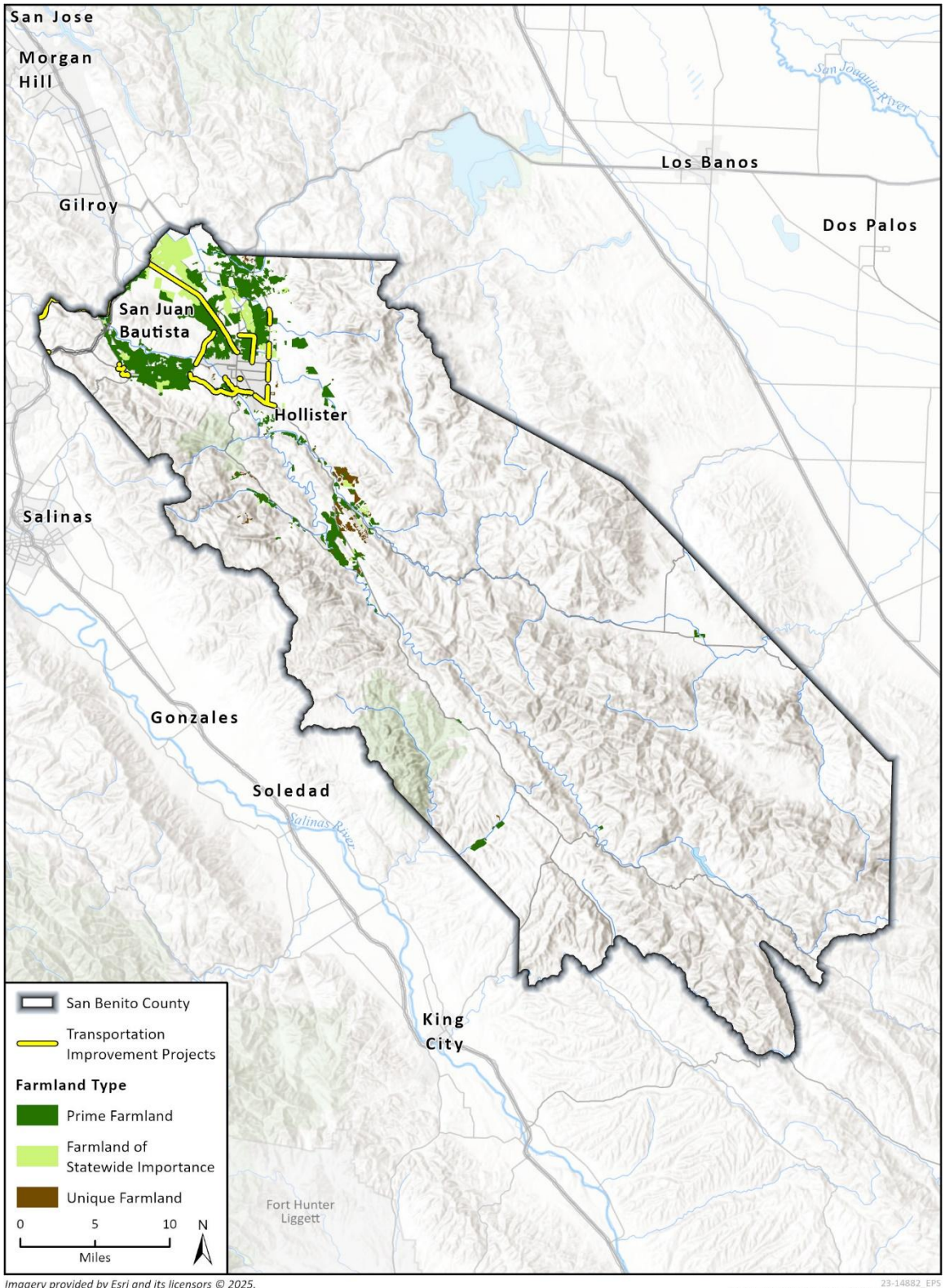
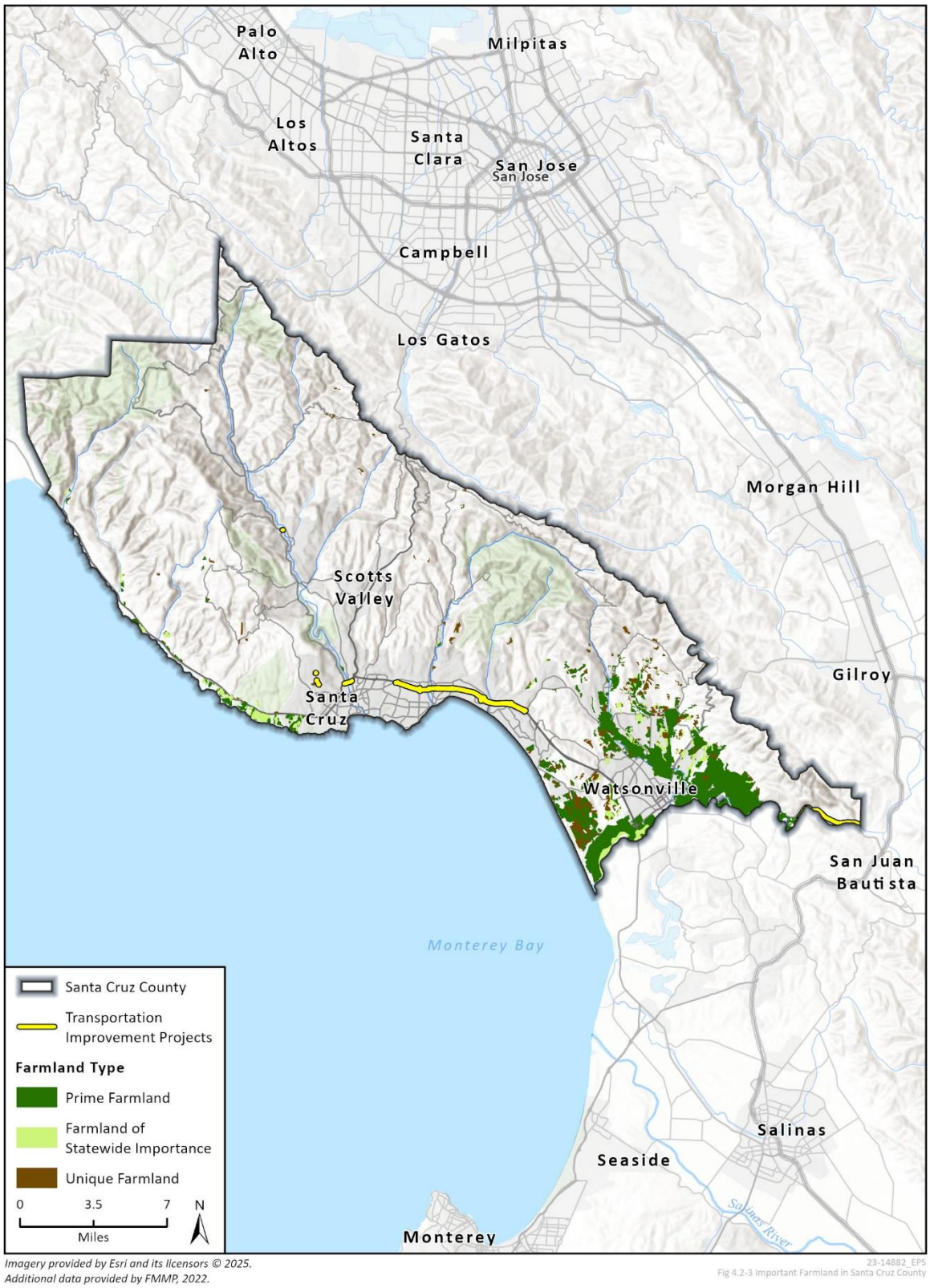


Figure 4.2-3 Farmland in Santa Cruz County (2020)



Forestry Resources

Monterey County

Monterey County contains expansive forest land areas, particularly along the coast in the southern portion of the County, in the Big Sur region and Los Padres National Forest. Major protected areas in the County with forestry resources include Los Padres National Forest, Fort Ord National Monument, Pinnacles National Park, and Palo Corona Regional Park. Monterey County historically had timber production; however, there are currently no parcels zoned for timberland production pursuant to the California Timberland Productivity Act of 1982 [Chapter 6.7 (commencing with Government Code Section 51100) of Part 1 of Division 1 of Title 5] within the County (County of Monterey 2010).

San Benito County

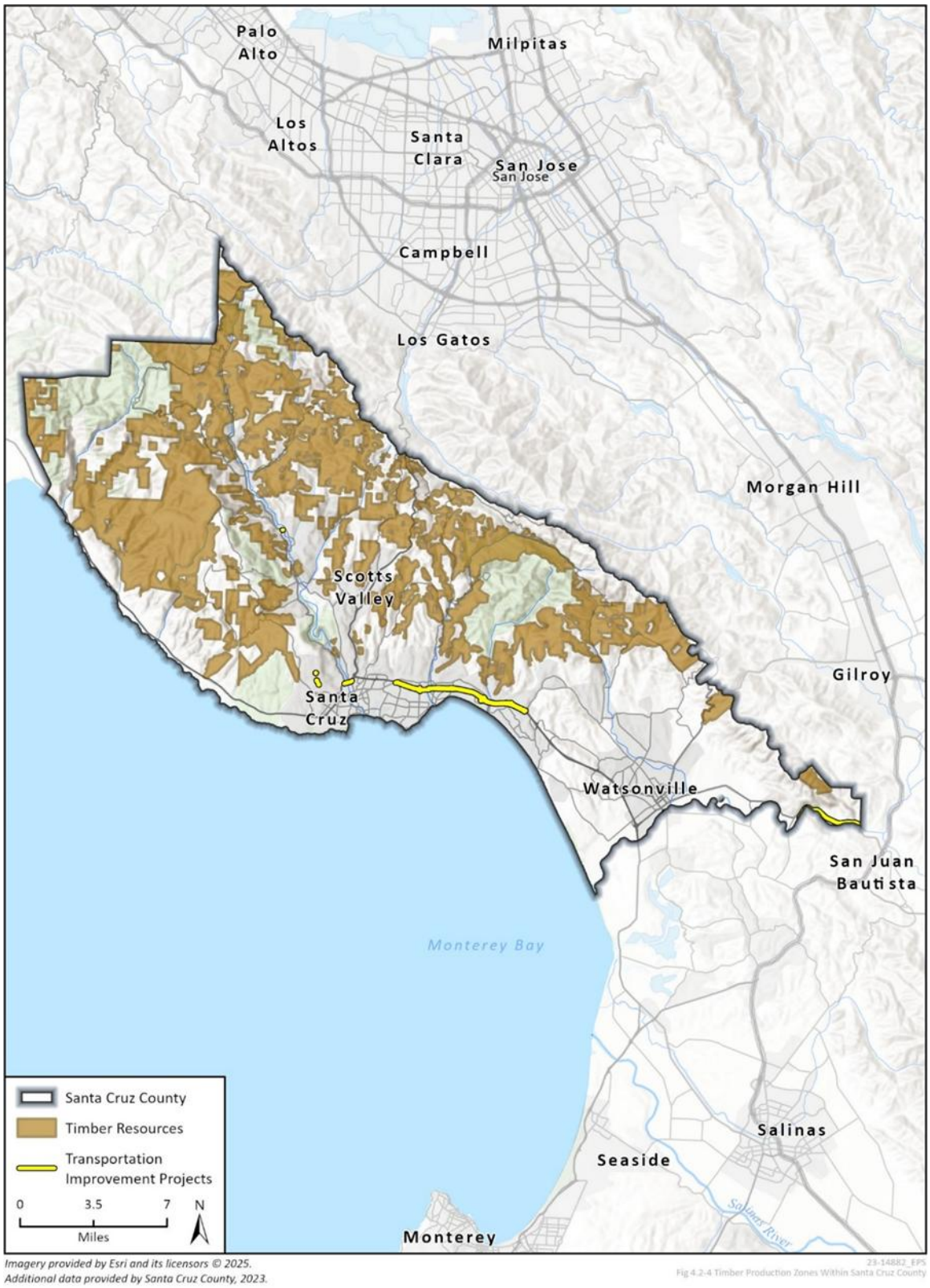
Forest land, as defined by Public Resources Code Section 12220(g) and timberland, as defined by Public Resources Code Section 4526, and timberland production areas, as defined by Government Code Section 51104(g), do not exist within San Benito County. There are no large, forested areas in the County, no commercial forestry production, and no known timber resources. While the southern, far northwestern, far western, and eastern portions of the County within the Gabilan and Diablo mountain ranges include oak woodland habitat and some very small and scattered forested areas, these areas are not classified as timber lands according to the existing San Benito County zoning designations as well as the governing statutes and regulations. Instead, according to the Department of Forestry and Fire Protection (CAL FIRE) Fire and Resource Assessment Program land use cover maps, the majority of these areas are classified as a combination of woodland and shrub habitat (County of San Benito 2015a).

Santa Cruz County

Santa Cruz County supports extensive areas of productive timber and protected forest land. The Santa Cruz Mountains and inter-mountain valleys support extensive forests with active timber production operations, particularly in the North Coast and Mountain regions. Forested lands and timberland occupy a substantial portion of the County with large areas of timber production in the Santa Cruz Mountains (County of Santa Cruz 2017). Timber Resources within the County are areas as defined by the General Plan, if they are on lands zoned CA or M3 – Mineral Extraction. On these lands, timber may be grown and harvested if there are sufficient timber resources to meet minimum stocking standards. Timberlands may occur within all zoning districts of the County and primarily located within Timber Production areas.

In its General Plan, Santa Cruz County designates Timber Production Zones (TPZ), defined as timberlands devoted to and used for growing and harvesting timber and capable of producing an average annual volume of wood fiber of at least 15 cubic feet per acre (Santa Cruz County 2024). As shown in Figure 4.2-4, most TPZs are located along the Santa Cruz-San Mateo and Santa Cruz-Santa Clara county lines, as well as in the northwestern portion of the county, near the unincorporated communities of Swanton and Davenport (Land Trust of Santa Cruz County 2011).

Figure 4.2-4 Timber Production Zones in Santa Cruz County (2023)



In 2020, 27,130 acres of TPZ in Santa Cruz County were affected by the CZU Lighting Complex Fires. TPZs within fire boundary were affected to varying degrees and a significant amount of underwent salvage logging (RCDSC 2021). The County also has Timber Harvesting Plans (THP), as approved by CAL FIRE. Most of the THPs in the county are located along the Santa Cruz-San Mateo and Santa Cruz-Santa Clara county lines, becoming smaller and sparser close to the cities of Santa Cruz and Watsonville.

4.2.2 Regulatory Setting

a. Federal Laws, Regulations, and Policies

Farmland Protection Policy Act

The Farmland Protection Policy Act (FPPA) is intended to minimize the impact Federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. It assures that to the extent possible federal programs are administered to be compatible with state, local units of government and private programs and policies to protect farmland. Projects are subject to FPPA requirements if they may irreversibly convert farmland (directly or indirectly) to nonagricultural use and are completed by a Federal agency or with assistance from a Federal agency.

Federal Forest Legacy Program

The Federal Forest Legacy Program was a part of the 1990 Farm Bill. Its purpose is to identify and protect environmentally important forestlands that are threatened by present or future conversion to non-forest uses. The program provides conservation easements and gives priority to lands that can be effectively protected and managed, as well as lands that have significant scenic, recreational, timber, riparian, fish and wildlife, threatened and endangered species, and other cultural or environmental values. Properties that are “working forests,” whereby the forestland is managed for the production of forest products, are also eligible under this program. Involvement in this program by private landowners is voluntary.

b. State Laws, Regulations, and Policies

Farmland Mapping and Monitoring Program

The DOC, under the Division of Land Resource Protection, developed the FMMP to monitor the conversion of the state’s farmland to and from agricultural use. Data is collected at the county level to produce a series of maps identifying eight land use classifications using a minimum mapping unit of 10 acres. The program also produces a biannual report on the amount of land converted from agricultural to non-agricultural use. The program maintains an inventory of state agricultural land and updates the “Important Farmland Series Maps” every two years (DOC 2018).

Right to Farm Act

The Right to Farm Act of 1981 (Civil 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.

Williamson Act

The California Land Conservation Act of 1965, Sections 51200 et seq. of the California Government Code, commonly referred to as the "Williamson Act," enables local governments to restrict the use of specific parcels of land to agricultural or related open space use. Landowners enter into contracts with participating cities and counties and agree to restrict their land to agriculture or open space use for a minimum of ten years. In return, landowners receive property tax assessments that are much lower than normal because they are based upon farming and open space uses as opposed to full market (speculative) value.

Coastal Zone Management Act

The Coastal Zone Management Act requires the protection of agricultural lands within the coastal zone. It does so by directly mandating that the maximum amount of prime agricultural land be maintained in production and by supporting various techniques to limit threats to agricultural productivity. These include establishing stable urban-rural boundaries, agricultural buffers, development priority on lands not suitable for agriculture, subdivision restrictions and public service expansion controls (Public Resource Code Section 30241).

The Cortese-Knox-Hertzberg Local Government Reorganization Act

The Cortese-Knox-Hertzberg Local Government Reorganization Act (Government Code Sections 56000 et seq.) establishes 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 other than open space will be guided away from existing prime agricultural lands in open space use toward areas containing nonprime agricultural lands, unless that action would not promote that planned, orderly, efficient development of an area.

Forest Practice Act

CAL FIRE enforces the laws that regulate logging on privately owned lands in California under the Forest Practice Act. Under the Forest Practice Act of 1973, timber operations may only be conducted pursuant to an approved THP, an environmental review document prepared by a Registered Professional Forester and submitted by landowners to CAL FIRE. The THP outlines the timber they want to harvest, how it will be harvested, and the steps that will be taken to prevent damage to the environment. Because a THP is the functional equivalent to an EIR for tree removal activities, the approval of a THP could depend on the inclusion of required mitigation.

A landowner that proposes to carry out a project that will result in timberland being converted to a non-timber growing use must apply for either a Timberland Conversion Permit or a notice of exemption. Grounds for exemption include conversions of less than three acres, conversions to construct or maintain a right–of-way by a public agency or a public or private utility, and development of subdivisions on forest land where approved by local government. When a Timberland Conversion Permit is issued, restocking of the timber resources is not required, as the land is converted to a non-timber growing use.

c. Local Laws, Regulations, and Policies

Each of the three counties' general plans highlights the importance of protecting agricultural land. The Monterey County General Plan (County of Monterey 2010) contains goals to promote the long-term protection, conservation and enhancement of productive and potentially productive agricultural land and ensure that the County's land use policies are consistent with ongoing agricultural activities. The Santa Cruz County's General Plan (County of Santa Cruz 2024) pays particular attention to the County's timber resources and provides policies that limit and regulate development in TPZ. These policies regulate development and timber harvesting. Santa Cruz County also collaborates with the Resource Conservation District of Santa Cruz County, which provides technical assistance and cost-share programs for forest management, fuel load reduction, and wildfire resilience to support timber viability. The San Benito County 2035 General Plan (San Benito County 2015a) also contains goals and policies to protect agricultural lands, but also contains the concept "right to farm and ranch." Specifically, San Benito County aims to protect the rights of operators of productive agricultural properties and ranching properties to continue their practices even though established urban uses in the general area may foster complaints against those agricultural and ranching practices. In addition, San Benito County protects forestry resources through its Management and Conservation of Woodlands Ordinance (Chapter 19.33), which regulates canopy retention, prohibits fragmentation of native woodlands, and establishes a permitting process for significant modifications. The County also coordinates with the California Department of Forestry and Fire Protection and the University of California's Hardwood Range Management Program to preserve oak woodlands and other forestry resources.

Several cities within the AMBAG region have adopted policies in their general plans aimed at preserving agricultural land. Representative policies for cities within each of the three counties are discussed below.

Cities in Monterey County

The City of Greenfield's Conservation, Recreation and Open Space Element of its General Plan (City of Greenfield 2005) contains several policies which aim to allow agriculture to continue as a viable use of land that reflects the community's origin while minimizing conflicts between agricultural and urban uses. For example, Policy 7.1.2 expresses the intent to minimize conflicts and negative impacts resulting from development that occurs in close proximity to agricultural uses. Moreover, Policy 7.1.3 encourages the promotion and marketing of locally grown agricultural products.

The Conservation and Open Space Element of the City of Soledad's General Plan (City of Soledad 2005) also contains policies aimed at preserving existing agricultural uses. Policy C/OS-1 states that "[t]he City shall discourage 'leapfrog' development and development in peninsulas extending into agricultural lands to avoid adverse effects on agricultural operations." Furthermore, Policy C/OS-3 aims to reduce urban encroachment upon agricultural lands by ensuring that new development and public infrastructure projects do not encourage expansion of urban uses outside the General Plan area into area designated as Agriculture by the Monterey County General Plan. Lastly, Policy C/OS-5 requires a right-to-farm condition to all future subdivision maps adjacent to farmlands.

The Conservation and Open Space Element of the City of Gonzales' General Plan (City of Gonzales 2011) contains goals, policies and implementing actions that focus on minimizing development on the agricultural edge. For example, Goal COS-4 states that the City aims for "[m]inimal disruption of agricultural operations and the loss of prime farmland and agricultural open space outside the Gonzales 2010 General Plan growth area. Furthermore, Policy COS-4.1 aims to maintain agricultural as the core or the local economy by conserving and protecting agricultural lands and operations within the Planning Area and where agricultural land is planned for eventual urbanization, work to keep such land in production up until the time when the land is converted to urban use. The Land Use Element of the City of Salinas' General Plan (City of Salinas 2002) contains several goals and policies aimed specifically at preserving existing agriculture land uses. For example, Goal LU-2 states that the City aims to "[m]anage future growth to minimize impacts to the existing community and surrounding agricultural lands." This is executed by the City of Salinas by maintaining a compact city form and directing urban expansion to the North and East, away from the most productive agricultural land. Moreover, the City's Conservation and Open Space Element also provides goals and policies aimed at protecting important agricultural land. Goal COS-3 in the Conservation and Open Space Element aims to "[i]dentify, preserve and protect the significant agricultural resources within and surrounding Salinas, while minimizing conflicts between agricultural and urban uses."

Monterey County also supports forestry resource conservation through programs like the Forest Health and Fire Resilience Public Works Plan, which was developed by the Resource Conservation District. This plan aligns with the California Coastal Act and CalFire's Vegetation Treatment Program and provides a framework for streamlining permitting for vegetation management and wildfire resilience projects in the coastal zone. Local ordinances in Monterey County cities also regulate tree removal, for example in the City of Monterey, where landmark trees are protected under municipal code.

Cities in San Benito County

The Open Space and Agriculture Element of the City of Hollister's General Plan (City of Hollister 2005) contains policies specifically aimed at preserving important and prime farmland. Policy OS2.1, Premature Conversion of Prime Farmland, aims to minimize the premature conversion of prime farmland to non-agricultural uses by directing urban growth toward portions of the Hollister Planning Area which have not been identified as prime farmland. Likewise, Policy OS2.2, Coordination with San Benito County to Preserve Prime Farmlands, encourages the County of San Benito to maintain existing County land use policies that discourage urban development in

rural areas within the County as a way to ensure continuing agricultural operations within portions of the Hollister Planning Area. This policy also encourages the City to coordinate with the County of San Benito in efforts to maintain prime farmlands in active agricultural use whenever possible and in all efforts to maintain the continued economic viability of agricultural within the Hollister Planning Area. Finally, Policy OS2.3, *Williamson Act Contracts*, encourages the sponsors of subdivisions on agriculturally viable land to enter and maintain prime soils of the proposed subdivision in Williamson Act contracts as a means of off-setting the loss of agricultural land.

The Conservation Element of the City of San Juan Bautista 2035 General Plan (City of San Juan Bautista 2015) outlines several policies which aim to preserve important environmental resources. For example, Policy CO 1.1.1 discourages the conversion of prime agricultural land into non-agricultural uses.

Cities in Santa Cruz County

The City of Santa Cruz 2030 General Plan (City of Santa Cruz 2012b) includes Policy LU1.2 in its Land Use and Natural Resources and Conservation Elements, which ensures that growth and development do not lead to the loss of prime agricultural land. In addition, Policy NRC3.4 aims to conserve agricultural resources in the Planning Area.

The City of Watsonville's 2005 General Plan (City of Watsonville 1994) Growth and Conservation Element contains Goal 3.3, *Agricultural Land Use*, which encourages the continuation of agriculture in the Pajaro Valley, and Implementation Measure 3.A.1, *Government Cooperation*, which expresses the City's intent to cooperate with Santa Cruz and Monterey counties to establish mutually reinforcing goals of city-centered development to prevent the intrusion of rural residential uses and urban development into agricultural lands.

4.2.3 Impact Analysis

a. Methodology and Significance Thresholds

The methodology used for the following evaluation is based on a review of publicly available data and planning documents to determine the potential for implementation of the 2050 MTP/SCS to result in impacts to agriculture and forestry resources in the AMBAG region. This includes land use and zoning maps, the California Important Farmland Finder, Timberland Production Zone data, and relevant city and county General Plans. Due to the regional scale and programmatic nature of the analysis, site-specific analyses were not conducted. Instead, the evaluation focuses on typical impacts associated with transportation and land use changes, and considers consistency with applicable policies and the potential for land conversion or disruption of resource-related activities.

Appendix G of the *CEQA Guidelines* identifies the following criteria for determining whether a project's impacts would have a significant impact on agriculture and forestry resources:

1. 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 nonagricultural use;
2. Conflict with existing zoning for agricultural use, or a Williamson Act contract;
3. Conflict with existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timber Production;
4. Result in the loss of forest land or conversion of forest land to non-forest use; and/or
5. Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use.

b. Project Impacts and Mitigation Measures

The following section describes agriculture and forestry resources impacts associated with the transportation improvements and future land use scenario included in the 2050 MTP/SCS. Table 4.2-2 included in Section 4.2.3(c), below, summarizes the specific transportation projects that may result in agriculture and forestry resource impacts. In general, implementation of proposed transportation improvements and the reasonably foreseeable future development facilitated under the land use scenario envisioned by the 2050 MTP/SCS would result in agriculture and forestry resources impacts as described in the following section.

Threshold 1:	Would the project 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 nonagricultural use?
Threshold 2:	Would the project conflict with existing zoning for agricultural use, or a Williamson Act contract?
Threshold 5:	Would the project involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?

Impact AG-1 PROPOSED TRANSPORTATION IMPROVEMENTS AND LAND USE PROJECTS ENVISIONED BY THE 2050 MTP/SCS WOULD RESULT IN THE CONVERSION OF PRIME FARMLAND, UNIQUE FARMLAND, OR FARMLAND OF STATEWIDE IMPORTANCE TO NONAGRICULTURAL USE, OR CONFLICT WITH EXISTING ZONING FOR AGRICULTURE OR A WILLIAMSON ACT CONTRACT. THIS WOULD BE A SIGNIFICANT AND UNAVOIDABLE IMPACT.

As noted in Table 4.2-1, there were 291,230 acres of Farmland (consisting of Prime Farmland, Farmland of Statewide Importance, and Unique Farmland, as defined by the DOC) in the AMBAG region in 2020, which represents approximately nine percent of the region's 3,295,663 acres of inventoried land area (DOC 2020).

The 2050 MTP/SCS emphasizes infill development and development near existing transportation corridors, which are generally located in urbanized areas of cities and unincorporated communities. Such land use development within urbanized areas would limit agricultural resource impacts since development would be located within existing urban areas. However, some development would still occur in agricultural areas, resulting in the conversion of approximately 2,635 acres of Farmland to non-agricultural use by 2050 (refer to Chapter 5 and Appendix G of the 2050 MTP/SCS). This represents 0.9 percent of the total Farmland in the region in 2020 (refer to Table 4.2-1). All of the Farmland being consumed in the 2050 MTP/SCS is within existing spheres of influence or is within Community Plan Areas as designated by the general plans in the region. Land use projects could also conflict with agricultural zoning or Williamson Act contracts.

Transportation improvement projects under the 2050 MTP/SCS adjacent to agricultural areas, particularly those requiring new rights-of-way, could also convert Farmland to non-agricultural use, or conflict with agricultural zoning or Williamson Act contracts. Although incorporated cities in Monterey, San Benito, and Santa Cruz County are fairly urbanized, many cities border agriculture, including FMMP-designated Farmland. These include the City of Watsonville in Santa Cruz County; the cities of Salinas, Soledad, Gonzales, Greenfield and King City in Monterey County; and the cities of San Juan Bautista and Hollister in San Benito County. Transportation improvement projects that involve roadway widening have the potential to affect narrow segments of agricultural land located immediately along the existing right-of-way of proposed improvements. For example, the widening of Boronda Road in Salinas would have the potential to impact agricultural fields immediately adjacent to its western edge, and the improvements planned for State Route 25 near Hollister and Highway 101 near Gonzales and Greenfield would have the potential to impact adjacent agricultural land on either side of the roadway. In addition, improving, expanding and extending existing roadways, along with the installation of new roadways, could remove some barriers to development taking place on the urban edge as the region's connectivity and access improves from these projects. Additionally, construction of projects adjacent to agricultural fields could result in introduction of invasive species or weeds, which could out-compete agricultural crops. It is important to note that for federally funded projects, implementing and local agencies are required to follow the rules and regulations of the FPPA including determining the impact by completing the Farmland Conversion Impact Rating form (AD-1006). The FPPA assures that to the extent possible, federal programs are administered to be compatible with state and local programs and policies to protect farmland.

A determination of the impacts to Farmland, agricultural zoning and conflicts with Williamson Act contracts would be made on a case-by-case basis as individual projects are implemented. Many individual projects would likely not create significant impacts, particularly those that involve only minor widening along existing rights-of-way or would be located in urbanized areas zoned for development. Nevertheless, because implementation of the 2050 MTP/SCS would directly result in conversion of Farmland and conflict with agricultural zoning and Williamson Act contracts, this would be a significant impact.

Mitigation Measures

For transportation projects under their jurisdiction, TAMC, SBtCOG, and SCCRTC shall implement, and transportation project sponsor agencies can and should implement, the following mitigation measures developed for the 2050 MTP/SCS program where applicable for transportation projects that would result in impacts to Important Farmland, and where feasible and necessary based on project and site specific considerations. Cities and counties in the AMBAG region can and should implement these measures, where relevant to land use projects implementing the 2050 MTP/SCS. Project specific environmental documents may adjust these mitigation measures as necessary to respond to site specific conditions.

AG-1 Agricultural Land Impact Avoidance and Minimization

Implementing agencies shall implement measures, where feasible based on project and site specific considerations, that include, but are not limited to those identified below.

- Require project relocation or corridor realignment, where feasible, to avoid Farmland, agriculturally zoned land and/or land under Williamson Act contract;
- Manage project construction to minimize the introduction of invasive species or weeds that may affect agricultural production on agricultural land adjacent to project sites. Managing project construction may include washing construction equipment before bringing equipment on-site, using certified weed-free straw bales for construction Best Management Practices (BMPs), and other similar measures.
- 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 development included as a part of the MTP/SCS;
- Achieve compensatory mitigation in advance of impacts through purchase or creation of mitigation credits or the implementation of mitigation projects through Regional Advance Mitigation Planning, as deemed appropriate by permitting agencies; and/or
- Require acquisition of conservation easements on land in the same jurisdiction, if feasible, and at least equal in quality and size to converted Important Farmland, to offset the loss of Farmland.
- Institute new protection of farmland in the project area or elsewhere through the use of long-term restrictions on use, such as 20-year Farmland Security Zone contracts (Government Code Section 51296 et seq.) or 10-year Williamson Act contracts (Government Code Section 51200 et seq.).

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for transportation projects are RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects are cities and counties. This mitigation measure shall, or can and should, be applied during permitting and environmental review and implemented during construction where appropriate.

Significance After Mitigation

Implementation of Mitigation Measure AG-1 would require avoidance or compensation for Farmland impacts by specific projects included in the 2050 MTP/SCS, thereby reducing the impact of conversion of Farmland to non-agriculture use and conflicts with agricultural zoning and Williamson Act contracts. However, the mitigation would not ensure that the future land use development pattern and transportation projects could feasibly relocate or realign to avoid conversion of Farmland, or conflicts with lands zoned for agriculture, or lands under Williamson Act contract. As a result, the aforementioned mitigation would reduce impacts, but impacts would remain significant and unavoidable.

Threshold 3:	Would the project conflict with existing zoning 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))?
Threshold 4:	Would the project result in the loss of forest land or conversion of forest land to non-forest use?

Impact AG-2 PROPOSED TRANSPORTATION IMPROVEMENTS AND LAND USE PROJECTS ENVISIONED BY THE 2050 MTP/SCS WOULD NOT CONFLICT WITH EXISTING ZONING FOR FOREST LAND, TIMBERLAND, OR TIMBERLAND PRODUCTION, NOR RESULT IN THE LOSS OF FOREST LAND OR CONVERT FOREST LAND TO NON-FOREST USES. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Most timber resources in the AMBAG region are in Santa Cruz County. All but one Timber Harvest Plan (in southern Monterey County) are in the mountains of Santa Cruz County (CAL FIRE 2025). Additionally, according to the CAL FIRE 2017 Fire and Resource Assessment Program , Santa Cruz County is the only county in the AMBAG region that contains land zoned with a Timber Production Zone designation (CAL FIRE 2018; refer to Figure 4.2-4).

The land use development pattern in Santa Cruz County, as shown in Chapter 2, *Project Description,* would concentrate development within existing urbanized areas. Limited development could overlap with existing Timber Harvest Plans. However, these areas of overlap primarily contain Town/Rural Residential land uses and would not result in the loss of forest land or land zoned for forest land, timberland, or timberland production because the overlap does not include land zoned for such uses. In addition, the 2050 MTP/SCS land use pattern would not conflict with existing zoning or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production, including within the Santa Cruz Mountains.

There are several local street improvement projects that occur near densely forested areas within the Santa Cruz Mountains. These projects, as well as other future development in areas zoned as forest land would be required to comply with existing development standards and zoning regulations, and thus would by design comply with then-existing zoning for forest land, timberland, and timberland production. In addition, transportation projects within the 2050

MTP/SCS that are located near forest lands would be required to comply with all applicable construction standards to reduce impacts on forest land and timber resources.

Because land use strategies contained within the 2050 MTP/SCS would help to encourage growth in developed areas, because of the majority of timber areas are outside the identified land use development areas in Santa Cruz County, and because MTP/SCS transportation projects would comply with the existing zoning for forest land, timberland, and timberland production, impacts on conversion of forest land or conflicts with land zoned for forest land, timberland, or timberland production would be less than significant.

Mitigation Measures

None required.

c. Specific MTP/SCS Projects That May Result in Impacts

Table 4.2-2 identifies transportation projects with the potential to cause or contribute to direct or indirect impacts to agriculture and forestry resources such as those discussed above. Program-level impact determinations were provided for the overall 2050 MTP/SCS project above. This section is not intended to provide project-specific impact determinations under CEQA. Rather, the transportation projects identified in Table 4.2-2 are representative of those that may result in project-level impacts with or without mitigation and were selected based on their potential scope and likelihood to result in the agriculture and forestry resource impacts identified above. The intent of this summary is to support potential future streamlining efforts as a screening tool to facilitate early identification of projects likely to result in the impacts identified above. Streamlining opportunities are discussed in Section 1.4, *Implementation Issues and Future Environmental Review*, in Chapter 1*, Introduction*.

Table 4.2-2 2050 MTP/SCS Projects That May Result in Agriculture and Forestry Impacts

AMBAG ID	Project	Location	Potential Impact
MON-GRN001-GR-2026	Apple Avenue Bridge over U.S. 101	Monterey County	AG-1
MON-GRN005-GR-2026	Thorne Road Bridge over U.S. 101	Monterey County	AG-1
MON-MYC075-UM-2026	River Road Operational Improvements	Monterey County	AG-1
MON-SNS078-SL-2026	Natividad Creek Bike Path	Monterey County	AG-1
MON-CT030-SL-2026	U.S. 101 – Salinas Corridor	Monterey County	AG-1
MON-CT031-CT-2026	U.S. 101 – South of Salinas Improvements	Monterey County	AG-1
MON-CT036-CT-2026	SR 156 - Castroville Boulevard Interchange	Monterey County	AG-1
MON-GON015-GO-2026	US 101 / Gloria Road Interchange	Monterey County	AG-1
MON-GRN008-GR-2026	U.S. 101 – Walnut Avenue Interchange	Monterey County	AG-1
MON-SOL002-SO-2026	U.S. 101 – North Interchange	Monterey County	AG-1
MON-SOL003-SO-2026	U.S. 101 – South Interchange	Monterey County	AG-1
MON-SNS012-SL-2026	Boronda Road Widening	Monterey County	AG-1
MON-SNS044-SL-2026	Natividad Road Widening	Monterey County	AG-1

AMBAG ID	Project	Location	Potential Impact
MON-SNS050-SL-2026	Russell Road Widening	Monterey County	AG-1
MON-SNS059-SL-2026	Williams Road Widening	Monterey County	AG-1
MON-SNS090-SL-2026	Russell Road Extension	Monterey County	AG-1
MON-SNS092-SL-2026	San Juan Natividad Collector	Monterey County	AG-1
MON-SNS093-SL-2026	Independence Boulevard Extension	Monterey County	AG-1
MON-SNS094-SL-2026	Hemingway Drive Extension	Monterey County	AG-1
MON-SNS095-SL-2026	Constitution Boulevard Extension	Monterey County	AG-1
MON-SNS096-SL-2026	Sanborn Road Extension	Monterey County	AG-1
MON-SNS097-SL-2026	Williams Russel Collector	Monterey County	AG-1
MON-SNS098-SL-2026	Sconberg Parkway Extension	Monterey County	AG-1
MON-SNS108-SL-2026	Laurel Drive Widening	Monterey County	AG-1
MON-SNS121-SL-2026	McKinnon Street Extension	Monterey County	AG-1
MON-SNS279-SL-2026	Rossi Road Extensions	Monterey County	AG-1
MON-SNS281-SL-2026	El Dorado Drive Extension	Monterey County	AG-1
SB-SBC-A05-2026	Union Road Widening (West) San Benito Street to Highway 156	San Benito County	AG-1
SB-CT-A44-2026	State Route 25 Corridor Improvement Project, Phase I	San Benito County	AG-1
SB-CT-A45-2026	State Route 25 Corridor Improvement Project, Phase II	San Benito County	AG-1
SB-COH-A18-2026	Westside Boulevard Extension	San Benito County	AG-1
SB-COH-A55-2026	Memorial Drive North Extension: Santa Ana Road to Flynn Road/Shelton Intersection	San Benito County	AG-1
SB-SBC-A04-2026	Union Road Widening (East): San Benito Street to Highway 25	San Benito County	AG-1
SB-SBC-A05-2026	Union Road Widening (West): San Benito Street to Highway 156	San Benito County	AG-1
SB-SBC-A09-2026	Fairview Road Widening: McCloskey to SR 25	San Benito County	AG-1
SB-SBC-A67-2026	Shore Road Extension	San Benito County	AG-1
SB-SBC-A69-2026	Fairview Road & Hillcrest Road Intersection	San Benito County	AG-1
SB-SJB-A09-2026	Lang Street	San Benito County	AG-1

4.2.4 Cumulative Impacts

a. Methodology

The cumulative analysis presented below primarily relies on a projections-based approach, using regional land use and growth forecasts for the AMBAG region and adjoining counties to evaluate cumulative conditions. The project is assessed within the existing and foreseeable future environmental setting, and a determination is made as to whether its incremental contribution would be cumulatively considerable when considered alongside both the overall envisioned land use scenario and specific large-scale planned projects. Refer to Section 6.4, *Cumulative Impacts*, in Chapter 6, *Other CEQA Required Discussions*, for a description of the cumulative impact methodology.

b. Impact Analysis

The cumulative impact analysis area for agriculture and forestry resources consists of the AMBAG region and adjoining counties. Future development in this cumulative impact analysis area that would impact farmland or forestry land is considered in the analysis. This cumulative extent is used to evaluate the potential loss or conversion of farmland and forest land due to projected regional development to determine whether reasonably foreseeable future development facilitated under the land use scenario envisioned by the 2050 MTP/SCS would contribute to the reduction in these resources in the AMBAG region.

Impact AG-C-1 DEVELOPMENT IN THE CUMULATIVE IMPACT ANALYSIS AREA WOULD RESULT IN CONVERSION OF AGRICULTURAL LAND TO NON-AGRICULTURAL USES. CUMULATIVE IMPACTS WOULD BE SIGNIFICANT AND THE CONTRIBUTION OF THE 2050 MTP/SCS WOULD BE CUMULATIVELY CONSIDERABLE. IMPACTS TO FORESTRY RESOURCES WOULD NOT BE CUMULATIVELY CONSIDERABLE.

Future development within the cumulative impact analysis area would convert agricultural land to non-agricultural uses and may result in conflicts with agricultural zoning and Williamson Act contracts. In addition, future development adjacent to agricultural land has the potential to result in a loss of Farmland due to land use conflicts, which adds to the cumulative conversion of agricultural lands. Cumulative impacts to agricultural resources would be significant. As described above, implementation of transportation projects and land use development patterns under the 2050 MTP/SCS would contribute to these impacts by resulting in conversion of approximately 2,635 acres of Farmland to non-agricultural use, and conflicts with agricultural zoning or Williamson Act contracts. This is a cumulatively considerable contribution to cumulative agricultural impacts.

Implementation of Mitigation Measure AG-1 would reduce the contribution of the proposed 2050 MTP/SCS to cumulative agricultural land impacts. However, the mitigation would not ensure that the future land use development pattern and transportation projects could feasibly relocate or realign to avoid impacts, and impacts would remain significant and unavoidable. The contribution of the proposed 2050 MTP/SCS to cumulative impacts would therefore remain cumulatively considerable post-mitigation.

In the cumulative impact analysis area, forestland and timber resources are primarily located in Santa Cruz County. Future development within the cumulative impact analysis area would not convert forestland to non-forest uses and thus, would not result in conflicts forest zoning. Thus, cumulative impacts to forestland and timber resources would not be significant, and the proposed Plan's contribution to the cumulative forestland and timber resources impact would not be cumulatively considerable.

4.3 Air Quality and Health Impacts/Risks

This section analyzes the impacts of the 2050 MTP/SCS on local and regional air quality, including both temporary impacts relating to construction activities and long-term impacts associated with population and employment growth and associated growth in transportation and energy consumption. In addition, the potential health risks associated with the development and growth induced by the 2050 MTP/SCS are discussed. Greenhouse gas emissions are analyzed in Section 4.8, *Greenhouse Gas Emissions/Climate Change.*

4.3.1 Setting

a. Local Climate and Topography

Air quality is affected by the rate and location of pollutant emissions and by climatic conditions that influence the movement and dispersion of pollutants. Atmospheric conditions, such as wind speed, wind direction and air temperature gradients, along with local and regional topography, mediate the relationship between air pollutant emissions and air quality.

The North Central Coast Air Basin (NCCAB) is comprised of Monterey, San Benito, and Santa Cruz, counties. The Basin lies along the central coast of California and covers an area of 5,159 square miles. The Diablo Range marks the northeastern boundary and, together with the southern extent of the Santa Cruz Mountains, forms the Santa Clara Valley, which extends into the northeastern tip of the NCCAB. Further south, the Santa Clara Valley transitions into the San Benito Valley, which runs northwest-southeast and has the Gabilan Range as its western boundary. To the west of the Gabilan Range is the Salinas Valley, which extends from Salinas at its northwestern end to King City at its southeastern end. The western side of the Salinas Valley is formed by the Sierra de Salinas, which also forms the eastern side of the smaller Carmel Valley. The coastal Santa Lucia Range defines the western side of the Carmel Valley (Monterey Bay Air Resources District [MBARD] 2008).

The semi-permanent high-pressure cell in the eastern Pacific is the basic controlling factor in the climate of the NCCAB. In the summer, the high-pressure cell is dominant and causes persistent west and northwest winds over the entire California coast. Air descends in the Pacific High forming a stable temperature inversion of hot air over a layer of cool coastal air. The onshore air currents pass over cool ocean waters to bring fog and relatively cool air into the coastal valleys. The warmer air loft acts as a lid to inhibit vertical air movement (MBARD 2008).

The generally northwest-southeast orientation of mountainous ridges tends to restrict and channel the summer onshore air currents. Surface heating in the interior portion of the Salinas and San Benito Valleys creates a weak low pressure which intensifies the onshore air flow during the afternoon and evening. In the fall, the surface winds become weak, and the marine layer grows shallow, dissipating altogether on some days. The air flow is occasionally reversed in a weak offshore movement, and the relatively stationary air mass is held in place by the Pacific high-pressure cell, which allows pollutants to build up over a period of a few days. It is most often during this season that the north or east winds develop to transport pollutants from either the San Francisco Bay Area or the Central Valley into the NCCAB (MBARD 2008).

During the winter, the Pacific High migrates southward and has less influence on the NCCAB. Air frequently flows in a southeasterly direction out of the Salinas and San Benito Valleys, especially during night and morning hours. Northwest winds are nevertheless still dominant in winter, but easterly flow is more frequent. The general absence of deep, persistent inversions and the occasional storm systems usually result in good air quality for the NCAAB in winter and early spring (MBARD 2008).

In Santa Cruz County, coastal mountains exert a strong influence on atmospheric circulation, which results in generally good air quality. Small inland valleys such as Scotts Valley with low mountains on two sides have poorer circulation than at Santa Cruz on the coastal plain. In addition, Scotts Valley is downwind of major pollutant generating centers, and these pollutants have time to form oxidants during transit Scotts Valley. Consequently, air pollutants tend to build up more in Scotts Valley than in Santa Cruz (MBARD 2008).

Monterey Bay is an approximately 25-mile-wide inlet, which allows marine air at low levels to penetrate the interior. The Salinas Valley is a steep-sloped coastal valley which opens out on Monterey Bay and extends southeastward with mountain ranges of two to three thousand feet elevation on either side. The broad area of the valley floor near the mouth is approximately 25 miles wide, narrowing to about six miles at Soledad, which is 40 miles inland, and to about three miles wide at King City, which is about 60 miles from the coast. At Salinas, near the northern end of the Valley, west and northwest winds occur about one-half the time during the entire year. Although the summer coastal stratus rarely extends beyond Soledad, the extended sea breeze, which consists of warmer and drier air currents, frequently reaches far down the Salinas Valley. In the southern end of the Valley, which extends into the South Central Coast Air Basin to Paso Robles, winds are generally weaker most of the year except during storm periods (MBARD 2008). The regional air patterns are important in context with air quality because meteorology influences how pollutants move through the air basin and how long pollutants remain in the air basin.

b. Air Pollutants of Primary Concern

The federal and State Clean Air Acts (CAA) mandate the control and reduction of certain air pollutants, referred to as "criteria pollutants." Under these laws, described more below in Section 4.3.2, *Regulatory Setting*, the U.S. Environmental Protection Agency (USEPA) and the California Air Resources Board (CARB) have established ambient air quality standards for criteria pollutants. Primary criteria pollutants are emitted directly from a source (e.g., vehicle tailpipe, an exhaust stack of a factory, etc.) into the atmosphere and include carbon monoxide (CO), reactive organic gasses (ROG), nitrogen oxides (NO_X), fine particulate matter (PM_{10} and $PM_{2.5}$), sulfur dioxide (SO_2) and lead (Pb). Secondary criteria pollutants are created by atmospheric chemical and photochemical reactions. ROG, together with nitrogen oxides, form the building blocks for the creation of photochemical (secondary) pollutants. Secondary pollutants include oxidants, ozone, sulfate, and nitrate particulates (smog). The characteristics, sources, and effects of selected air contaminants are provided in Table 4.3-1.

Table 4.3-1 Description of Selected Air Contaminants

Air Contaminants of Concern
Photochemical Oxidant (Ox)
Characteristics. The term "photochemical oxidant" can include several different pollutants but consists primarily of ozone (more than 90 percent) and a group of chemicals called organic peroxynitrates. Photochemical oxidants are created in the atmosphere rather than emitted directly into the air. Reactive organic gases and oxides of nitrogen are the emitted contaminants, which participate in the reaction. Ozone is a pungent, colorless toxic gas, which is produced by the photochemical process. Photochemical oxidant is a characteristic of southern California-type smog and reaches highest concentrations during the summer and early fall. **Sources.** Ozone is caused by complex atmospheric reactions involving oxides of nitrogen and reactive organic gases with ultraviolet energy from sunlight. Motor vehicles are the major source of oxides of nitrogen and reactive organic gases in the basin. **Effects.** The common manifestations of ozone and other photochemical oxidants are damage to vegetation and cracking of untreated rubber. Ozone in high concentrations (ranging from 0.15 ppm to 0.50 ppm) can also directly affect the lungs, causing respiratory and coronary irritation and possible changes in lung functions. These health problems are particularly acute in children and elderly people exposed to these pollutants.
Carbon Monoxide (CO)
Characteristics. CO is a colorless, odorless, toxic gas produced through the incomplete combustion of fossil fuels. Concentrations are higher in winter when more fuel is burned for heating purposes and weather conditions favor the build-up of directly emitted contaminants. **Sources.** The use of gasoline-powered engines is the major source of this contaminant, with automobiles being the primary contributor. The CO emissions from gasoline-powered engines are higher during winter months due to poor engine efficiency in cold temperatures. Various industrial processes also produce CO emissions through incomplete combustion of fossil fuels. **Effects.** CO does not irritate the respiratory tract. However, it passes through the lungs directly into the blood stream and, by interfering with the transfer of oxygen, deprives sensitive tissues of oxygen.
Nitrogen Oxides (NO_X)
Characteristics. NO_X primarily consists of nitric oxide (NO) (a colorless, odorless gas formed from atmospheric nitrogen and oxygen when petroleum combustion takes place under high temperatures and/or pressure) and nitrogen dioxide (NO_2) (a reddish-brown irritating gas formed by the combination of nitric oxide with oxygen). Due to the role they play as ozone precursors, oxides of nitrogen are one of the two criteria pollutants subject to federal ozone requirements. **Sources.** High combustion temperatures cause nitrogen and oxygen to combine and form nitric oxide. Further reaction produces additional oxides of nitrogen. Combustion in motor vehicle engines, power plants, refineries, and other industrial operations are the primary sources in the region. Ships, railroads and aircraft are other significant emitters. **Effects.** Oxides of nitrogen are direct participants in photochemical smog reactions. The emitted compound, nitric oxide, combines with oxygen in the atmosphere in the presence of sunlight, to form nitrogen dioxide and ozone. Nitrogen dioxide, the most significant of these pollutants, can color the atmosphere at concentrations as low as 0.5 ppm on days of 21 0-mile visibility. NO_2 is an important air pollutant in the region because it is a primary receptor of ultraviolet light. The latter initiates photochemical reactions, helping to form ozone and/or particulate nitrate. It will also react in the air to form nitrate particulates.

Air Contaminants of Concern

Sulfur Dioxide (SO_2)

Characteristics. SO_2 is a colorless, pungent, irritating gas formed primarily by the combustion of sulfur-containing fossil fuels. In humid atmospheres, SO_2 can form sulfur trioxide and sulfuric acid mist, with some of the latter eventually reacting to produce sulfate particulates.

Sources. This contaminant is the natural combustion product of sulfur or sulfur-containing fuels. Fuel combustion is the major source, while chemical plants, sulfur recovery plants and metal processing are minor contributors.

Effects. At sufficiently high concentrations, sulfur dioxide irritates the upper respiratory tract. At lower concentrations, when in conjunction with particulates, SO_2 appears able to do still greater harm by injuring lung tissues. Sulfur oxides, in combination with moisture and oxygen, can yellow the leaves of plants, dissolve marble and eat away iron and steel. Sulfur oxides can also react to form sulfates, which reduce visibility.

Particulates (Total Suspended Particles and PM_{10})

Characteristics. Atmospheric particulates are made up of finely divided solids or liquids, such as soot, dust, aerosols, fumes and mists. About 90 percent by weight of the emitted particles are larger than 10 microns in diameter, but about 10 percent by weight, or 90 percent of the total *number* of particulates, are less than 5 microns in diameter. The aerosols formed in the atmosphere, primarily sulfate and nitrate, are usually smaller than 1 micron. In areas close to major sources, particulate concentrations are generally higher in the winter, when more fuel is burned for heating and meteorological conditions favor the build-up of directly-emitted contaminants. However, in areas remote from major sources and subject to photochemical smog (ozone), particulate concentrations can be higher during summer months because the presence of ozone increases the potential for SO_2 and NO_2 to convert to sulfate and nitrate particulates.

Sources. Particulate matter consists of particles in the atmosphere resulting from many kinds of dust and fume-producing industrial and agricultural operations, from combustion and from atmospheric photochemical reactions. Re-entrained road dust from vehicles is a significant source of particulates. Natural activities also put particulates into the atmosphere; wind-raised dust and ocean spray are two such sources of particulates.

Effects. In the respiratory tract, very small particles of certain substances may produce injury by themselves, or may contain absorbed gases that are injurious. Suspended in the air, particulates less than 5 microns in diameter can both scatter and absorb sunlight, producing haze and reducing visibility. They can also cause a wide range of damage to materials.

Diesel Particulate Matter (DPM)

Characteristics. Diesel particulate matter is part of a complex mixture that makes up diesel exhaust. Diesel exhaust is commonly found throughout the environment. Diesel exhaust is composed of two phases, either gas or particle, and both phases contribute to the risk. The gas phase is composed of many of the urban hazardous air pollutants, such as acetaldehyde, acrolein, benzene, 1,3-butadiene, formaldehyde and polycyclic aromatic hydrocarbons. Diesel exhaust has a distinct odor, which is primarily a result of hydrocarbons and aldehydes contained in diesel fuel. The particle phase also has many different types of particles that can be classified by size or composition. The size of diesel particulates that are of greatest health concern are those that are in the categories of fine and ultra-fine particles. The composition of these fine and ultra-fine particles may be composed of elemental carbon with adsorbed compounds such as organic compounds, sulfate, nitrate, metals and other trace elements.

Sources. Diesel exhaust is emitted from a broad range of diesel engines: the on-road diesel engines of trucks, buses and cars and the off-road diesel engines that include locomotives, marine vessels and heavy-duty equipment.

Effects. Acute exposure to diesel exhaust may cause irritation to the eyes, nose, throat and lungs and some neurological effects such as lightheadedness. Acute exposure may also elicit a cough or nausea as well as exacerbate asthma. Chronic exposure in experimental animal inhalation studies has shown a range of dose-dependent lung inflammation and cellular changes in the lung and there are also diesel exhaust immunological

Air Contaminants of Concern
effects. Based upon human and laboratory studies, there is considerable evidence that diesel exhaust is a likely carcinogen. Human epidemiological studies demonstrate an association between diesel exhaust exposure and increased lung cancer rates in occupational settings.
Hydrocarbons and Other Organic Gases (Total Hydrocarbons, CH_4NMHC (non-methane), AHC, NHC)
Characteristics. Any of the vast family of compounds consisting of hydrogen and carbon in various combinations are known as hydrocarbons. Fossil fuels are included in this group. Many hydrocarbon compounds are major air pollutants, and those which can be classified as olefins or aromatics are highly photochemically reactive. Atmospheric hydrocarbon concentrations are generally higher in winter because the reactive hydrocarbons react more slowly in the winter and meteorological conditions are more favorable to their accumulating in the atmosphere to higher concentration before producing photochemical oxidants. Due to the role they play as ozone precursors, reactive hydrocarbons are one of the two criteria pollutants subject to federal ozone requirements. **Sources.** Motor vehicles are a major source of anthropogenic hydrocarbons (AHC) in the basin. Other sources include evaporation of organic solvents, and petroleum refining and marketing operations. Trees are the principal emitters of biogenic or natural hydrocarbons (NHC). **Effects.** Certain hydrocarbons can damage plants by inhibiting growth and causing flowers and leaves to fall. Levels of hydrocarbons currently measured in urban areas are not known to cause adverse effects in humans. However, certain members of this contaminant group are important components in the reactions which produce photochemical oxidants.
Lead (Pb)
Characteristics. Lead is an elemental heavy metal found naturally in the environment as well as in manufactured products. Lead can be released directly into the air, as suspended particles. It is soft, malleable and melts at a relatively low temperature. When freshly cut, it has a bluish-white tint; it tarnishes to a dull gray upon exposure to air. Lead has several properties that make it useful: high density, low melting point, ductility, and relative inertness to oxidation. Combined with relative abundance and low cost, these factors resulted in the extensive worldwide use of lead. Lead is persistent in the environment and accumulates in soils and sediments through deposition from air sources, direct discharge of waste streams to water bodies, mining, and erosion. **Sources.** The major sources of lead emissions historically have been mobile and industrial sources. As a result of phasing out leaded gasoline, metal processing currently is the primary source of Pb emissions. The highest level of lead in the air is generally found near lead smelters. Other stationary sources include waste incinerators, utilities, and lead-acid battery manufacturers. **Effects.** Humans may be exposed to lead from air pollution directly, through inhalation, or through the incidental ingestion of lead that has settled out from the air onto soil or dust. Depending on the level of exposure, lead can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems and the cardiovascular system. Lead exposure also affects the oxygen carrying capacity of the blood. The lead effects most commonly encountered in current populations are neurological effects in children and cardiovascular effects (e.g., high blood pressure and heart disease) in adults. Infants and young children are especially sensitive to even low levels of lead, which may contribute to behavioral problems, learning deficits and lowered IQ. Elevated lead in the environment can result in decreased growth and reproductive rates in plants and animals and neurological effects in vertebrates.

Source: USEPA 2025a

Ozone is the main pollutant of concern for the NCCAB; ROGs, and NO_X join in photochemical reactions that produce ozone and thus are also of concern. The region is "NO_X sensitive," meaning that ozone formation from local emissions is limited by the availability of NO_X as opposed to the availability of ROGs (MBARD 2017a). The primary sources of ROGs within the AMBAG region are on- and off-road motor vehicles, petroleum production and marketing, solvent evaporation, and prescribed burning. The primary sources of NO_X are on- and off-road motor vehicles and stationary sources.

PM_{10} is also a main pollutant of concern for the NCCAB. Major sources of PM_{10} emissions in the region include exhaust from mobile sources, agricultural operations (e.g., tilling, harvesting, and unpaved road travel), construction and demolition activities, and re-entrained road dust from vehicle travel. Natural sources such as windblown dust also contribute, particularly during dry seasons. Additionally, pollutant transport from neighboring air basins, including the San Francisco Bay Area and the Central Valley, can exacerbate PM_{10} levels in the fall due to prevailing meteorological conditions.

c. Current Ambient Air Quality

MBARD is required to monitor air pollutant levels to assure that ambient air quality standards are met and to develop strategies to meet these standards if they are not met. Monitoring of ambient air pollutant concentrations is conducted by CARB, MBARD and industry. Depending on whether measured air pollutant concentrations fall within or exceed standards, the local air basin is classified as being in "attainment" or "non-attainment." Ambient air quality is currently monitored at seven permanent stations in the NCCAB, which are shown in Figure 4.3-1. Table 4.3-2 shows MBARD daily emissions for 2022, estimated using CARB's *California Emission Projection Analysis Model (CEPAM) 2019v1.04 - Standard Emission Tool* are included in.

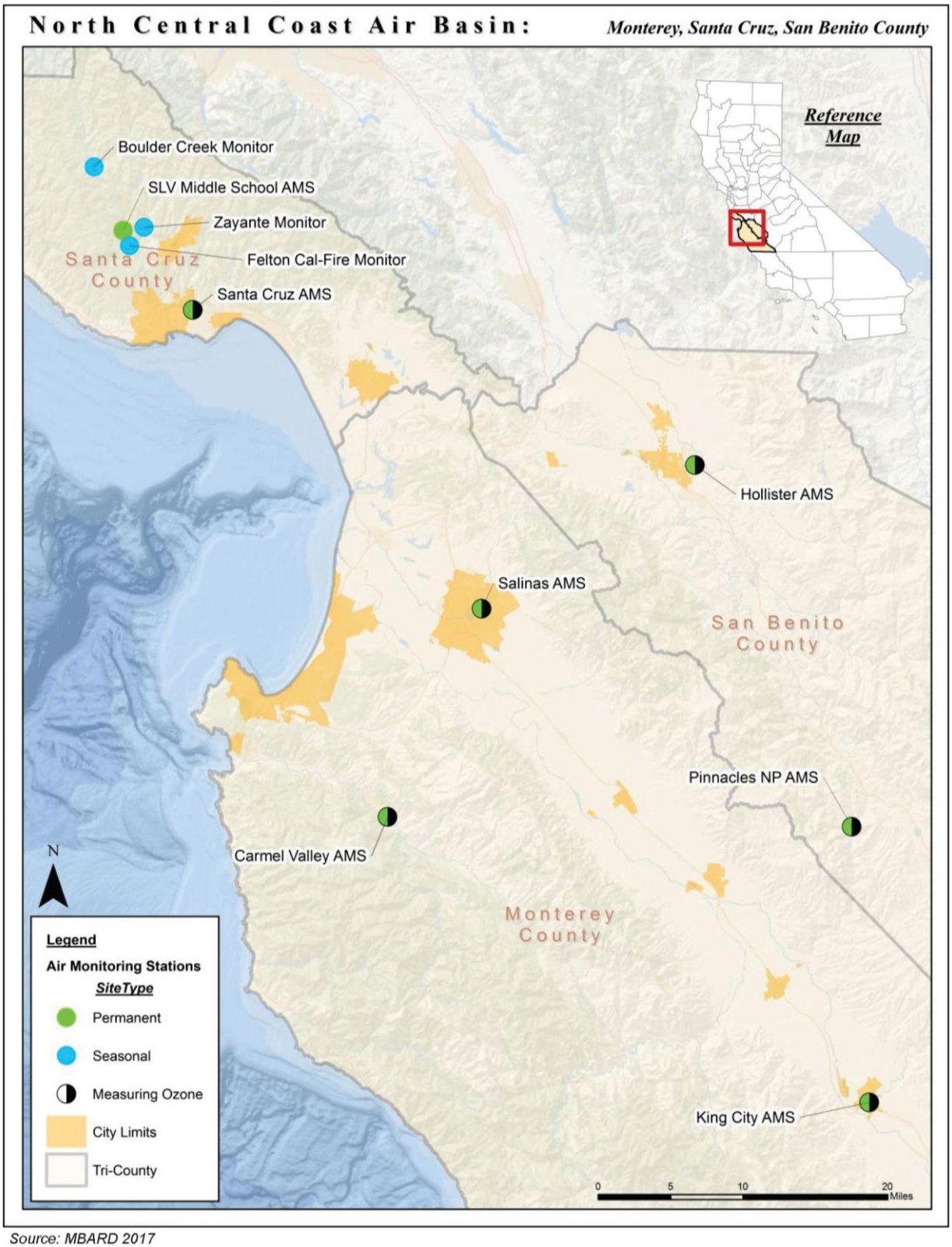
Table 4.3-2 2022 Daily Emissions Estimates

Emission Type	Total Forecasted Emissions (tons)	Area-Wide Percentage	Mobile Source Percentage	Stationary Source Percentage
ROG	45	49%	28%	24%
NO_x	66	3%	71%	27%
PM_{10}	46	85%	4%	11%
$PM_{2.5}$	11	74%	11%	15%

Source: CARB 2025b

The highest particulate levels and most frequent violations occur at the King City station in Monterey County from dust particles associated with agricultural operations (tilling fields) in the Salinas Valley (MBARD 2025). These violations occurred in July, August, October, and November 2024, when the typical annual pattern of exceedances due to dry conditions and agricultural operations creating windblown dust impacting the monitors over the 24-hour averaging period. An increase in Santa Ana wind events is typical during this timeframe of the year in the afternoon.

Figure 4.3-1 NCCAB Air Quality Monitoring Stations



Source: MBARD 2017

The NCCAB is currently in nonattainment of the State PM_{10} standard and the eight-hour ozone standard. The NCCAB is in attainment or unclassifiable for all other State standards and all federal standards (MBARD 2024). Table 4.3-3 presents a 10-year summary of the days that the NCCAB exceeded the ozone CAAQS and NAAQS and the PM_{10} CAAQS and the NAAQS.

As shown in Table 4.3-3, the NCCAB region exceeded the PM_{10} 24-hour NAAQS in 2020, with no other exceedances for the remaining years. The PM_{10} 24-hour CAAQS were exceeded on 13 days in 2021, 16 days in 2022, and 7 days in 2023. Insufficient data is available from 2014 to 2020. Overall, the trend suggests a recent increase in PM_{10} exceedances, indicating potential air quality challenges in the region.

Table 4.3-3 Ten-Year NCCAB Air Quality Summary (2014-2023) for Days Over the Ozone and PM_{10} NAAQS and CAAQS

Year	Ozone 1-Hour CAAQS	Ozone 8-Hour NAAQS	Ozone 8-Hour CAAQS	PM_{10} 24 Hour NAAQS	PM_{10} 24 Hour CAAQS
2014	0	3	3	0	*
2015	0	0	0	0	*
2016	1	5	5	0	*
2017	0	1	1	0	*
2018	0	1	1	0	*
2019	0	0	0	0	*
2020	0	3	4	2	*
2021	0	0	1	0	13
2022	0	0	0	0	16
2023	0	0	0	0	7

CAAQS = California Ambient Air Quality Standard; NAAQS = National Ambient Air Quality Standard; PM_{10} = particulate matter with a diameter of 10 microns or less

* Insufficient data available to determine the value

Note: No measurement data available post-2023

Source: CARB 2025a

In Table 4.3-4, there were no days in Monterey County that exceeded the eight-hour ozone CAAQS from 2014 to 2023. San Benito County had the largest number of exceedances, with four in 2014, five in 2016, one in 2017, 2018, and 2021, and three in 2020. Santa Cruz County had only one exceedance in 2017, with no other exceedances for the remaining years.

Table 4.3-4 Days Exceeding the 8-Hour Ozone CAAQS (2014-2023)

Station by County	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Monterey County	0	0	0	0	0	0	0	0	0	0
San Benito County	4	0	5	1	1	0	3	1	0	0
Santa Cruz County	0	0	0	1	0	0	0	0	0	0

Note: No measurement data available post-2023

Source: CARB 2025a

Emissions inventory and forecast data is provided below for ROG, NO_x, $PM_{2.5}$ and PM_{10}. Data from CARB's *CEPAM 2019v1.04 - Standard Emission Tool* is shown for the NCCAB (CARB 2025b). Table 4.3-5 and Table 4.3-6 show the emissions inventory and forecast for ROG, NO_X, $PM_{2.5}$, and PM_{10} within the NCCAB through year 2050.

Table 4.3-5 Emissions Inventory and Forecasts for ROG and NO_X

Tons/Day	2015	2020	2025	2030	2035	2040	2045	2050
ROG	48.89	44.62	42.59	41.09	40.71	41.19	42.46	44.10
NO_X	39.65	32.43	28.17	26.06	25.65	26.30	27.50	28.96

Notes: Emission Inventory and forecasts include all sources except natural (non-anthropogenic) sources. Emissions forecasts show projected emissions with both growth factors and control measures applied. The CEPAM2019v1.04 - Standard Emission Tool only forecasts emission inventories out until 2050. Thus, there are no future forecasts beyond 2050 available.

Source: CARB 2025b

Table 4.3-5 shows a steady decline in emissions of both ROG and NOx from 2015 to 2050. ROG emissions decrease from 49 to 44 tons per day, while NOx emissions drop more significantly from 40 to 29 tons per day, reflecting ongoing improvements in emission controls and technology.

Table 4.3-6 Emissions Inventory and Forecasts for PM2.5 and PM10

Tons/Day	2015	2020	2025	2030	2035	2040	2045	2050
PM_{10} (All Sources)	45.37	44.55	45.33	45.66	46.31	47.19	48.16	49.17
PM_{10} (Mobile Sources)	1.71	1.46	1.34	1.28	1.26	1.24	1.26	1.29
$PM_{2.5}$ (All Sources)	12.28	10.80	10.75	10.68	10.73	10.85	11.02	11.20
$PM_{2.5}$ (Mobile Sources)	1.13	0.89	0.77	0.71	0.67	0.65	0.65	0.66

Notes: Emission Inventory and forecasts include all sources except natural (non-anthropogenic) sources. Emissions forecasts show projected emissions with both growth factors and control measures applied. The CEPAM2019v1.04 - Standard Emission Tool only forecasts emission inventories out until 2050. Thus, there are no future forecasts beyond 2050 available.

Source: CARB 2025b

Table 4.3-6 presents emissions forecasts for PM_{10} and $PM_{2.5}$ from 2015 to 2050, showing a gradual increase in total PM_{10} emissions from 45 to 49 tons per day and a gradual decrease in $PM_{2.5}$ emissions from 12 to 11 tons per day.

d. Toxic Air Containments

A toxic air contaminant (TAC) is an air pollutant that may cause or contribute to an increase in mortality or serious illness, or which may pose a present or potential hazard to human health. TACs may result in long-term health effects such as cancer, birth defects, neurological damage, asthma, or genetic damage, or short-term acute effects such as eye watering, respiratory irritation, runny nose, throat pain, and headaches. TACs are considered either carcinogenic or non-carcinogenic based on the nature of the health effects associated with exposure. For carcinogenic TACs, potential health impacts are evaluated in terms of overall relative risk expressed as excess cancer cases per one million exposed individuals. Non-carcinogenic TACs differ in that there is generally assumed to be a safe level of exposure below which no negative

health impact is believed to occur. These levels are determined on a pollutant-by-pollutant basis (MBARD 2008).

TACs include both organic and inorganic chemical substances. One of the main sources of TACs in California is diesel engines that emit exhaust containing solid material known as diesel particulate matter (DPM; CARB 2025c); however, TACs may be emitted from a variety of common sources, including gasoline stations, motor vehicles, dry cleaners, industrial operations, painting operations, and research and teaching facilities.

CARB reports that diesel particulate matter represents about 70 percent of the potential cancer risk from vehicle travel on a typical urban freeway (CARB 2005). Residences and communities in proximity to TAC sources are disproportionately impacted. To protect people from TACs and reduce exposure, CARB recommends avoiding locating 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. Additional non-cancer health risk attributable to proximity to freeways was seen within 1,000 feet and was strongest within 300 feet. California freeway studies show about a 70 percent drop-off in particulate pollution levels at 500 feet (CARB 2005).

Diesel Particulate Matter

Particulates in diesel emissions, referred to as diesel particulate matter (DPM), are very small and readily respirable. More than 90 percent of DPM is less than one micron in diameter (about 1/70th the diameter of a human hair) and thus is a subset of $PM_{2.5}$. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lungs (CARB 2025c). The particles have hundreds of chemicals adsorbed onto their surfaces, including many known or suspected mutagens and carcinogens. The California Office of Environmental Health Hazard Assessment (OEHHA) completed a comprehensive health assessment of diesel exhaust in 1998, which formed the basis for CARB to formally identify the particles in diesel exhaust as a TAC. In California, DPM has a significant impact since it is estimated that 70 percent of total known cancer risk related to air toxics is attributable to DPM. According to CARB, DPM is estimated to increase statewide cancer risk by 520 cancers per million residents exposed over a lifetime (CARB 2025c).

DPM can also be responsible for elevated localized exposures (“hotspots”). Risk characterization scenarios conducted by CARB have determined the potential cancer risk resulting from proximity to DPM sources, such as school buses and high-volume freeways. California freeway studies show about a 70 percent drop off in particulate pollution levels at 500 feet from freeways and high-traffic roads (CARB 2005).

Besides DPM, several other pollutants are emitted by vehicle exhaust are a public health concern. USEPA has identified five pollutants of highest priority in addition to DPM: acrolein, acetaldehyde, formaldehyde, benzene, and 1,3-butadiene. The latter five pollutants are found in organic gases emitted by vehicles.

4.3.2 Regulatory Setting

a. Federal Laws, Regulations, and Policies

Clean Air Act

The federal Clean Air Act (CAA) governs air quality in the United States. At the federal level, USEPA administers the CAA. CARB administers the CAA at the State level and the local air districts administers the CAA at the regional and local levels. In addition to being subject to federal requirements, air quality in California is also governed by more stringent regulations under the California CAA, which is administered by the CARB at the State level and the air districts at the regional and local levels. MBARD regulates air quality in the AMBAG region, which includes Monterey, San Benito, and Santa Cruz counties. Table 4.3-7 summarizes the current federal and State air quality standards.

USEPA is responsible for enforcing the federal CAA, which defines non-attainment areas as geographic regions designated as not meeting one or more of the national ambient air quality standards (NAAQS) that are required under the 1977 CAA and subsequent amendments. The federal CAA requires that a State Implementation Plan (SIP) be prepared for each non-attainment area and a maintenance plan be prepared for each former non-attainment area that subsequently demonstrated compliance with the standards. A SIP is a compilation of a state's air quality control plans and rules, approved by USEPA. Section 176(c) of the CAA provides that federal agencies cannot engage, support, or provide financial assistance for licensing, permitting, or approving any project unless the project conforms to the applicable SIP. The state and the USEPA's goals are to eliminate or reduce the severity and number of violations of the NAAQS and to achieve expeditious attainment of these standards.

Table 4.3-7 Current Federal and State Ambient Air Quality Standards

Pollutant	Averaging Time	Federal Primary Standards	California Standards
Ozone	1-Hour	–	0.09 ppm
Ozone	8-Hour	0.070 ppm	0.070 ppm
Carbon Monoxide	8-Hour	9.0 ppm	9.0 ppm
Carbon Monoxide	1-Hour	35.0 ppm	20.0 ppm
Nitrogen Dioxide	Annual	0.053 ppm	0.030 ppm
Nitrogen Dioxide	1-Hour	0.100 ppm	0.18 ppm
Sulfur Dioxide	Annual	–	–
Sulfur Dioxide	24-Hour	–	0.04 ppm
Sulfur Dioxide	1-Hour	0.075 ppm	0.25 ppm
PM_{10}	Annual	–	20 µg/m^3
PM_{10}	24-Hour	150 µg/m^3	50 µg/m^3
$PM_{2.5}$	Annual	9 µg/m^3	12 µg/m^3
$PM_{2.5}$	24-Hour	35 µg/m^3	–

Pollutant	Averaging Time	Federal Primary Standards	California Standards
Lead	30-Day Average	–	1.5 µg/m^3
Lead	3-Month Average	0.15 µg/m^3	–
Visibility Reducing Particles	8-Hour	–	Extinction of 0.23 per kilometer*
Sulfates	24-Hour	–	25 µg/m^3
Hydrogen Sulfide	1-Hour	–	0.03 ppm (42 µg/m^3)
Vinyl Chloride	24-Hour	–	0.01 ppm (26 µg/m^3)

ppm = parts per million; µg/m^3 = micrograms per cubic meter

* In 1989, the CARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

Source: CARB 2024

1990 Amendments to the Clean Air Act

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

Federal Fuel Economy and Emissions Standards

Corporate Average Fuel Economy Standards

The Energy Policy and Conservation Act in 1975 established the Corporate Average Fuel Economy Standards (CAFE) standards are Federal rules established by the National Highway Traffic Safety Administration (NHTSA) that set fuel economy standards for all new passenger cars and light trucks sold in the United States. 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.

On July 29, 2025, the USEPA announced a proposal to rescind the Clean Air Act Endangerment Finding for GHGs and repeal all GHG emission standards for light-duty, medium-duty, and heavy-duty vehicles and engines pursuant to CAA Section 202(a). As of writing this EIR, the USEPA has not adopted this proposal (USEPA 2025). The proposed rule would remove GHG-related provisions from 40 CFR part 600 without affecting provisions related to CAFE standards and fuel economy labeling.

Federal Motor Vehicle GHG Emissions Standards

The federal motor vehicle GHG emissions standards were adopted by USEPA under Section 202(a) of the CAA following the 2009 Endangerment Finding, which determined that GHG emissions from motor vehicles contribute to air pollution that may endanger public health and welfare.

On July 29, 2025, USEPA proposed to rescind the 2009 Endangerment Finding and repeal all federal GHG emissions standards for light-, medium-, and heavy-duty vehicles. If finalized, the rule would eliminate USEPA's authority to regulate motor vehicle GHG emissions and remove all associated compliance obligations for manufacturers.

At the time of this EIR's preparation, the proposed rescission had not been adopted. The rule remains under public review, with comments accepted through September 22, 2025, and a final decision pending. Therefore, existing federal motor vehicle GHG emissions standards remain in effect and are considered applicable to motor vehicle emissions.

b. State Laws, Regulations, and Policies

Assembly Bill 32

The "California Global Warming Solutions Act of 2006," (AB 32), outlines California's major legislative initiative for reducing GHG emissions. AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020 and requires CARB to prepare a Scoping Plan that outlines the main state strategies for reducing GHG emissions to meet the 2020 deadline. In addition, AB 32 requires CARB to adopt regulations to require reporting and verification of statewide GHG emissions. Based on this guidance, CARB approved a 1990 statewide GHG level and 2020 target of 431 MMT CO_2e, which was achieved in 2016. CARB approved the Scoping Plan on December 11, 2008, which included GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste, among others (CARB 2008). Many of the GHG reduction measures included in the Scoping Plan (e.g., Low Carbon Fuel Standard, Advanced Clean Car standards, and Cap-and-Trade) have been adopted since the Scoping Plan's approval.

CARB approved the 2013 Scoping Plan update in May 2014 (CARB 2014). The update defined the CARB's climate change priorities for the next five years, set the groundwork to reach post-2020 statewide goals, and highlighted California's progress toward meeting the "near-term" 2020 GHG emission reduction goals defined in the original Scoping Plan. It also evaluated how to align the state's longer term GHG reduction strategies with other state policy priorities, including those for water, waste, natural resources, clean energy, transportation, and land use (CARB 2014).

Senate Bill 32

On September 8, 2016, the governor signed Senate Bill (SB) 32 into law, extending the California Global Warming Solutions Act of 2006, by requiring the state to further reduce GHG emissions to 40 percent below 1990 levels by 2030 (the other provisions of AB 32 remain unchanged). On December 14, 2017, the CARB adopted the 2017 Scoping Plan, which provides a framework for achieving the 2030 target. The 2017 Scoping Plan relies on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program, and implementation of

recently adopted policies and legislation, such as SB 1383 and SB 100 (discussed later). The 2017 Scoping Plan also puts an increased emphasis on innovation, adoption of existing technology, and strategic investment to support its strategies. As with the 2013 Scoping Plan update, the 2017 Scoping Plan does not provide project-level thresholds for land use development. Instead, it recommends that local governments adopt policies and locally appropriate quantitative thresholds consistent with statewide per capita goals of six MT CO_2e by 2030 and two MT CO_2e by 2050 (CARB 2017b). As stated in the 2017 Scoping Plan, these goals may be appropriate for plan-level analyses (city, county, sub-regional, or regional level), but not for specific individual projects because they include all emissions sectors in the state (CARB 2017).

Assembly 1279 and 2022 Climate Change Scoping Plan

AB 1279, the California Climate Crisis Act, was passed on September 16, 2022, and declares the State would achieve net zero GHG emissions as soon as possible, but no later than 2045, and to achieve and maintain net negative GHG emissions thereafter. In addition, the bill states that the State would reduce anthropogenic GHG emissions by 85 percent below 1990 levels no later than 2045.

In response to the passage of AB 1279 and the identification of the 2045 GHG reduction target, CARB published the Final 2022 Climate Change Scoping Plan in November 2022 (CARB 2022). The 2022 Update builds upon the framework established by the 2008 Climate Change Scoping Plan and previous updates while identifying new, technologically feasible, cost-effective, and equity-focused path to achieve California's climate target. The 2022 Update includes policies to achieve a significant reduction in fossil fuel combustion, further reductions in short-lived climate pollutants, support for sustainable development, increased action on natural and working lands to reduce emissions and sequester carbon, and the capture and storage of carbon.

The 2022 Update assesses the progress California is making toward reducing its GHG emissions by at least 40 percent below 1990 levels by 2030, as called for in SB 32 and laid out in the 2017 Scoping Plan, addresses recent legislation and direction from Governor Gavin Newsom, extends and expands upon these earlier plans, and implements a target of reducing anthropogenic emissions to 85 percent below 1990 levels by 2045, as well as taking an additional step of adding carbon neutrality as a science-based guide for California's climate work. As stated in the 2022 Update, "The plan outlines how carbon neutrality can be achieved by taking bold steps to reduce GHGs to meet the anthropogenic emissions target and by expanding actions to capture and store carbon through the state's natural and working lands and using a variety of mechanical approaches" (CARB 2022). Specifically, the 2022 Update:

- Identifies a path to keep California on track to meet its SB 32 GHG reduction target of at least 40 percent below 1990 emissions by 2030.
- Identifies a technologically feasible, cost-effective path to achieve carbon neutrality by 2045, and a reduction in anthropogenic emissions by 85 percent below 1990 levels.
- Focuses on strategies for reducing California's dependency on petroleum to provide consumers with clean energy options that address climate change, improve air quality, and support economic growth and clean sector jobs.

- Integrates equity and protecting California's most impacted communities as driving principles throughout the document.
- Incorporates the contribution of natural and working lands to the State's GHG emissions, as well as their role in achieving carbon neutrality.
- Relies on the most up-to-date science, including the need to deploy all viable tools to address the existential threat that climate change presents, including carbon capture and sequestration, as well as direct air capture.
- Evaluates the substantial health and economic benefits of taking action.
- Identifies key implementation actions to ensure success.

In addition to reducing emissions from transportation, energy, and industrial sectors, the 2022 Update includes emissions and carbon sequestration in NWL and explores how NWL contribute to long-term climate goals. Under the Scoping Plan Scenario, California's 2030 emissions are anticipated to be 48 percent below 1990 levels, representing an acceleration of the current SB 32 target. Cap-and-Trade regulation continues to play a large factor in the reduction of near-term emissions for meeting the accelerated 2030 reduction target. Every sector of the economy will need to begin to transition in this decade to meet the GHG emissions reduction goals and achieve carbon neutrality no later than 2045. The 2022 Update approaches decarbonization from two perspectives, managing a phasedown of existing energy sources and technologies, as well as increasing, developing, and deploying alternative clean energy sources and technology.

California Clean Air Act

The California Clean Air Act (CCAA) was enacted in 1988 (California Health & Safety Code Section 39000 et seq.) and amended in 1992. The CAAQS are generally more stringent than the corresponding federal standards and incorporate additional standards for sulfates, hydrogen sulfide, vinyl chloride and visibility reducing particles. Air basins or areas that exceed the CAAQS are designated non-attainment until compliance is disclosed in an attainment plan. In California, CARB is responsible for meeting the State requirements of the federal CAA, administering the California CAA, and establishing the California ambient air quality standards (CAAQS). The California CAA, as amended in 1992, requires all air districts in the State to endeavor to achieve and maintain the CAAQS. CARB oversees the functions of local air pollution control districts and air quality management districts, which in turn administer air quality activities at the regional and county level.

Senate Bill 656

In 2003, the California Legislature enacted SB 656 (Chapter 738, Statutes of 2003), codified as Health and Safety Code Section 39614, to reduce public exposure to PM_{10} and $PM_{2.5.}$ SB 656 required CARB, in consultation with local air pollution control and air quality management districts (air districts), to develop and adopt, by January 1, 2005, a list of the most readily available, feasible, and cost-effective control measures that could be employed by CARB and the air districts to reduce PM_{10} and $PM_{2.5}$ (collectively referred to as PM). The legislation established a process for achieving near-term reductions in PM throughout California ahead of federally

required deadlines for $PM_{2.5}$ and provided new direction on PM reductions in those areas not subject to federal requirements for PM. Measures adopted as part of SB 656 complement and support those required for federal $PM_{2.5}$ attainment plans, as well as for State ozone plans. This ensures continuing focus on PM reduction and progress toward attaining California's more health protective standards. This list of air district control measures was adopted by CARB on November 18, 2004. MBARD also complied with this legislation; staff developed a Particulate Matter Implementation Schedule that was adopted in December 2005 (MBARD 2005).

In response to SB 656, MBARD identified several control measures aimed at reducing PM_{10} and $PM_{2.5}$ emissions in their *2005 Report on Attainment of the California Particulate Matter Standards in the Monterey Bay Region* (i.e., 2005 Particulate Matter Plan). The most applicable measures to mobile emissions listed in Table 4.3-8, specifically to re-entrained road dust, are D-1 and D-2.

Table 4.3-8 MBARD Fugitive Dust Control Measures

No.	Measure Description	Target Pollutant	Measure Type	Implementation Date
D-1	Unpaved Roads – Best Management Practices (BMPs)	Fugitive Dust	Educational and Grants	December 2006
D-2	Unpaved Roads – Speed Limit	Fugitive Dust	Educational or Regulatory	December 2006
D-3	Agricultural Tilling/Land Planning	Fugitive Dust	Policy	December 2006
D-4	Sea Salt Exemption	None	Regulatory	March 2006
D-5a	Mineral Processing	Fugitive Dust	Contingency Measure	June 2007
D-5b	Cement Manufacturing	Fugitive Dust	Regulatory	Implemented with Mineral Processing measure; June 2007
D-6a	Integrate Air Quality Management Plan for Ozone	Secondary PM	Regulatory	June 2007
D-6b	Integrate Smoke Management Program	Smoke	Regulatory	June 2007
D-6c	Integrate Environmental Review Under CEQA	Fugitive Dust	Regulatory	October 2006
D-6d	Integrate Air Toxic Control Measure for Naturally Occurring Asbestos	Fugitive Dust	Regulatory	June 2007
D-6e	Integrate Expanding Moyer Program (AB 923)	Diesel Exhaust	Grants	June 2006
D-6f	Integrate Department of Motor Vehicles Renewal Fees (AB 2766)	PM_{10}	Educational and Grants	June 2006
D-7	Air Toxic Control Measure for Agricultural Irrigation Pumps	Fugitive Dust	Grants	June 2007

*All control measures were adopted on December 14, 2005.

Source: MBARD 2005

Toxic Air Contaminant Identification and Control Act

The Toxic Air Contaminant Identification and Control Act (AB 1807) created California's program to reduce exposure to air toxics. The program involves a two-step process: risk identification and risk management. In the risk identification step, and upon CARB's request, the Office of Environmental Health Hazard Assessment evaluates the health effects of substances other than pesticides and their pesticidal uses. Substances with the potential to be emitted or that are currently being emitted into the ambient air may be identified as a TAC. In the risk management step, once a substance is identified as a TAC, and with the participation of local air districts, industry, and interested public, CARB prepares a report that outlines the need and degree to regulate the TAC through a control measure.

Air Toxics "Hot Spots" Information and Assessment Act

The Air Toxics "Hot Spots" Information and Assessment Act (AB 2588) was enacted in 1987 to require stationary sources to report the types and quantities of substances identified as having a localized health risk. This act aims to ascertain health risks, notify nearby residents of significant risks and to reduce significant risks to acceptable levels. The California OEHHA is the lead agency for the assessment of health risks posed by environmental contaminants. OEHHA, which is an office within the California Environmental Protection Agency (CalEPA), aims to protect human health and the environment through scientific evaluation of risks posed by hazardous substances. In addition, OEHHA develops health-protective exposure levels for contaminants in air, water, and soil as guidance for regulatory agencies and the public. These include public health goals for contaminants in drinking water and both cancer potency factors and non-cancer reference exposure levels for the Air Toxics Hot Spots Program.

Executive Order N-79-20

Executive Order N-79-20 established a Statewide goal that 100 percent of in-state sales of new passenger cars and trucks will be zero-emission by 2035 and a further goal of the State that 100 percent of medium- and heavy-duty vehicles in the State be zero-emission by 2045 for all operations where feasible and by 2035 for drayage trucks.

California Building Energy Efficiency Standards

The California Code of Regulations Title 24 is referred to as the Building Energy Efficiency Standards or California Energy Code. This code, originally enacted in 1978, establishes energy-efficiency standards for residential and non-residential buildings to reduce California's energy demand. New construction and major renovations must demonstrate their compliance with the current Energy Code through submittal and approval of a Title 24 Compliance Report to the local building permit review authority and the CEC.

Future land use projects would be subject to the 2025 California Building Energy Efficiency Standards, codified in Title 24, Part 6 of the California Code of Regulations, which take effect on January 1, 2026. These standards are designed to reduce energy consumption in residential and non-residential buildings, support California's climate goals, and improve indoor environmental quality.

Key updates to the 2025 standards include expanded requirements for heat pump technologies, electric readiness for future electrification, enhanced ventilation and indoor air quality measures, and battery storage system readiness for homes with larger electrical service capacities. These measures are expected to reduce building energy demand, lower greenhouse gas emissions, and support integration of distributed energy resources.

AB 130 of 2025 imposes a moratorium on changes to California building codes affecting residential units, including both state and local amendments, through 2031, with limited exemptions. Essentially, AB 306 would prohibit CEC or any other adopting agency from considering, approving, or adopting any proposed building standards affecting residential units, unless a certain condition is met, including that the CEC deems those changes necessary as emergency standards to protect health and safety. The 2025 Energy Code will proceed as planned with an effective date of January 1, 2026, and the 2031 Energy Code cycle is anticipated to be unaffected.

California Green Building Standards Code

The 2026 California Green Building Standards Code (CALGreen), codified in Title 24, Part 11 of the California Code of Regulations, and effective in 2025, establishes mandatory minimum environmental performance standards for newly constructed residential and non-residential buildings statewide. These standards are enforced by local jurisdictions and address key sustainability areas including energy efficiency, water conservation, material resource efficiency, and indoor environmental quality.

CALGreen also includes voluntary tiers (Appendices A4 and A5) that provide enhanced environmental performance options. These voluntary measures are intended as model provisions for jurisdictions considering above-code ordinances (also known as “reach codes”) or for builders seeking additional compliance flexibility under the California Energy Code.

CARB Air Quality and Land Use Handbook and 2017 Technical Advisory

CARB’s *Air Quality and Land Use Handbook: A Community Health Perspective* recommends that local agencies avoid siting new, sensitive land uses within specific distances of potential sources of TACs, such as freeways and high-traffic roads, distribution centers, railroads, and ports (CARB 2005). Specifically, CARB recommends that local agencies avoid siting new, sensitive land uses within 500 feet of a freeway. The primary concern is the effect of diesel exhaust particulate on sensitive uses.

CARB *Strategies to Reduce Air Pollution Exposure Near High-Volume Roadways* technical advisory (2017) identifies effective strategies that planners and other land use decision-makers can implement locally and in the near-term to reduce exposure to near-roadway pollution from increased infill development while also protecting public health. These strategies complement the state’s many efforts to reduce air pollution from all sources, including cars and trucks.

Diesel Risk Reduction Program

In August 1998, CARB identified particulate emissions from diesel-fueled engines (diesel PM) as TACs, based on data linking diesel PM emissions to increased risks of lung cancer and respiratory disease. Following the identification process, CARB was required to determine if there was a need for further control, which led to creation of the Diesel Advisory Committee to assist in the development of a risk management guidance document and risk reduction plan. In September 2000, CARB adopted the Diesel Risk Reduction Plan, which recommends control measures to reduce the risks associated with diesel PM and achieve a goal of 75 percent diesel PM reduction by 2010 and 85 percent by 2020.

CARB met its original Diesel Risk Reduction Plan goal of reducing Diesel PM emissions by 85 percent by 2020. Building on this success, CARB has adopted more ambitious targets focused on transitioning to zero-emission technologies across all sectors, including mandates for 100 percent zero-emission sales of new passenger vehicles by 2035 and full transition of on- and off-road fleets to zero emissions by 2045, with the broader aim of achieving health-protective air quality standards statewide by the mid-2030s.

Airborne Toxic Control Measures

Under the California 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. CARB has promulgated several mobile and stationary source airborne toxic control measures (ATCMs) pursuant to this authority. For instance, effective as of July 2003, CARB approved an ATCM that limits school bus idling and idling at or near schools to only when necessary for safety or operational concerns (13 CCR Chapter 10, Section 2480). This ATCM is intended to reduce diesel PM and other TACs and air pollutants from heavy-duty motor vehicle exhaust. It applies to school buses, transit buses, school activity buses, youth buses, general public paratransit vehicles, and other commercial motor vehicles. This ATCM focuses on reducing public exposure to diesel PM and other TACs, particularly for children riding in and playing near school buses and other commercial motor vehicles, who are disproportionately exposed to pollutants from these sources. In addition, effective February 2005, CARB approved an ATCM to limit the idling of diesel-fueled commercial motor vehicles with gross vehicular weight ratings of greater than 10,000 pounds, regardless of the state or country in which the vehicle is registered (13 CCR Chapter 10, Section 2485).

Drayage Truck Regulation

CARB established the Drayage Truck Regulation as part of its ongoing efforts to reduce PM and NOx emissions from diesel-fueled engines and improve air quality associated with goods movement. The purpose of this regulation is to reduce emissions and public exposure to diesel PM, NOx, and other air contaminants by setting emission standards for in-use, heavy-duty diesel-fueled vehicles.

CARB adopted the Advanced Clean Fleets Regulation in 2023, which included updated requirements for drayage trucks operating at seaports and intermodal railyards. Beginning January 1, 2024, only zero-emission drayage trucks can be newly registered in CARB's Truck

Regulation Upload, Compliance, and Reporting System (TRUCRS). Existing legacy trucks must meet annual operational and useful life requirements to remain in service, with non-compliant vehicles removed from the registry starting in 2025. By 2035, all drayage trucks operating in California must be zero-emission, supporting statewide goals to reduce diesel particulate matter, NOx, and greenhouse gas emissions, particularly in communities disproportionately impacted by freight-related pollution.

Advanced Clean Trucks and Low-NOx Regulation

The Advanced Clean Trucks rule is a CARB regulation that requires medium and heavy-duty truck manufacturers to gradually increase the percentage of zero-emission vehicles (ZEVs) they sell in the state. Effective in March 2021, the rule mandates that by 2035, 55% of Class 2b-3 truck sales, 75% of Class 4-8 straight truck sales, and 40% of truck tractor sales must be ZEVs. The goal is to accelerate the transition to zero-emission trucks. The USEPA granted the waiver request under the CAA to enact the more stringent fuel economy components of the ACT regulation on April 6, 2023. However, Public Law 119-15 enacted on June 12, 2025, disapproves of this regulation under the Congressional Review Act, retroactively revoking the state's waiver issued by USEPA under the Clean Air Act to implement the Advanced Clean Trucks regulation.

The Heavy-Duty Low-NOX Omnibus Regulation was adopted by CARB in 2021 (effective December 22, 2021; amended in May 2024), and mandates steep reductions in NO_X and PM emissions from new medium- and heavy-duty diesel and Otto-cycle engines starting with model year 2024. By full rollout, the regulation is projected to eliminate approximately 17–23 tons/day of NO_X by 2031.However, Public Law 119-17 enacted on June 12, 2025, disapproves of this regulation under the Congressional Review Act, retroactively revoking the state's waiver issued by USEPA under the Clean Air Act to implement the low-NO_x regulation.

Proposition 1B: Goods Movement Emission Reduction Program

The $1 billion Proposition 1B Goods Movement Emission Reduction Program is a partnership between CARB and local agencies, air districts, and seaports to quickly reduce air pollution emissions and health risk from freight movement along California's trade corridors. Local agencies apply to CARB for funding. Then those agencies offer financial incentives to owners of equipment used in freight movement to upgrade to cleaner technologies. Projects funded under this program must achieve early or extra emission reductions not otherwise required by law or regulation. As of April 2025, Executive Order G-25-093 was adopted under this program, providing modifications to the Program Guidelines for Year 5 and Year 6 locomotive, cargo handling equipment, and TRU projects.

Assembly Bill 1493

Assembly Bill (AB) 1493 (Chapter 200, Statutes of 2002), known as the "Pavley bill," amended Health and Safety Code Sections 42823 and 43018.5 requiring CARB to develop and adopt regulations that achieve maximum feasible and cost-effective reduction of GHG emissions from

passenger vehicles, light-duty trucks and other vehicles used for noncommercial personal transportation in California.

Implementation of new regulations prescribed by AB 1493 required that the State of California apply for a waiver under the federal Clean Air Act. Although USEPA initially denied the waiver in 2008, USEPA approved a waiver in June 2009, and in September 2009, CARB approved amendments to its initially adopted regulations to apply the Pavley standards that reduce GHG emissions to new passenger vehicles in model years 2009 through 2016. In 2012, CARB approved the Low-Emission Vehicle III GHG regulation, which requires further reductions in passenger GHG for 2017 and subsequent vehicle model years. According to CARB, implementation of the Pavley regulations is expected to reduce fuel consumption while also reducing GHG emissions (CARB 2025).

In 2022, CARB approved the Advanced Clean Cars II rule regulating model years from 2026 to 2035. The rule establishes a year-by-year roadmap so that by 2035, 100 percent of new cars and light trucks sold in California would be zero-emission vehicles, including plug-in hybrid electric vehicles. The regulation realizes and codifies the light-duty vehicle goals set out in Governor Newsom's Executive Order N-79-20. By 2040, CARB anticipates that the rule would reduce GHG emissions from light-duty vehicles by 50 percent for a cumulative total of 395 MMT CO*2*e from 2026 through 2040. The EPA granted CARB its California's Clean Air Act waiver request on December 18, 2024. However, Public Law 119-16 enacted on June 12, 2025, disapproves of this regulation under the Congressional Review Act, retroactively revoking the state's waiver issued by USEPA under the Clean Air Act to implement the Advanced Clean Cars II rule.

c. Regional Laws, Regulations, and Policies

Monterey Bay Air Resources District

MBARD is the agency primarily responsible for ensuring that NAAQS and CAAQS are not exceeded and that air quality conditions are maintained in Monterey, San Benito, and Santa Cruz counties. Responsibilities of MBARD include, but are not limited to: preparing plans for the attainment of ambient air quality standards, adopting and enforcing rules and regulations concerning sources of air pollution, issuing permits for stationary sources of air pollution, inspecting stationary sources of air pollution and responding to citizen complaints, monitoring ambient air quality and meteorological conditions, and implementing programs and regulations required by the Federal CAA and the California CAA. Since the passage of the 1990 Federal CAA Amendments, eight plan updates have been adopted by MBARD. The most recent regional plan is MBARD's *2012-2015 Air Quality Management Plan* (AQMP) (MBARD 2017a).

The AQMP was prepared to ensure continued progress towards clean air and compliance with State and federal requirements. This AQMP shows how the State AAQS for ozone would be met in the NCCAB. According to the emission reduction strategy in the AQMP, MBARD's priority is to continue to pursue reduction of ozone precursor emissions from mobile sources. Although the AQMP detailed transportation control measures, these measures have not been listed in more recent updates of AMBAG's Metropolitan Transportation Improvement Program because the region has come into attainment of all NAAQS (MBARD 2017a).

MBARD continues to foster and support programs that reduce ozone precursor emissions, implement rules when necessary, and continue to maintain robust permitting and enforcement programs. Mobile source emission reductions are primarily achieved through MBARD's incentive programs. To support reducing on-road vehicle emissions, MBARD's AB 2766 grant program focuses funding on direct emission reduction projects. These projects include roundabout design and construction as well as the application of adaptive traffic signal control at intersections. Since 2016, MBARD has implemented the Monterey Bay Electric Vehicle Incentive Program, which offers cash rebates to the public for purchasing or leasing battery electric and plug-in hybrid electric vehicles. In addition, the Plug-in Monterey Bay Electric Vehicle Charge Station Infrastructure program was implemented in January 2017 to establish DC fast charge and Level 2 charge station multi-centers. Furthermore, MBARD is also evaluating whether to implement a voluntary accelerated vehicle retirement and/or voluntary repair of vehicles to reduce light-duty vehicle emissions in accordance with the Carl Moyer Program, which provides funding to encourage replacement of older heavy-duty motors/engines in the AMBAG region. Each of these reduction projects would reduce emissions in the region by encouraging cleaner vehicles. In 2005, MBARD adopted the 2005 Particulate Matter Plan to fulfill the requirements of Senate Bill 656, which was approved by the California Legislature in 2003 with the objective of reducing public exposure to particulate matter. In 2011, CARB approved the latest regulation to reduce emissions of DPM and nitrogen oxides from existing on-road heavy-duty diesel fueled vehicles (Title 13 Section 2205). The regulation required affected vehicles to meet specific performance requirements between 2012 and 2023, with all affected diesel vehicles required to have 2010 model-year engines or the equivalent by 2023. This regulation is now fully in effect, and CARB has transitioned to enforcement and compliance verification. As of 2025, CARB has introduced additional compliance measures, including semi-annual emissions testing for 2013 and newer diesel trucks, with quarterly testing for onboard diagnostics – equipped vehicles beginning in 2027. These updates are part of California's continued efforts to reduce diesel particulate matter, nitrogen oxides (NOx), and greenhouse gas emissions from mobile sources.

MBARD Rule 402, *Nuisances*, prohibits the discharge of air contaminants or other material that would cause injury, detriment, nuisance, or annoyance to any considerable number of persons. Nuisances can include offensive odors. If offensive odors are present and become a nuisance, complaints can be filed by email or phone call with MBARD, who will then investigate the source.

Motor Vehicle Emission Reduction Grant Program

The Motor Vehicle Emission Reduction Grant Program (AB 2766), administered by the MBARD, is authorized under California AB 2766 and funded through a $4.00 surcharge on vehicle registrations within Monterey, San Benito, and Santa Cruz counties. The program provides grants to public agencies, non-profits, and residents for projects that reduce motor vehicle emissions and support implementation of the California Clean Air Act. Eligible projects fall under three categories: the Clean Air Management Program (e.g., bike lanes, multi-use paths, and EV charging infrastructure), the Clean Vehicle Program (e.g., battery-electric fleet replacements for public agencies), and the Electric Vehicle Incentive Program (e.g., rebates for residents purchasing zero-

emission vehicles). Projects are evaluated based on cost-effectiveness and quantified emission reductions, with maximum funding typically capped at $200,000 per project.

d. Local Laws, Regulations, and Policies

The general plans and zoning ordinances of the cities within the Monterey Bay area regulate design and the built environment within those communities, while the general plans for each county perform the same function within unincorporated areas. In all cases, the general plans and zoning typically prescribe policies to protect air quality. Listed below are the policies from each county in the region applicable to air quality. Cities in the region have generally similar policies and examples are provided in more detail below.

Monterey County

The Monterey County General Plan (Monterey County 2010) contains policies in the Conservation/Open Space Element that pertain to air quality as shown below.

- **Policy OS-10.1.** Land use policy and development decisions shall be consistent with the natural limitations of the County's air basins.
- **Policy OS-10.2.** Mass transit, bicycles, pedestrian modes of transportation and other transportation alternatives to automobiles shall be encouraged.
- **Policy OS-10.3.** Monterey County shall promote conservation of naturally vegetated and forested areas for their air purifying functions.
- **Policy OS-10.4.** Monterey County shall encourage concentrating industrial and commercial development in areas that are more easily served by public transit.
- **Policy OS-10.5.** Mixed land uses that reduce the need for vehicular travel shall be encouraged.
- **Policy OS-10.6.** The Monterey Bay Unified Air Pollution Control District's air pollution control strategies, air quality monitoring and enforcement activities shall be supported.
- **Policy OS-10.7.** Use of the best available technology for reducing air pollution emissions shall be encouraged.
- **Policy OS-10.8.** Air quality shall be protected from naturally occurring asbestos by requiring mitigation measures to control dust and emissions during construction, grading, quarrying, or surface mining operations. This policy shall not apply to Routine and Ongoing Agricultural Activities except as required by state and federal law.
- **Policy OS-10.9.** The County of Monterey shall require that future development implement applicable Monterey Bay Unified Air Pollution Control District control measures. Applicants for discretionary projects shall work with the Monterey Bay Unified Air Pollution Control District to incorporate feasible measures that assure that health-based standards for diesel particulate emissions are met. The County of Monterey will require that future construction operate and implement MBUAPCD [Monterey Bay Unified Air Pollution Control District, now MBARD] PM_{10} control measures to ensure that construction-related PM_{10} emissions do not exceed the MBUAPCD's daily threshold for PM_{10}. The County shall implement MBUAPCD measures to address off-road mobile source and heavy-duty equipment emissions as

conditions of approval for future development to ensure that construction-related NO_X emissions from non-typical construction equipment do not exceed the MBUAPCD's daily threshold for NO_X.

- **Policy OS-10.14**. The County of Monterey shall require that construction contracts be given to those contractors who show evidence of the use of soot traps, ultra-low sulfur fuels and other diesel engine emissions upgrades that reduce PM_{10} emissions to less than 50% of the statewide PM_{10} emissions average for comparable equipment.

Cities within the County of Monterey contain similar policies. In the City of Monterey, the Conservation Element of the General Plan (2005; amended in 2019) contains the following policies:

- **Policy c.1**. Reduce air pollution generated by motor vehicles by encouraging the use of public transit, carpooling, bicycles, and walking as alternatives. Policies to achieve these goals are found in the Circulation Element. Promote cooperation with local and state agencies to develop programs to reduce sources of air pollution.
- **Policy c.3**. Promote cooperation with local and state agencies to develop programs to reduce sources of air pollution.

Similarly, the City of Salinas contains policies in the Conservation/Open Space Element that support the County's effort (2002). Some of the policies include:

- **Policy COS-22.** To reduce dust and particulate matter levels, implement fugitive dust control measures such as:
  - Restrict outdoor storage of fine particulate matter;
  - Provide tree buffers between residential and agricultural uses;
  - Monitor construction and agricultural activities and emissions; and
  - Pave areas used for vehicular maneuvering
- **Policy COS-24.** Continue to cooperate with the District to implement the most recent Air Quality Management Plan to address regional motor vehicle emissions. In particular, coordinate with District and AMBAG, providing technical assistance and demographic data when available, during the development of future population projections by AMBAG and the District.

San Benito County

The San Benito County 2035 General Plan (County of San Benito 2015) contains policies in the Health and Safety Element that pertain to air quality as shown below.

- **Policy HS-5.1 – New Development.** The County shall use the CEQA process to ensure development projects incorporate feasible mitigation measures to reduce construction and operational air quality emissions and consult with the Monterey Bay Unified Air Pollution Control District early in the development review process.

- **Policy HS-5.2 – Sensitive Land Use Locations.** The County shall ensure adequate distances between sensitive land use and facilities or operations that may produce toxic or hazardous air pollutants or substantial odors.
- **Policy HS-5.3 – Early Coordination with the Air Quality Control District.** The County shall notify and coordinate with the Monterey Bay Unified Air Pollution Control District when industrial developments are proposed within the county to ensure applicants comply with applicable air quality regulations and incorporate design features and technologies to reduce air emissions.
- **Policy HS-5.4 – PM_{10} Emissions from Construction.** The County shall require developers to reduce particulate matter emissions from construction (e.g., grading, excavation, and demolition) consistent with standards established by the Monterey Bay Unified Air Pollution Control District.
- **Policy HS-5.5 – PM_{10} Emissions from Industrial Facilities.** The County shall require industrial facilities to incorporate best management practices to reduce $PM_{2.5}$ and PM_{10} emissions consistent with standards established by the Monterey Bay Unified Air Pollution Control District.
- **Policy HS-5.6 – New Construction Mitigation.** The County shall work in coordination with the Monterey Bay Unified Air Pollution Control District to minimize air emissions from construction activities associated with proposed development.
- **Policy HS-5.10 – Vehicle Emissions Reductions.** The County shall study alternatives for improving circulation (e.g., roundabouts, one ways, etc.), when feasible, to reduce idling motor vehicle emissions.
- **Policy HS-5.12 – Air Quality Management Plans.** The County shall encourage regional planning agencies to consider the County's population projections during the preparation of future Air Quality Management Plans.
- **Policy HS-5.13 – Reduce Air Pollution from Wood Burning.** No permanently installed wood-burning devices shall be allowed in any new development, except when necessary for food preparation in a restaurant or other commercial establishment serving food.
- **Policy HS-5.14 – Notify Project Applicants of Air District Requirements.** The County shall work with the Air District to obtain materials to give to project applicants regarding relevant information about Air District requirements.

The City of Hollister within the County of San Benito contains similar policies that support the County's initiative. For example, the Natural Resources and Conservation Element in the City of Hollister's General Plan (2005) lists some of the following policies:

- **Policy NRC 2.2 – Air Quality Considerations in Land Use Planning.** To ensure excellent air quality, promote land use compatibility for new development by using buffering techniques such as landscaping, setbacks, and screening in areas where different land uses abut one another.
- **Policy NRC 2.3 – Air Quality Planning and Coordination.** Integrate air quality considerations with the land use and transportation processes by mitigating air quality impacts through land use design measures, such as encouraging project design that will foster walking and biking.

Santa Cruz County

The Santa Cruz County General Plan and Local Coastal Program (County of Santa Cruz 2024) contains policies and implementation strategies in the Built Environment, Access and Mobility, and Parks, Recreation and Public Facilities Elements that pertain to air quality as shown below.

- **Policy AM-3.1.2: Mobility Hubs.** Work with METRO, SCCRTC, and transportation service providers to identify and develop mobility hubs at critical locations where different modes of transportation seamlessly converge, including but not limited to high-quality transit service, micromobility services, ridesharing as well as park and ride spaces.
- **Policy AM-5.2.4 Commercial Traffic.** Whenever feasible, heavy commercial traffic should be routed away from residential neighborhoods.
- **Policy AM-5.2.5 Buffers.** Incorporate buffering between people and roadway pollutants to promote health, particularly near sensitive receptors.
- **Policy BE-1.2.7 Mobility Hub Land Use.** Encourage the economic viability and safety of mobility hubs by encouraging a diversity of high building intensity land uses that facilitate an active hub area during both the daytime and evening.
- **Policy BE-1.3.6 Shopping Centers as Activity Centers.** Encourage redevelopment and rebranding of existing commercial shopping centers to vital and modern activity centers, through higher intensity development, mixed uses, public gathering places, event programming, and reorientation of buildings and parking facilities to improve walkability and connection to transit.
- **Policy BE-1.4.2 Neighborhood Mobility Infrastructure.** Encourage sidewalks, bike lanes, and bus routes that support a variety of transportation options within and between neighborhoods, with particular emphasis on routes to schools, parks, grocery stores, and gathering places.
- **Policy AM-1.1.5 15-Minute Neighborhoods.** Connect neighborhoods to nearby commercial land uses by filling gaps in active transportation infrastructure, with a goal of accommodating 15-minute walks or bicycle rides between residential areas and destinations.
- **Policy AM-2.2.3 Infrastructure Safety.** Plan for and program infrastructure that promotes a safe means of travel for all users along the right-of-way, such as sidewalks, shared use paths, bicycle lanes, and paved shoulders.
- **Policy BE-4.2.8 Healthy Indoor Environment.** Ensure that building regulations provide for safe and healthy indoor air quality through moisture control and ventilation and reduction of exposure to lead, mold, and other indoor health hazards. Encourage the use of toxin-free building materials
- **Policy PPF-3.2.8 Exposure to Toxins.** Reduce youth exposure to hazardous materials and pollutants.

Cities within the County of Santa Cruz contain similar policies that support the County's initiative. The City of Santa Cruz's 2030 General Plan (2012) includes the following policies:

- **Policy HZ2.2.1.** Require future development projects to implement applicable Monterey Bay Unified Air Pollution Control District (MBUAPCD) control measure and/ or air quality mitigations in the design of new projects as set forth in the District's "CEQA Guidelines."
- **Policy HZ2.2.3.** Locate air pollution-sensitive land uses away from major sources of air pollution or require mitigation measures to protect residential and sensitive land uses from freeways, arterials, point source polluters, and hazardous material locations
- **Policy HZ2.2.4.** Encourage public education programs promoting reduced emissions from transportation-generated pollutants and area-wide sources.

In the City of Watsonville 2005 General Plan, policies to address air quality through design and transportation include:

- **Policy 9.C.5 – Alternative Travel Modes.** In order to reduce automobile related pollution, the City shall plan for and encourage the use of transit, ridesharing, bicycles, and walking as alternatives to automobile travel, and the use of low emission and electric vehicles.
- **Policy 9.C.4 – Design Review.** The City shall require new development to include considerations for transit, Transportation Demand Management (TDM), and alternative travel modes in project designs including but not limited to transit stops, car and van pool preferred parking, and bicycle access and storage facilities.

4.3.3 Impact Analysis

a. Methodology and Significance Thresholds

Appendix G of the *CEQA Guidelines* identifies the following general criteria for determining whether a project's impacts would have a significant impact on air quality. AMBAG has modified the language of the second criterion to provide specific quantities of criteria pollutants that would contribute to a significant impact based on MBARD emissions thresholds:

1. Conflict with or obstruct implementation of the applicable air quality plan;
2. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard:
    a. During construction, cause a violation of PM_{10} AAQS at nearby or upwind of sensitive receptors, based on whether the project would:
        i. Emit greater than 82 pounds (lbs)/day of PM_{10} if located nearby or upwind of sensitive receptors[1]; or
        ii. Use equipment that is not "typical construction equipment" as specified in Section 5.3 of MBARD CEQA Guidelines.

[1] Projects which require minimal earthmoving on 8.1 or more acres per day or grading and excavation on 2.2 or more acres per day are likely to exceed this threshold

b. During operation:
    i. Generate direct (area source or stationary) plus indirect (operational or mobile) emissions of either ROG that exceed 137 lbs/day;
    ii. Generate direct (area source or stationary) plus indirect (operational or mobile) emissions of either NOx that exceed 137 lbs/day
    iii. Generate on-site emissions of PM_{10} exceeding 82 lbs/day;
    iv. Generate direct emissions of CO exceeding 550 lbs/day;
    v. Generate direct emissions of SO_X exceeding 150 lbs/day; or
    vi. Cause or substantially contribute to a violation of a CO standard.

3. Expose sensitive receptors to substantial pollutant concentrations; or
4. Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

Short-Term Emissions Methodology

Emissions from construction activities represent temporary impacts that are typically short in duration, depending on the size, phasing, and type of project. Air quality impacts can nevertheless be acute during construction periods, resulting in significant localized impacts to air quality. Construction-related emissions are speculative at the MTP/SCS level because such emissions are dependent on the characteristics of individual projects. However, because construction of transportation improvement projects and buildout of future land use patterns envisioned in the 2050 MTP/SCS would generate temporary criteria pollutant emissions, primarily due to the operation of construction equipment and truck trips, a qualitative analysis is provided.

Long-Term Emissions Methodology

The methodology for determining the significance of air quality impacts compares the year 2022 baseline conditions to the future MTP/SCS conditions in the year 2050, as required in the CEQA Guidelines Section 15126.2(a). See Section 3, *Environmental Setting*, for further details regarding the baseline year. For informational purposes, the analysis of air quality also includes a comparison between expected future conditions in 2050 with adoption of the 2050 MTP/SCS in addition to the expected future conditions in 2050 if the 2050 MTP/SCS was not adopted ("no project" scenario). With respect to long-term impacts, the long-term impacts of the 2050 MTP/SCS to air quality will be considered significant if the plan results in mobile source emissions that significantly exceed MBARD thresholds, as outlined above. In this case, the pollutants of primary concern are ozone precursors (NO_X and ROG), fugitive dust (PM_{10}), and fine particulate matter ($PM_{2.5}$) because these are the primary pollutants associated with vehicle transportation.

While the 2050 MTP/SCS would include additional land use development, including commercial and industrial projects, the total criteria air pollutant emissions from the land uses proposed

would vary for each individual project and would need to be analyzed on a project-by-project basis. Therefore, impacts under the land use development scenario are evaluated qualitatively.

Air emissions from on road mobile sources were calculated using emission factors from CARB's Emission FACtors 2021 (EMFAC2021) model[2], which is the most recent USEPA-approved model, and regional vehicle miles traveled (VMT) from AMBAG's Regional Travel Demand Model (RTDM).[3] EMFAC emission factors are established by CARB and accommodate mobility assumptions (e.g., vehicle fleets, speed, delay times, average trip lengths, time of day, and total travel time) provided by AMBAG's RTDM, which include socioeconomic growth projections based on AMBAG's 2026 Regional Growth Forecast (2026 RGF). Refer to Appendix E.1 and "Modeling Methodology" in Appendix F of the 2050 MTP/SCS for additional methodology details.

Health Impacts Methodology

Short-term and long-term exposure to criteria pollutants and TACs may result in adverse health effects, based on the information presented in Table 4.3-1. As shown in Table 4.3-1, these effects may include aggravated asthma, increases in respiratory symptoms like coughing and difficult or painful breathing, chronic bronchitis, decreased lung function, increased cancer risk, heart attack, and premature death. The ambient air quality standards are health-based standards. Therefore, because MBARD thresholds and ambient air quality standards have been set at levels that protect public health, in this impact analysis, when the proposed MTP/SCS would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard, it would also contribute to these adverse health effects. It should also be noted that adverse health effects induced by regional criteria pollutant emissions generated by the project (such as ozone precursors) depend on a multitude of interconnected variables (e.g., cumulative concentrations, local meteorology and atmospheric conditions, the number and character of exposed individuals), so it is not possible to meaningfully quantify the localized health effects of such regional pollutants. As such, health risk impacts of such regional pollutants are qualitatively discussed.

b. Project Impacts and Mitigation Measures

The following section describes air quality impacts associated with the transportation projects and land use scenario included in the 2050 MTP/SCS. Table 4.3-13 summarizes the specific 2050 MTP/SCS transportation projects that may result in air quality impacts. In general, implementation of proposed transportation improvements and the reasonably foreseeable future development facilitated under the land use scenario envisioned by the 2050 MTP/SCS would result in air quality impacts as described in the following sections.

[2] EMFAC2021 accounts for criteria pollutant emissions reductions associated with the Advanced Clean Trucks Regulation and the Omnibus Low-NOx Regulation, both of which were subject to federal CAA waiver disapprovals under Public Laws 119-15 and 119-17, respectively. EMFAC2021 also reflects reductions from federal motor vehicle GHG emissions standards that would be repealed if USEPA's proposed rescission of the 2009 Endangerment Finding is finalized. However, at the time of this EIR's preparation, the federal disapprovals are subject to legal uncertainty due to ongoing litigation, and the Endangerment Finding had not been rescinded. Emissions modeling for this EIR was conducted prior to the announcement of these proposed federal actions, and CARB had not issued guidance on how to adjust EMFAC2021 modeling to account for these developments. Therefore, EMFAC2021 was the most appropriate and current methodology available for estimating criteria pollutant emissions.

[3] EMFAC 2025 is currently available, but at the time of writing, it is not yet approved by USEPA. Therefore, the previous model – EMFAC 2021 – was used.

Threshold 1: Would the project conflict with or obstruct implementation of the applicable air quality plan?

Impact AQ-1 THE 2050 MTP/SCS WOULD NOT CONFLICT WITH OR OBSTRUCT IMPLEMENTATION OF THE AQMP. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Conflicts with or obstruction of the applicable air quality plan are typically determined by consistency with the population forecast or emissions forecast. The most recent air quality plan is MBARD's *2012-2015 AQMP*, which includes emissions forecasts based on the socioeconomic assumptions for population, housing, and employment in AMBAG's 2014 RGF. In the 2014 RGF, it was projected that the population would increase by 152,292 people and 64,400 jobs would be added from the years 2010 to 2035 (AMBAG 2014).[4]

The 2050 MTP/SCS is based on the 2026 RGF, which includes analysis of the current economy and updated population forecasts to provide a more accurate assessment of future growth. The 2026 RGF forecasts that the population will grow by approximately 47,538 people and the region will add approximately 27,799 jobs between 2022 and 2050 (AMBAG 2024).

For a direct comparison to the 2014 RGF, the 2026 RGF estimates that between 2010 and 2035 the population would increase by 62,012 people and 68,359 jobs would be added. The 2026 RGF population forecast is lower than the 2014 RGF forecasts for the same timeline, but the job increase is higher due to rapid employment growth between the years 2015 to 2020. The 2026 RGF forecasts slightly lower population growth due to the slowing growth rates attributed to declining fertility, stalled improvements in life expectancy, and falling international migration. In the 2026 RGF, the 2020 population estimate was lower by 25,895 persons compared to prior forecast predictions. In addition, it is predicted that there will be a higher older age distribution with a larger portion of the population expected to be 65 years of age and older. Therefore, the population forecast from the 2026 RGF would be consistent with the AQMP because the 2026 RGF forecasts a lower population increase by 2035 than the 2014 RGF. However, the policies and land use patterns facilitated by the 2050 MTP/SCS are projected to reduce emissions of ozone precursors below 2022 baseline levels, as discussed in Impact AQ-2 (see Table 4.3-9).

This decrease in emissions is due to the improved vehicle efficiency standards along with the proposed transportation improvements and land use projects envisioned by the 2050 MTP/SCS, which selectively increases residential and commercial land use capacity near high quality transit corridors. A focus of the 2050 MTP/SCS is providing more than $5 billion for a long-term public transit network that meets the region's mobility needs. The remaining transit funding is separated between maintenance and operation costs, as well as adding new transit vehicles and infrastructure. The 2050 MTP/SCS emphasizes active transportation through 2050, which refers to bicycle and pedestrian facilities. Since one of the primary goals of the 2050 MTP/SCS is to reduce greenhouse gases emissions, active transportation plays a large role in reducing congestion, increasing health and improving overall quality of life. Reductions in greenhouse gas emissions also lead to improvements in air quality. The 2050 MTP/SCS intends to make active

[4] No data after 2035 is provided in MBARD's 2012-2015 AQMP.

transportation more attractive, safe and feasible for all different users in the region, and the 2050 MTP/SCS has provided more than $1 billion for active transportation projects. These investments and improvements include bike lane additions, widenings, extensions, sidewalks, and trails. These investments are in addition to the active transportation improvements included as part of the local streets and roads investments, as well as improvement to air quality as a result of reduced VMT and vehicle emissions. These efforts are consistent with the Complete Streets Act of 2008 (AB 1358) and with AMBAG's Complete Street Policy.

The 2050 MTP/SCS would not conflict with the population forecast in the AQMP and would reduce emissions of ozone precursors below 2022 baseline levels. Therefore, implementation of the 2050 MTP/SCS would not conflict with or obstruct implementation of the AQMP, and this impact would be less than significant.

Mitigation Measures

None required.

Threshold 2:	Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment or attainment under an applicable federal or state ambient air quality standard?

Impact AQ-2 CONSTRUCTION OF PROPOSED TRANSPORTATION IMPROVEMENTS AND LAND USE PROJECTS ENVISIONED BY THE 2050 MTP/SCS WOULD RESULT IN A CUMULATIVELY CONSIDERABLE NET INCREASE IN PM_{10} OR OZONE PRECURSOR EMISSIONS. IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

There are three primary sources of short-term emissions that would be generated by construction of future transportation projects and the land use projects envisioned by the 2050 MTP/SCS:

1. Operation of construction vehicles (i.e., scrapers, loaders, dump trucks);
2. Generation of fugitive dust during clearing and grading; and
3. Use of asphalt or other oil-based substances during the final construction phases, which also generate nuisance odors.

The significance of daily emissions generated by construction equipment utilized to build 2050 MTP/SCS transportation improvements and future development facilitated by the SCS land use scenario would depend on the type and quantity of equipment used and the hours of operation. The amount of ROG emissions generated by oil-based substances such as asphalt is dependent upon the type and amount of asphalt utilized. The significance of fugitive dust ($PM_{2.5}$ and PM_{10}) emissions would depend upon the following factors: (1) the aerial extent of disturbed soils; (2) the length of disturbance time; (3) whether existing structures are demolished; (4) whether excavation is involved (including the potential removal of underground storage tanks); and (5) whether transport of excavated materials offsite is necessary.

Intersection improvements such as signalization, re-striping, or signal coordination are not expected to generate significant short-term emissions impacts. However, other 2050 MTP/SCS transportation projects as well as future development facilitated by the SCS land use scenario

may involve grading and paving, or the construction of permanent facilities. The precise quantity of emissions would need to be determined at the time of proposed construction of a given transportation improvement or development project. These emissions would be compared to MBARD's construction thresholds, as listed in Section 4.3.3(a), *Methodology and Significance Thresholds*.

Construction equipment would also be subject to the stringent rules and regulations adopted by the USEPA and CARB to reduce criteria pollutant and hazardous emissions limits from on-road vehicles and off-road equipment. For example, CARB has the In-Use Off-Road Diesel-Fueled Fleets Regulation to reduce particulate matter and NO_x from off-road heavy-duty diesel vehicles from various industries including air travel, manufacturing, and landscaping. In addition, the USEPA and CARB both have ignition diesel engine standards for non-road portable equipment, such as diesel generators and air compressors, that require the non-road equipment engines to be rated a cleaner tier by specific years, which will result in reduced emissions. Even though these regulations exist, it cannot be assumed that projects under the 2050 MTP/SCS would be constructed using the latest and lowest emitting construction equipment for a majority of their construction fleet and the exact construction emissions cannot be determined at this time. Therefore, short-term impacts would be significant because construction emissions could result in cumulatively considerable net increases in PM_{10}, ozone precursor, and/or other criteria pollutant emissions and impacts are significant.

Mitigation Measures

For transportation projects under their jurisdiction, TAMC, SBtCOG, and SCCRTC, and transportation project sponsor agencies can and should implement the following mitigation measures developed for the 2050 MTP/SCS program where applicable for transportation projects that result in fugitive dust and ozone precursor emissions, and where feasible and necessary based on project and site-specific considerations. Cities and counties in the AMBAG region can and should implement these measures, where relevant to land use projects implementing the 2050 MTP/SCS. Project specific environmental documents may adjust these mitigation measures as necessary to respond to site specific conditions. In addition, implementation of Mitigation Measure GHG-1 in Section 4.8, *Greenhouse Gas Emissions/Climate,* would also reduce criteria air pollutant emissions during construction, providing a co-benefit.

AQ-2(a) Application of MBARD Feasible Mitigation Measures

For all projects, the implementing agency shall incorporate the most recent MBARD feasible mitigation measures and/or technologies for reducing inhalable particles based on analysis of individual sites and project circumstances. Current MBARD feasible mitigation measures include the following measures. Additional and/or modified measures may be adopted by MBARD prior to implementation of individual projects under the 2050 MTP/SCS. The most current list of feasible mitigation measures at the time of project implementation shall be used.

- Water all active construction areas at least twice daily. Frequency should be based on the type of operation, soil, and wind exposure.
- Prohibit all grading activities during periods of high wind (over 15 miles per hour).
- Apply chemical soil stabilizers on inactive construction areas (disturbed lands within construction projects that are unused for at least four consecutive days).
- Apply non-toxic binders (e.g., latex acrylic copolymer) to exposed areas after cut and fill operations and hydro seed area.
- Haul trucks shall maintain at least 2'0"of freeboard.
- Cover all trucks hauling dirt, sand, or loose materials.
- Plant tree windbreaks on the windward perimeter of construction projects if adjacent to open land.
- Plant vegetative ground cover in disturbed areas as soon as possible.
- Cover inactive storage piles.
- Install wheel washers at the entrance to construction sites for all exiting trucks.
- Pave all roads on construction sites.
- Sweep streets if visible soil material is carried out from the construction site.
- Limit the area under construction at any one time.
- Post a publicly visible sign which specifies the telephone number and person to contact regarding dust complaints. This person shall respond to complaints and take corrective action within 48 hours. The phone number of the Monterey Bay Air Resources District shall be visible to ensure compliance with Rule 402 (Nuisance).

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for 2050 MTP/SCS transportation projects are RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects are cities and counties. This mitigation measure shall, or can and should, be implemented during construction where appropriate.

AQ-2(b) Diesel Equipment Emissions Standards

The implementing agency shall ensure, to the extent feasible, that diesel construction equipment meeting CARB Tier 4 emission standards for off-road heavy-duty diesel engines is used. If use of Tier 4 equipment is not feasible, diesel construction equipment meeting Tier 3 (or if infeasible, Tier 2) emission standards shall be used, and engines shall be retrofitted with CARB Level 3 Verified Diesel Emissions Control Strategy if available for the equipment. These measures shall be noted on all construction plans and the implementing agency shall perform periodic site inspections.

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for 2050 MTP/SCS transportation projects are RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects are cities and counties.

This mitigation measure shall, or can and should, be applied during permitting and environmental review and implemented during construction where appropriate.

AQ-2(c) Electric Construction Equipment

The implementing agency shall ensure that to the extent possible, construction equipment utilizes electricity from power poles rather than temporary diesel power generators and/or gasoline power generators.

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for 2050 MTP/SCS transportation projects are RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects are cities and counties. This mitigation measure shall, or can and should, be applied during permitting and environmental review and implemented during construction where appropriate.

Significance After Mitigation

Implementation of Measures AQ-2(a) through AQ-2(c) would reduce short-term construction emissions from individual projects and thus reduce the severity of impacts by requiring best practices for dust and exhaust emissions via readily available, lower-emitting diesel equipment, and/or equipment powered by alternative cleaner fuels (e.g., propane) or electricity, as well as on-road trucks using particulate exhaust filters. To the extent that an implementing agency requires an individual project to implement all feasible mitigation measures described above, individual project impacts may be reduced to a less than significant level. However, these mitigation measures may not be feasible or effective for all projects. Therefore, this impact would remain significant and unavoidable. No additional mitigation measures to reduce this impact to less than significant levels are feasible at the programmatic level.

Threshold 2:	Would the project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?

Impact AQ-3 PROPOSED TRANSPORTATION IMPROVEMENTS AND LAND USE PROJECTS ENVISIONED BY THE 2050 MTP/SCS WOULD RESULT IN A CUMULATIVELY CONSIDERABLE NET INCREASE OF PM_{10}. LONG-TERM OPERATIONAL IMPACTS RELATED TO CRITERIA POLLUTANT EMISSIONS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

Operation – Transportation Systems

Projected on-road vehicle emissions of ozone precursors and particulate matter on the transportation network and land use emissions in the AMBAG region for the year 2050 were compared to 2022 baseline conditions. The on-road vehicle source emissions for the 2050 MTP/SCS were estimated using the EMFAC2021 emission inventory model developed by CARB. In addition to ozone precursors and particulate matter, MBARD also regulates emissions of two attainment pollutants, CO and SO_X. The primary source of CO is the use of gasoline-powered

engines with automobiles being the primary contributor. The primary source of SO_X is fuel combustion by vehicles, while chemical plants, sulfur recovery plants, and metal processing are minor contributors (USEPA 2025b). MBARD has not developed regional emissions inventories or projections for CO and SO_X. However, because both pollutants are primarily associated with fuel combustion and transportation, this analysis evaluates the change in CO and SO_X emissions associated with on-road motor vehicles, based on data and projections developed by AMBAG using EMFAC2021. Table 4.3-9 compares the baseline conditions for these pollutants in 2022 and 2050 conditions with implementation of the 2050 MTP/SCS. The conditions in 2050 without implementation of the 2050 MTP/SCS are also shown for informational purposes. Please refer to Appendix E.1 for additional information on how pollutant emissions were estimated.

Table 4.3-9 Regional Emissions Analysis

Scenario	VMT	ROG Emissions (tons/day)	NO_X Emissions (tons/day)	PM_{10} Emissions (tons/day)	$PM_{2.5}$ Emissions (tons/day)	Total Fugitive PM Emissions (tons/day)[1]	CO Emissions (tons/day)	SO_x Emissions (tons/day)
2022 AMBAG Baseline	16,011,425	3.98	6.68	0.50	0.20	0.56	31.97	0.07
2050 No Project	18,216,739	1.82	2.54	0.48	0.17	0.59	13.99	0.06
2050 MTP/SCS	18,203,962	1.82	2.54	0.48	0.17	0.59	13.97	0.06
Change % (Baseline vs. 2050 MTP/SCS)[2]	**14%**	**-54%**	**-62%**	**-4%**	**-17%**	**4%**	**-56%**	**-24%**

VMT = vehicle miles traveled; ROG = reactive organic gases; NO_x = nitrous oxide; PM_{10} = particulate matter with a diameter of 10 microns or less; CO = carbon monoxide; SO_x = sulfur oxide

[1] Total Fugitive PM includes PM_{10} and $PM_{2.5}$. Fugitive PM_{10} emissions increase by 5%, per Table 4.3-10.

[2] A negative percentage represents a decrease

Note: Numbers may not add due to rounding.
Source: On-road motor vehicle emissions were calculated by AMBAG using EMFAC2021. Refer to Appendix E.1, 2050 MTP/SCS Chapter 5, and 2050 MTP/SCS Appendix G for complete methodology.

For mobile source emissions, projected 2050 emissions for ROG and NO_X with implementation of the 2050 MTP/SCS would be below the 2022 AMBAG baseline. Although total regional VMT would increase over the planning horizon from 2022 to 2050 regardless of MTP/SCS implementation, this result for ROG and NO_X emissions is consistent with the statewide downward trend for these pollutants as a result of CARB rules designed to reduce emissions from cars and trucks. ROG emissions are primarily generated by gasoline vehicles and are decreasing over time due to improvements in vehicle emission rates (USEPA 2025a). NO_X emissions are primarily generated by trucks and are decreasing substantially over time due to CARB rules designed to reduce NO_X emissions from diesel trucks and buses. The projected 2050 emissions

for CO and SO_X with implementation of the 2050 MTP/SCS would also be below the 2022 baseline due to the same reasoning.

However, total fugitive PM emissions from on-road mobile sources, which includes fugitive PM_{10} and $PM_{2.5}$, would increase by approximately 0.03 tons per day (approximately four percent) compared to the 2022 AMBAG baseline. The increase can be attributed to an increase in tire and brake wear emissions (i.e., fugitive emissions). There are no statewide regulations to reduce fugitive PM_{10} and $PM_{2.5}$ emissions from tire and brake wear, but CARB is conducting research to better characterize and reduce these emissions (CARB 2025d). Unlike the fugitive PM_{10} emissions, the PM_{10} emissions from running exhaust would decrease due to the decrease in average daily VMT. Given this increase in fugitive PM_{10} emissions, total PM_{10} emissions would increase. Long-term operational impacts would be significant because they would result in a cumulatively considerable net increase in a criteria pollutant for which the project region is non-attainment.

The 2050 MTP/SCS already includes policies, alternative transportation projects and transportation demand management projects that would encourage the use of transportation modes other than passenger vehicles. However, the expected growth in the AMBAG region would still result in higher regional PM_{10} emissions compared to baseline conditions. Some of the relevant strategies from the 2050 MTP/SCS that support alternative transportation include:

- Work with the Planning Directors Forum to further define and evaluate Opportunity Areas as areas for transit oriented development, as well as educate jurisdictions on the definition of transit priority project areas per SB 375 to take advantage of CEQA streamlining benefits.
- Prioritize corridor investment projects along high-quality transit corridors that serve multiple modes of travel in the development of the Metropolitan Transportation Plan and Regional Transportation Plans. Supportive investments include enhancements for high quality transit, technology development, bicycle and pedestrian improvements and safer intersections.
- Prioritize projects for funding that are consistent with the Sustainable Communities Strategy goals and/or that have complete streets elements per the adopted Sustainable Communities Strategy and Regional Complete Streets Guidelines/Policy to encourage use of active transportation options for short trips and improve quality of life
- Investment in safe bicycle and pedestrian routes that improve connectivity and access to common destinations, such as connections between residential areas and schools, employment centers, neighborhood shopping, and transit stops and stations, supporting efforts throughout the region to improve connectivity and realize public health benefits from these investments.
- Take steps to improve safety and security at crosswalks, transit stops and along main access routes to transit, including rural areas, with higher priority for low income, minority and high crime areas.
- Collaborate with jurisdictions and employers to provide local community shuttles or circulators that serve transit oriented development, high quality transit stops, and neighborhood commercial centers providing an incentive for residents and employees to make trips on transit.

- Continue the region's commitment to transportation demand management programs as a strategy for safety education and promotion of alternative travel modes for all types of trips. Market transportation demand management strategies towards tourists so that once people arrive to the Monterey Bay area they have resources to get out of their cars.
- Continue to plan for and provide infrastructure for electric vehicles using the region's PEV Readiness Plan, while also planning for and considering evolving transport methods from driverless cars to informal ridesharing networks.

Also note that the 2050 MTP/SCS air contaminant emissions shown in Table 4.3-9 are modeled emissions based on VMT. The results do not account for reduction strategies, such as a transportation demand management plan, telecommuting, and transit service enhancements, since these strategies are off-model reductions that cannot be included in EMFAC. The mobile air contaminant emissions from the 2050 MTP/SCS are expected to decrease with the inclusion of these reduction strategies, such that the analysis herein represents a conservative scenario for air contaminant emissions. Refer to "Modeling Methodology" in Appendix F of the 2050 MTP/SCS for an explanation about the model sensitivity and recommended off model adjustments. While the above strategies from the 2050 MTP/SCS would reduce VMT and some of the criteria pollutants (ROG, NO_x, CO, and SO_x), there would still be a net increase in PM_{10} emissions from mobile sources. As such, mobile source impacts associated with the project would be significant.

Operation – Land Uses

As described in Impact AQ-1, the 2026 RGF forecasts that the population within the AMBAG region will grow by approximately 47,538 people and 27,799 jobs would be added from the years 2022 to 2050. It is expected that the increased growth would result in an increase in PM_{10} emissions over the planning horizon based on the ROG, NO_x, and PM_{10} emission inventory and forecasts patterns (see Table 4.3-5 and Table 4.3-6). A further review of the sources contributing to MBARD 2022 through 2050 emission inventories (e.g., stationary, mobile, and area-wide sources) show that increasing area-wide emissions and emissions from stationary sources continue to increase while emissions from mobile sources are declining for total ROG emissions. For the PM_{10} emission inventories, area-wide and mobile sources are responsible for the total increase over time. While the 2050 MTP/SCS would include additional land use development, the total criteria air pollutant emissions from the land uses proposed would vary for each individual project and they may not exceed the applicable MBARD project level significance thresholds. Therefore, this impact would be significant.

While the above strategies from the 2050 MTP/SCS would reduce some of the criteria pollutants (ROG, NO_x, CO and SO_x), the proposed land use projects would increase area-wide emissions and emissions from stationary sources, resulting in an increase in PM_{10} based on growth forecasts. This would increase the likelihood that the NCCAB continues to exceed the PM_{10} CAAQS since NCCAB is currently in non-attainment of the State PM_{10} standard. Therefore, since the PM_{10} emissions generated by the 2050 MTP/SCS land use projects would contribute to existing non-attainment conditions in the NCAAB, and PM_{10} impacts would be significant.

Mitigation Measures

AMBAG, in partnership with MBARD and implementing agencies, shall implement Mitigation Measure AQ-3(a) to reduce PM_{10} emissions. For land use projects under their jurisdiction, the cities and counties in the AMBAG region can and should implement Mitigation Measure AQ-3(b) to reduce PM_{10} emissions, where relevant to land use projects implementing the 2050 MTP/SCS. Implementation of Mitigation Measure GHG-3(a) in Section 4.8, *Greenhouse Gas Emissions/Climate Change,* and Mitigation Measures TRA-2(a) and TRA-2(b) in Section 4.15, *Transportation,* would also reduce PM_{10} emissions from the 2050 MTP/SCS. Project specific environmental documents may adjust these mitigation measures as necessary to respond to site specific conditions.

AQ-3(a) PM_{10} Emissions Reduction

To help reduce regional PM_{10} emissions, AMBAG and the RTPAs, in partnership with MBARD and implementing agencies, shall:

a. Support the use of existing air quality and transportation funds and seek additional funds to continue the implementation of the CARB Carl Moyer Program, which is intended to retrofit and replace trucks and locomotives to reduce particulate matter.
b. Incentivize the reduction of mobile PM emissions from mobile exhaust and entrained PM sources such as tire wear, brake wear, and roadway dust through funding.
c. Hold forums and workshops to encourage land use projects to incorporate transportation demand management (TDM) strategies as part of the project design to reduce the number of vehicular trips across the transportation network. Potential strategies could include ridesharing, carpooling, subsidized public transit, flexible work hours, and parking management measures.

IMPLEMENTING AGENCIES AND TIMING

AMBAG and the RTPAs, in partnership with MBARD, are responsible for implementing this measure. This mitigation measure shall, or can and should, be applied during permitting and environmental review and implemented during operation where appropriate.

AQ-3(b) Long-term Regional Operational Emissions

Implementing agencies including transportation project sponsors, counties, and cities shall, or can and should, implement long-term operational emissions reduction measures. Such reduction measures include the following:

- Require that all interior and exterior architectural coatings for all developments utilize coatings following MBARD Rule 426, *Architectural Coatings*.
- Increase building envelope energy efficiency standards in excess of applicable building standards and encourage new development to achieve zero net energy use.
- Install energy-efficient appliances, interior lighting, and building mechanical systems. Encourage installation of solar panels for new residential and commercial development.

- Locate sensitive receptors more than 500 feet of a freeway, 500 feet of urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day.
- Locate sensitive receptors more than 1,000 feet of a major diesel rail service or railyards. Where adequate buffer cannot be implemented, implement the following:
  - Install air filtration (as part of mechanical ventilation systems or stand-alone air cleaners) to reduce indoor pollution exposure for residents and other sensitive populations in buildings that are close to transportation network improvement projects.
  - Use air filtration devices rated MERV-13 [minimum efficiency report value] or higher.
- Plant trees and/or vegetation suited to trapping roadway air pollution and/or sound walls between sensitive receptors and the pollution source. The vegetation buffer should be thick, with full coverage from the ground to the top of the canopy. Install higher efficacy public street and exterior lighting.
- Use daylight as an integral part of lighting systems in buildings.
- Use passive solar designs to take advantage of solar heating and natural cooling.
- Install light colored "cool" roofs, cool pavements.
- Install solar and tankless hot water heaters.
- Exclude wood-burning fireplaces and stoves.
- Incorporate design measures and infrastructure that promotes safe and efficient use of alternative modes of transportation (e.g., neighborhood electric vehicles, bicycles) pedestrian access, and public transportation use. Such measures may include incorporation of electric vehicle charging stations, bike lanes, bicycle-friendly intersections, and bicycle parking and storage facilities.
- Incorporate design measures that promote ride sharing programs (e.g., by designating a certain percentage of parking spaces for ride sharing vehicles, designating adequate passenger loading and unloading and waiting areas for ride sharing vehicles, and providing a web site or message board for coordinating rides).

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for transportation projects are RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects are cities and counties. This mitigation measure shall, or can and should, be applied during permitting and environmental review and implemented during operation where appropriate.

Significance After Mitigation

If implementing agencies adopt and require the mitigation described above, transportation related PM_{10} emission impacts would be reduced because said measures encourage the use of cleaner vehicles and reduce vehicle trips. However, since the implementation is not project or site specific, reductions cannot be estimated and cannot be guaranteed on a project by project basis. Additionally, it is unlikely that an increase in daily PM_{10} emissions above baseline conditions could be fully avoided in 2050, due to factors unrelated to discretionary approvals, such as population and employment growth in the region. Therefore, this impact would remain

significant and unavoidable. No additional feasible mitigation measures are available that would reduce daily emissions below the 2022 AMBAG baseline.

Threshold 3: Would the project expose sensitive receptors to substantial pollutant concentrations?

Impact AQ-4 IMPLEMENTATION OF THE 2050 MTP/SCS WOULD EXPOSE SENSITIVE RECEPTORS TO SUBSTANTIAL POLLUTANT CONCENTRATIONS. IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

Fugitive Dust

Re-entrained dust refers to roadway dust that is "kicked up" by moving vehicles on paved and unpaved roadways. This type of dust would be generated by roadway activity. In addition, dust from construction activity would add to regional dust levels. The synergistic effects of road dust (typically measured as PM_{10}) with ozone and the hazardous constituents of re-entrained road dust itself (carcinogens, irritants, pathogens) may affect human health by contributing to respiratory illnesses such as asthma and allergies. Although motor vehicle emission control advances have allowed vehicle tailpipe emissions of some pollutants to decrease over the last 20 years, the number of vehicles in use and the amount of vehicle activity has continued to increase. This would suggest that re-entrained road dust has increased as well, as the amount of re-entrained dust is related to the number of vehicles on a road.

Table 4.3-10 compares fugitive particulate emissions, which includes only brake and tire wear, for the baseline conditions in 2022 and 2050 with implementation of the 2050 MTP/SCS. The conditions in 2050 without implementation of the 2050 MTP/SCS are also shown for informational purposes. As shown in Table 4.3-10, fugitive particulate emissions would be higher with implementation of the 2050 MTP/SCS compared to 2022 baseline conditions.

Table 4.3-10 Mobile Source Fugitive Particulate (PM_{10} + $PM_{2.5}$) Emissions

Scenario	VMT	Fugitive PM_{10} Emissions (tons/day)	Fugitive $PM_{2.5}$ Emissions (tons/day)	Total Fugitive PM (PM_{10} + $PM_{2.5}$) Emissions (tons/day)
2022 AMBAG Baseline	16,011,425	0.43	0.13	0.56
2050 No Project	18,216,739	0.45	0.14	0.59
2050 MTP/SCS	18,203,962	0.45	0.14	0.59
Change % (Baseline vs. 2050 MTP/SCS)	**14%**	**5%**	**3%**	**4%**

VMT = vehicle miles traveled; PM_{10} = particulate matter with a diameter of 10 microns or less; $PM_{2.5}$ = particulate matter with a diameter of 2.5 microns or less

Note: Numbers may not add due to rounding.

Source: Regional Mobile source emissions were calculated by AMBAG using EMFAC2021. The PM emissions only account for tire and brake wear emissions. Total PM includes both fugitive PM_{10} and fugitive $PM_{2.5}$. Refer to Appendix E.1, 2050 MTP/SCS Chapter 5, and 2050 MTP/SCS Appendix G for complete methodology.

MBARD fugitive dust control measures described in Table 4.3-8 would reduce re-entrained dust from unpaved roads within the region. In 2003, the California Legislature enacted SB 656 to reduce public exposure of airborne particulate matter. SB 656 is described above in Section 4.3.2.

MBARD Fugitive Dust Control Measure D-1 encourages the use of dust suppressants, including watering or gravel, applying non-toxic surfactants on unpaved roads and related equipment staging areas, recommending speed limits, limiting access to infrequently used unpaved roads or parking areas and in situations involving high volumes of traffic (>100 vehicles per day), considering paving on a case-by-case basis. Measure D-2 is an extension or enhancement of D-1 and evaluates the impact of vehicle speed on unpaved roads in creating fugitive dust, visibility impairment, nuisance, and dust deposition in areas along the roadway corridor. However, these fugitive dust control measures are not standard conditions of approval or required control measures for new developments. Therefore, implementation of Mitigation Measure AQ-3(b) *Long-term Regional Operational Emissions* in Impact AQ-3 would be required to reduce re-entrained road dust exposure to sensitive receptors.

Mitigation Measures

AQ-3(b) Long-term Regional Operational Emissions

See Impact AQ-3 for Mitigation Measure AQ-3(b).

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for 2050 MTP/SCS transportation projects are RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects are cities and counties. This mitigation measure shall, or can and should, be implemented during construction where appropriate.

Significance After Mitigation

Implementation of Mitigation Measure AQ-3(b) would reduce fugitive dust emissions from individual projects and thus reduce the severity of impacts by requiring best practices for dust and emissions via watering, vegetative covers, reducing travel speed, and covering exposed areas. To the extent that an implementing agency requires an individual project to implement all feasible mitigation measures described above, individual project impact would be reduced to a less than significant level. However, these measures may not be feasible or effective for all projects. Therefore, this impact would remain significant and unavoidable. No additional mitigation measures to reduce this impact to less than significant levels are feasible at the programmatic level.

Threshold 3: Would the project expose sensitive receptors to substantial pollutant concentrations?

Impact AQ-5 FUTURE GROWTH AND DEVELOPMENT FACILITATED BY THE 2050 MTP/SCS LAND USE SCENARIOS AND TRANSPORTATION PROJECTS WOULD EXPOSE SENSITIVE RECEPTORS TO SUBSTANTIAL HAZARDOUS AIR POLLUTANT CONCENTRATIONS. IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

As described in Section 4.3.1, *Setting*, TACs are air pollutants that pose a potential hazard to human health by causing or contributing to an increase in mortality or serious illness. Common sources of TAC include high traffic freeways and roads, gas dispensing facilities, industrial facilities, and diesel engines. DPM is classified as the primary airborne carcinogen in the State. To protect people from TACs and reduce exposure, CARB 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).

According to MBARD CEQA Air Quality Guidelines (2008), a sensitive receptor is defined as any residence including private homes, condominiums, apartments, and living quarters; education resources such as preschools and kindergarten through grade twelve schools; daycare centers; and health care facilities such as hospitals or retirement and nursing homes. A sensitive receptor includes long term care hospitals, hospices, prisons, and dormitories or similar live-in housing.

Although no high capacity urban or rural roadways exist in the AMBAG region, there are seven major highway routes (Highways 1, 9, 17, 25, 68, 101, and 156). Within the AMBAG region, the sensitive receptors residing close to freeways or busy roadways may experience adverse health effects beyond those typically found in urban areas.

MBARD significance threshold for long-term public health risk is set at 10 excess cancer cases in a million for cancer risk. For non-cancer risk (i.e., chronic or acute risk), the significance level is set at a hazard index of greater than 1.0. If a formal project level health risk assessment shows that a significant impact results, mitigation measures to reduce the predicted levels of toxic air pollutants from the facility to a level of insignificance may be imposed by the lead agency.

Toxic Air Containments – Diesel Particulate Matter

Because exposure of toxic air contaminants is primarily based on local parameters (e.g., average daily traffic on local roadway segments and wind direction in relation to source and receptor), health risks adjacent to high volume roadways and transportation facilities would remain higher than regional averages.

To assess the impact of diesel on regional roadways, an analysis of on-road mobile source diesel $PM_{2.5}$ and PM_{10} emissions (primary) and diesel NO_X, SO_X, and CO (as surrogates for secondary PM_{10}[5]) are shown in Table 4.3-11. The emissions are the total exhaust emissions, which include the running, idling, and start exhaust. The baseline conditions in 2022 and 2050 conditions with

[5] Secondary PM_{10} is formed in the atmosphere through chemical reactions of gases and certain organic compounds.

implementation of the 2050 MTP/SCS are compared. The conditions in 2050 without implementation of the 2050 MTP/SCS are also shown for informational purposes.

Table 4.3-11 On-Road Mobile Source Diesel Toxics Comparison

Scenario	Diesel $PM_{2.5}$ (tons/day)	Diesel PM_{10} (tons/day)[1]	Diesel NO_X (tons/day)	Diesel SO_X (tons/day)	Diesel CO (tons/day)
2022 AMBAG Baseline	0.08	0.04	3.54	0.02	0.77
2050 No Project	0.06	0.02	1.71	0.01	0.65
2050 MTP/SCS	0.06	0.02	1.71	0.01	0.65
Change in % (Baseline vs. 2050 MTP/SCS)	**-28%**	**-48%**	**-52%**	**-18%**	**-15%**

Source: On-road mobile source diesel toxics emissions were calculated by AMBAG using EMFAC2021. Refer to 2050 MTP/SCS Chapter 5 and Appendix G for complete methodology.

Note: Numbers may not add due to rounding.

Projected emissions for 2050 with implementation of the 2050 MTP/SCS would result in lower diesel $PM_{2.5}$, PM_{10}, NO_X, SO_X, and CO emissions when compared to the 2022 baseline. Because on-road mobile emissions with implementation of the 2050 MTP/SCS would decrease for all pollutants compared to baseline 2022 conditions, impacts related to diesel particulate matter exposure and associated health risks and nuisance odors at the regional level would be less than significant.

While overall toxic air contaminant concentrations health risks within any given distance of mobile sources in the region would generally decrease with implementation of the MTP/SCS (refer to Table 4.3-11), exposure is primarily based on local parameters such as average daily traffic on local roadway segment, or wind direction in relation to source and receptor. As such, the health risks adjacent to high volume roadways and transportation facilities (e.g., State Route 1 and U.S. 101) would remain higher than regional averages. See Section 4.15, *Transportation*, for a description of high-volume roadways and transportation facilities, such as railways, in the AMBAG region.

As discussed above, proximity to freeways increases cancer risk and exposure to particulate matter. Similarly, proximity to heavily traveled transit corridors and intersections would expose residents to higher levels of diesel particulate matter and carbon monoxide. As shown in Table 4.3-12, although the 2050 MTP/SCS would reduce daily truck hours of delay in the region as a whole in 2050 when compared to conditions without the 2050 MTP/SCS, the 2050 MTP/SCS would nevertheless increase daily truck hours of delay compared to the 2022 baseline. The increased hours of truck delay would result in lengthier exposure of DPM where delay occurs near residences. The increase in vehicle delay, especially along corridors near sensitive residential receptors, would increase idling emissions and associated health risks for nearby receptors. This increase in delay would largely be a result of population and employment growth that is anticipated throughout the region by 2050, as discussed in Section 4.13, *Population and Housing*, and which would also result in additional vehicle travel within the region that would increase delay.

Table 4.3-12 Daily Hours of Truck Delay in AMBAG Region

	Baseline Conditions (2022)	2050 No Project	2050 MTP/SCS	Change in % (Baseline vs. 2050 MTP/SCS)
Daily Hours of Truck Delay	2,538	6,139	5,917	133%

Source: RTDM (AMBAG 2025)

As discussed in Chapter 2, *Project Description*, as a result of the 2050 MTP/SCS policies and land use scenario, the anticipated growth pattern would concentrate population adjacent to transit and other transportation facilities that would result in more people being exposed to elevated health risks as compared to areas of the region more distant from such facilities.

It is important to note that the location and pattern of the proposed 2050 MTP/SCS growth would influence travel behavior. A compact growth pattern served by an efficient and diverse transportation system facilitates a reduction in automotive travel and increases walking, bicycling and transit use—all of which reduce individual vehicle trips and associated vehicle delay. Reduced vehicle delay and vehicle trips are directly linked to reduced regional criteria air pollutant emissions and toxic air emissions from mobile sources. A variety of other factors contribute to the declines in TAC emissions compared to existing conditions, including vehicle technology, cleaner fuels and fleet turnover. However, in order to achieve the greatest VMT reductions from a compact growth pattern, development also must necessarily be in relatively close proximity to public transit and major roadway corridors such as State Route 1 or U.S. 101. Although the precise location and density of such development is not known at this time, the proposed 2050 MTP/SCS would result in new sensitive receptors close to existing and new hazardous air pollutant sources, potentially resulting in the exposure of sensitive receptors to substantial hazardous air pollutant concentrations and objectionable odors. The siting of new sensitive receptors would be subject to an individual jurisdiction's land use approval processes and would be analyzed on an individual project basis and subject to mitigation measures identified below.

Therefore, the 2050 MTP/SCS would expose existing and new sensitive receptors to substantial pollutant concentrations from diesel particulates and other TACs, and impacts would be significant.

Mitigation Measures

For transportation projects under their jurisdiction, TAMC, SBtCOG, and SCCRTC shall implement, and transportation project sponsor agencies can and should implement, the following mitigation measures developed for the 2050 MTP/SCS program where applicable for transportation projects, and where feasible and necessary based on project and site specific considerations. Cities and counties in the AMBAG region can and should implement these measures, where relevant to land use projects implementing the 2050 MTP/SCS. Project specific environmental documents may adjust these mitigation measures as necessary to respond to site specific conditions.

AQ-5 Health Risk Reduction Measures

Transportation implementing agencies shall, or can and should, implement the following measures:

- Retain a qualified air quality consultant to prepare a health risk assessment in accordance with CARB and OEHHA requirements to determine the exposure of nearby sensitive receptors to TAC concentrations.
- If impacts result in increased risks to sensitive receptors above MBARD significance thresholds, then design features or control measures must be included that will reduce the health risks at the location of the off-site sensitive receptors to a level below MBARD significance threshold. For example, plant trees and/or vegetation suited to trapping TACs and/or sound walls between sensitive receptors and the pollution source would be recommended. This measure would trap TACs emitted from pollution sources such as highways, reducing the amount of TACs to which residents and other sensitive populations would be exposed.
- AMBAG will partner with MBARD and other implementing agencies to explore a program to retrofit existing residential buildings and other sensitive land uses near freeways or roadways where health risk impacts would exceed MBARD significance thresholds with air filtration devices rated MERV 13.
- Implement air pollution reduction strategies as described in Table 1 from the CARB *Strategies to Reduce Air Pollution Exposure Near High-Volume Roadways* technical advisory (2017) when reasonable and feasible for transportation system projects associated with the 2050 MTP/SCS.

In addition, consistent with the general guidance contained in CARB's *Air Quality and Land Use Handbook* (2005) and *Technical Advisory on Strategies to Reduce Air pollution Exposure Near High-Volume Roadways* (2017), appropriate measures shall include one or more of the following methods, as determined by a qualified professional, as applicable. The implementing agency shall incorporate health risk reduction measures based on analysis of individual land use sites and project circumstances. These measures may include:

- Avoid siting new sensitive land uses within 500 feet of a freeway or railway.
- Require development projects for new sensitive land uses to be designed to minimize exposure to roadway-related pollutants to the maximum extent feasible through inclusion of design components including air filtration and physical barriers.
- Do not locate sensitive receptors near the entry and exit points of a distribution center.
- Locate structures and outdoor living areas for sensitive uses as far as possible from the source of emissions. As feasible, locate doors, outdoor living areas, and air intake vents primarily on the side of the building away from the freeway or other pollution source. As feasible, incorporate dense, tiered vegetation that regains foliage year-round and has a long-life span between the pollution source and the project.
- Maintain a 50-foot buffer from a typical gas dispensing facility (under 3.6 million gallons of gas per year).

- Install, operate, and maintain in good working order a central heating and ventilation (HV) system or other air take system in the building, or in each individual residential unit, that meets or exceeds the efficiency standard of MERV 13. The HV system should include the following features: installation of a high efficiency filter and/or carbon filter-to-filter particulates and other chemical matter from entering the building. Either HEPA filters or ASHRAE 85 percent supply filters should be used. Ongoing maintenance should occur.
- Retain a qualified HV consultant or Home Energy Rating Systems (HERS) rater during the design phase of the project to locate the HV system based on exposure modeling from the mobile and/or stationary pollutant sources.
- Maintain positive pressure within the building.
- Achieve a performance standard of at least one air exchange per hour of fresh outside filtered air.
- Achieve a performance standard of at least four air exchanges per hour of recirculation. Achieve a performance standard of 0.25 air exchanges per hour of unfiltered infiltration if the building is not positively pressurized.
- Require project owners to provide a disclosure statement to occupants and buyers summarizing technical studies that reflect health concerns about exposure to highway exhaust emissions.
- Implement feasible attenuation measures needed to reduce potential air quality impacts to sensitive receptors such as air filtration systems.

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for 2050 MTP/SCS transportation projects are RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects are cities and counties. This mitigation measure shall, or can and should, be applied during permitting and environmental review and implemented during operation where appropriate.

Significance After Mitigation

Although implementation of the above mitigation would reduce health risks, individual sensitive receptors may still be exposed to substantial hazardous air pollutant concentrations that would have significant health risk effects. Therefore, this impact remains significant and unavoidable. No additional mitigation measures to reduce this impact to less than significant levels are feasible.

Threshold 4: Would the project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Impact AQ-6 IMPLEMENTATION OF THE 2050 MTP/SCS WOULD NOT RESULT IN OTHER EMISSIONS (SUCH AS THOSE LEADING TO ODORS) ADVERSELY IMPACTING A SUBSTANTIAL NUMBER OF PEOPLE. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Impacts from odor emissions can vary from being a mild annoyance to a person or could trigger an asthma episode for people with sensitive airways (MBARD 2008). The degree to which an odor is offensive is based on an individual's sensitivity and tolerance for said odor. Some people may find an odor acceptable (e.g., odors from a coffee roaster), while others may find it off-putting. Since odors are subjective, the sensory and physical response experienced by an individual varies based on their perception of the quality and intensity of the odor. Quality refers to the nature of the smell (e.g., flowery or sour) and intensity refers to the strength of the odor. Furthermore, the distance between the odor source and receptor, the wind direction, and sensitivity of the receptor can influence how the impact is perceived. Common sources of odors include landfills, agricultural uses, wastewater treatment plants, refineries, and vehicle exhaust.

Construction

Buildout constructed under the 2050 MTP/SCS would generate oil and diesel fuel odors during construction from equipment use. The odors would be limited to the construction period and would be intermittent and temporary. Furthermore, these odors would dissipate rapidly with distance from in-use construction equipment. Accordingly, construction activities would not result in the frequent exposure of receptors to objectionable odorous emissions.

Operation

Development associated with the 2050 MTP/SCS is related to transportation improvements (e.g., roadway widening, interchange improvements, installation of bicycle lanes), new residences, and job growth, through the development of commercial and industrial projects. These types of projects are not typical operational sources of odors. However, all 2050 MTP/SCS projects would be subject to MBARD Rule 402, *Nuisance*, which prohibits the discharge of air contaminants or other material that would cause injury, detriment, nuisance, or annoyance to any considerable number of persons. Furthermore, the projects would be required to adhere to local policies, zoning designations, and municipal codes that would limit odors. As discussed in Section 4.3.2, *Regulatory Setting*, counties and cities within the NCAAB have air quality-related policies in their general plans that promote multimodal transportation, electric-vehicles, and transit oriented development. These types of policies aim to reduce travel with fossil-fueled vehicles, and indirectly reduce odors from vehicle exhaust. However, if offensive odors are present and become a nuisance, then complaints can be filed by email or phone call with MBARD, who will then investigate the source.

Since objectionable odors associated with the construction and operation of the projects from the 2050 MTP/SCS would either be temporary and regulated by local governing bodies (i.e., MBARD, counties, and cities), implementation of the 2050 MTP/SCS would not result in odors or emissions adversely affecting a substantial number of people. Impacts would be less than significant.

Mitigation Measures

None required.

c. Specific MTP Projects That May Result in Impacts

Table 4.3-13 identifies transportation projects with the potential to cause or contribute to direct or indirect impacts related to air quality such as those discussed above. Program-level impact determinations were provided for the overall 2050 MTP/SCS Project above. This section is not intended to provide project-specific impact determinations under CEQA. Rather, the projects identified in Table 4.3-13 are representative of projects that may result in project-level impacts with or without mitigation and were selected based on their potential scope and likelihood to result in the air quality impacts identified above. The intent of this summary is to support potential future streamlining efforts as a screening tool to facilitate early identification of projects likely to result in the impacts identified above. Streamlining opportunities are discussed in Section 1.5, *Implementation Issues and Future Environmental Review*, in Chapter 1*, Introduction*.

All projects that include a construction component would contribute to Impact AQ-2. Projects that include roadway, rail, and transit features and/or expansions would contribute to Impacts AQ-3 through AQ-5. Moreover, any project that would expose sensitive receptors to hazardous air pollutants would contribute to Impact AQ-4 and AQ-5. Additional specific analysis will be required as individual projects are implemented to determine the project specific magnitude of impact. Mitigation discussed above would apply to these specific projects.

Table 4.3-13 2050 MTP/SCS Projects that May Result in Air Quality Impacts

AMBAG Project No.	Project	Location	Impact
MON-KCY006-CK-2026	US 101 - 1st Street Interchange (Lonoak Street I/C)	Monterey County	AQ-2, AQ-3, AQ-4, AQ-5
MON-SOL014-SO-2026	SR 146 Bypass (Pinnacles Parkway)	Monterey County	AQ-2, AQ-3, AQ-4, AQ-5
MON-CT023-CT-2026	State Route 156 and US 101 Interchange	Monterey County	AQ-2, AQ-3, AQ-4, AQ-5
SB-CT-A44-2026	State Route 25 Corridor Improvement Project, Phase I	San Benito County	AQ-2, AQ-3, AQ-4, AQ-5
SB-CT-A45-2026	State Route 25 Corridor Improvement Project, Phase II	San Benito County	AQ-2, AQ-3, AQ-4, AQ-5

AMBAG Project No.	Project	Location	Impact
SC-RTC-24e-RTC-2026	3 - Hwy 1 Auxiliary Lanes & Bus on Shoulders (State Park to Bay/Porter) & Mar Vista Bike/Ped Xing	Santa Cruz County	AQ-2, AQ-3, AQ-4, AQ-5
SC-RTC-24f-RTC-2026	2 - Hwy 1 Auxiliary Lanes & Bus on Shoulders (41st Ave to Soquel Ave) & Chanticleer Bike/Ped Bridge	Santa Cruz County	AQ-2, AQ-3, AQ-4, AQ-5
SC-RTC-24g-RTC-2026	4 - Hwy 1 Auxiliary Lanes & Bus on Shoulders (Freedom Blvd to State Park Dr) & Trail Segment 12	Santa Cruz County	AQ-2, AQ-3, AQ-4, AQ-5

4.3.4 Cumulative Impacts

a. Methodology

The cumulative analysis presented below primarily relies on a projections-based approach, using regional land use and growth forecasts for the AMBAG region and adjoining counties to evaluate cumulative conditions. The project is assessed within the existing and foreseeable future environmental setting, and a determination is made as to whether its incremental contribution would be cumulatively considerable when considered alongside both the overall envisioned land use scenario and specific large-scale planned projects. Refer to Section 6.4, *Cumulative Impacts,* in Chapter 6, *Other CEQA Required Discussions*, for a description of the cumulative impact methodology.

b. Impact Analysis

The AMBAG planning region falls within the jurisdiction of MBARD, while the adjoining counties fall within the jurisdiction of the Bay Area Air Quality Management District, San Joaquin Valley Air Pollution Control District, or San Luis Obispo Air Pollution Control District. Each of these four air districts has prepared an air quality plan to improve conditions and meet federal and state air quality standards. While each air district is primarily responsible for regulating emissions within its own boundaries, the transport of emissions in one area can affect another area's ability to achieve attainment of pollutant standards. All four air districts currently exceed at least one federal and/or state air quality standard. Because emissions can cross the boundaries of air districts before dissipating, the cumulative impact analysis area for air quality consists of the AMBAG region and adjoining counties.

Impact AQ-C-1 DEVELOPMENT IN THE CUMULATIVE IMPACT ANALYSIS AREA WOULD RESULT IN AN INCREASE OF REGIONAL PARTICULATE MATTER EMISSIONS AND WOULD EXPOSE SENSITIVE RECEPTORS TO DIESEL PARTICULATES AND TOXIC AIR CONTAMINANTS. CUMULATIVE IMPACTS WOULD BE SIGNIFICANT AND THE CONTRIBUTION OF THE 2050 MTP/SCS WOULD BE CUMULATIVELY CONSIDERABLE.

Future development within the cumulative impact analysis area would involve grading and paving, or the construction of permanent facilities. Although individual development projects may not generate significant short-term emissions, it is probable that several projects would be

under construction simultaneously and would generate cumulative construction emissions that could impact air quality. While regional ozone precursors would be reduced with implementation of the 2050 MTP/SCS compared to 2022 baseline conditions, regional particulate matter emissions would increase beyond baseline conditions. Construction activities, such as excavation and ground disturbance, associated with transportation projects under the 2050 MTP/SCS, as well as the land use projects envisioned by the 2050 MTP/SCS, would create fugitive dust emissions and have the potential to result in temporary adverse impacts on air quality. Moreover, construction equipment used for the construction of 2050 MTP/SCS projects may not be the lowest emitting equipment available.

The 2050 MTP/SCS could result in substantial increases in pollutant emission levels (fine particulate matter and toxic air contaminants) during construction and operational activities associated with future growth and development patterns. However, implementation of the 2050 MTP/SCS is intended to reduce the overall emissions load through a transportation and land use strategy that maximizes access to transit and other alternative transportation approaches, lowering potential VMT per capita. Given existing and projected air pollution conditions in surrounding areas, the 2050 MTP/SCS would have a cumulatively considerable contribution to significant regional air quality impacts, including particulate matter, diesel particulate, and toxic air contaminant impacts. Implementation of Mitigation Measures AQ-2(a) through AQ-3(b) would reduce the contribution to cumulative air quality impacts. However, the 2050 MTP/SCS contribution would remain cumulatively considerable after mitigation because particulate matter, diesel particulate, and toxic air contaminant emissions reductions cannot be guaranteed. Thus, the cumulative impacts related to air quality would be significant, and the proposed Plan's contribution to the cumulative air quality impacts would remain cumulatively considerable.

4.4 Biological Resources

This section evaluates biological resources impacts of transportation and development projects facilitated by the proposed 2050 MTP/SCS.

4.4.1 Setting

a. Terrestrial Vegetation Communities

Monterey, San Benito, and Santa Cruz counties contain a wide diversity of tree (hardwood and coniferous forests, oak woodlands, riparian woodlands), shrub (chaparrals, coastal scrubs) and herbaceous (grasslands, certain wetlands) habitat types. Some habitat types, such as coast live oak woodland, tend to have similar species composition and structure in most areas; however, other habitats, such as other forest types, grasslands and coastal scrubs, exhibit differences in species composition and structure depending upon proximity to the coast, soil type, elevation and aspect. Thirty-seven habitats are mapped within Monterey, San Benito, and Santa Cruz counties using the California Department of Forestry and Fire Protection's (CAL FIRE) Fire and Resource Assessment Program (CAL FIRE 2024) in cooperation with California Department of Fish and Wildlife (CDFW) California Wildlife Habitat Relationships (CWHR) habitat classification system (CDFW 2014, CAL FIRE 2024) (Figure 4.4-1 through Figure 4.4-3). A description of each of the habitats adapted from A Guide to Wildlife Habitats of California (Mayer and Laudenslayer 1988) within three miles of projects outlined in the 2050 MTP/SCS is presented below. The vegetation classifications from a digital version of *A Manual of California Vegetation*, published by California Native Plant Society (CNPS), that most closely resemble those classified by the CWHR are also presented in each description (CNPS 2025a). It should be noted that these habitats are generalized, and that site-specific variation is likely present. The CWHR classification system maps habitats from a broad perspective, and in many areas, it is expected that two or more habitats may blend with one another. Due to the large scale at which habitats are mapped using the CWHR classification system, vernal pools, wetlands and drainages are discussed separately in Section 4.4.1.b utilizing sources of information that better capture aquatic and wetland habitats that are of smaller scale in the landscape. Habitats which occur within populated areas can also show variation because of a greater exposure to anthropogenic influences, such as the introduction of exotic plant species.

Tree-Dominated Habitats

Monterey, San Benito, and Santa Cruz counties are home to a variety of hardwood, coniferous and mixed woodlands and forests (Figure 4.4-1 through Figure 4.4-3). These tree-dominated habitats can support diverse wildlife populations. Riparian habitats are generally the terrestrial areas adjacent to freshwater bodies forming a vegetated corridor from stream edge to floodplain edge.

Figure 4.4-1 Habitat Classifications in Monterey County

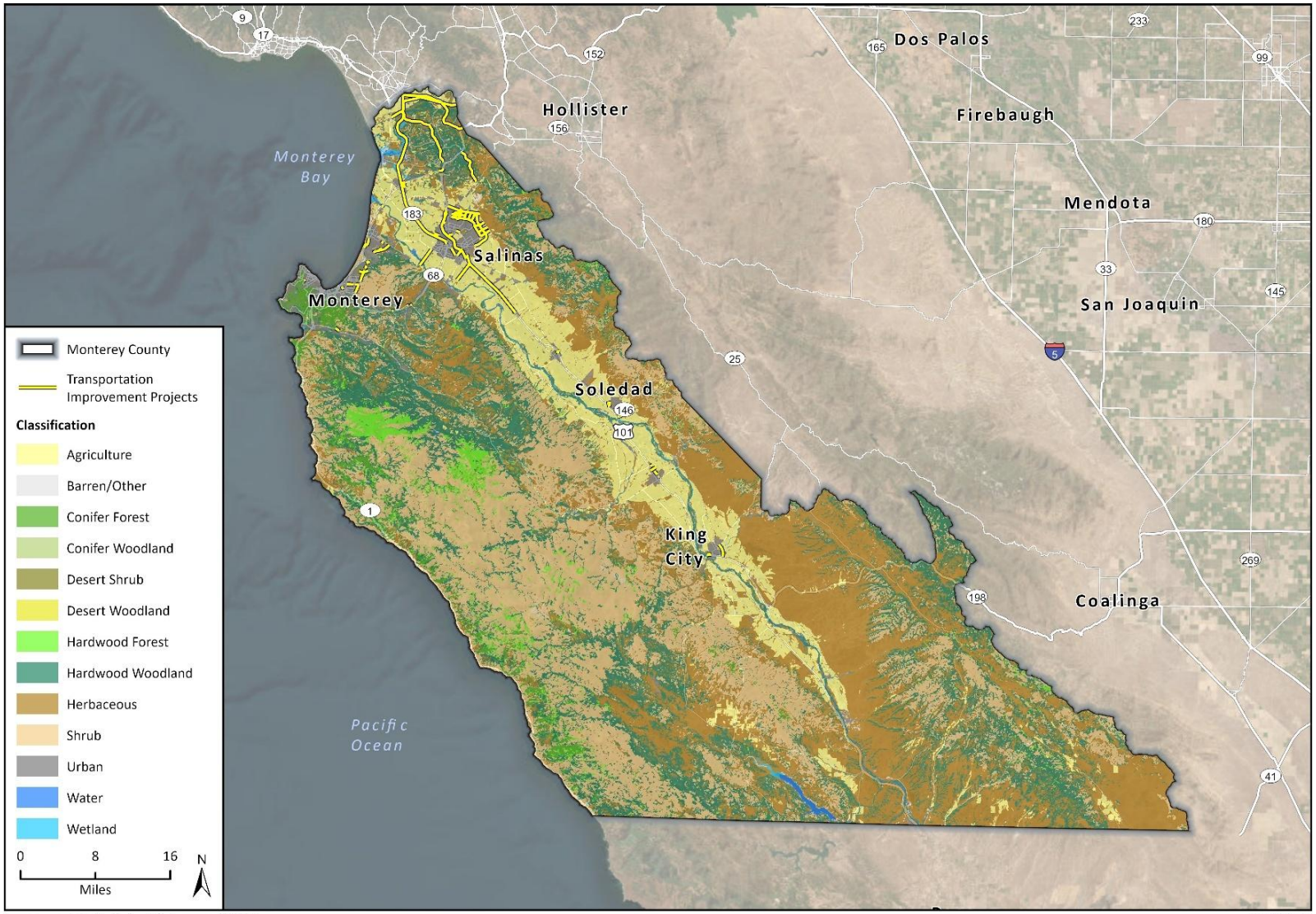


Figure 4.4-2 Habitat Classifications in San Benito County

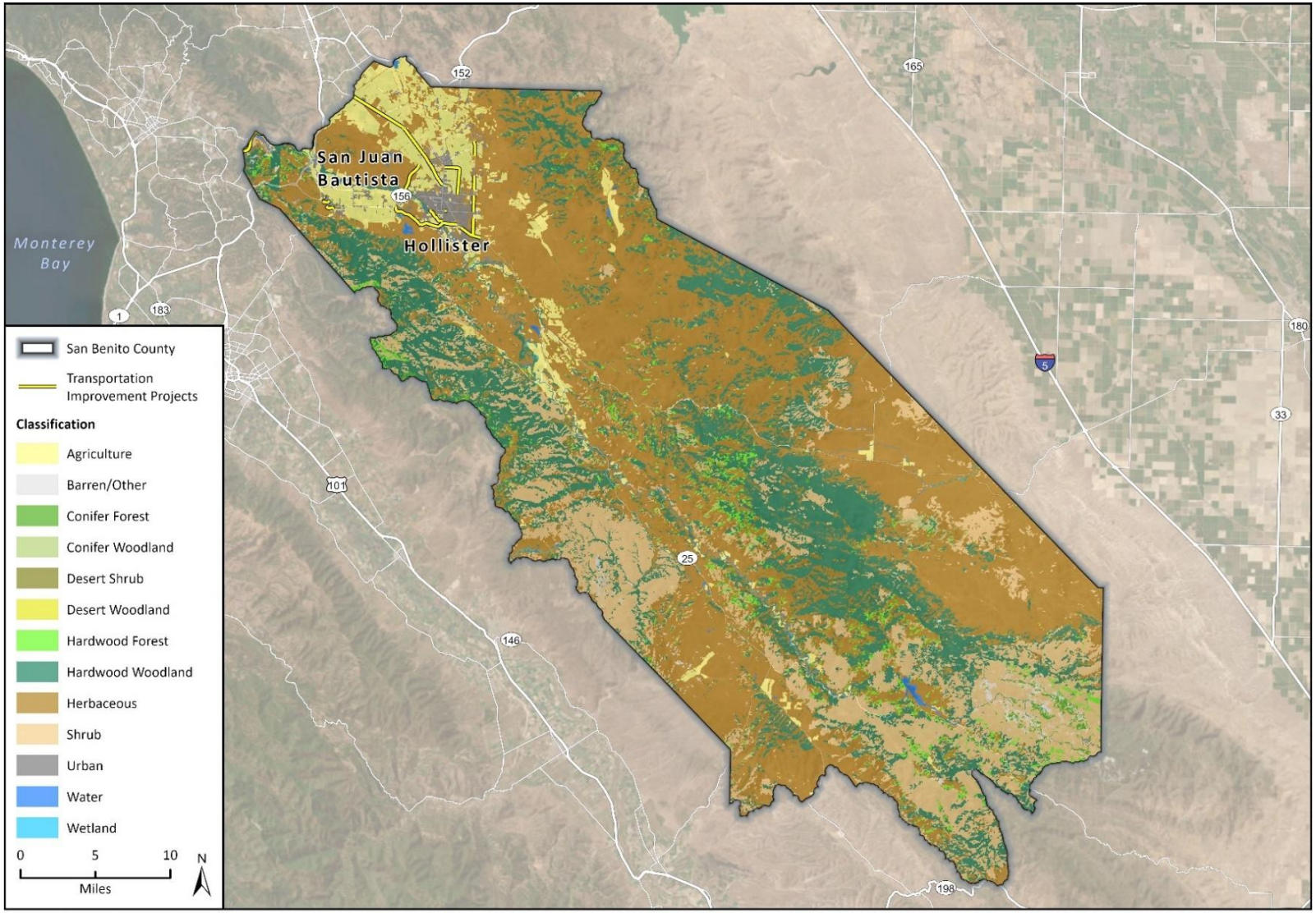
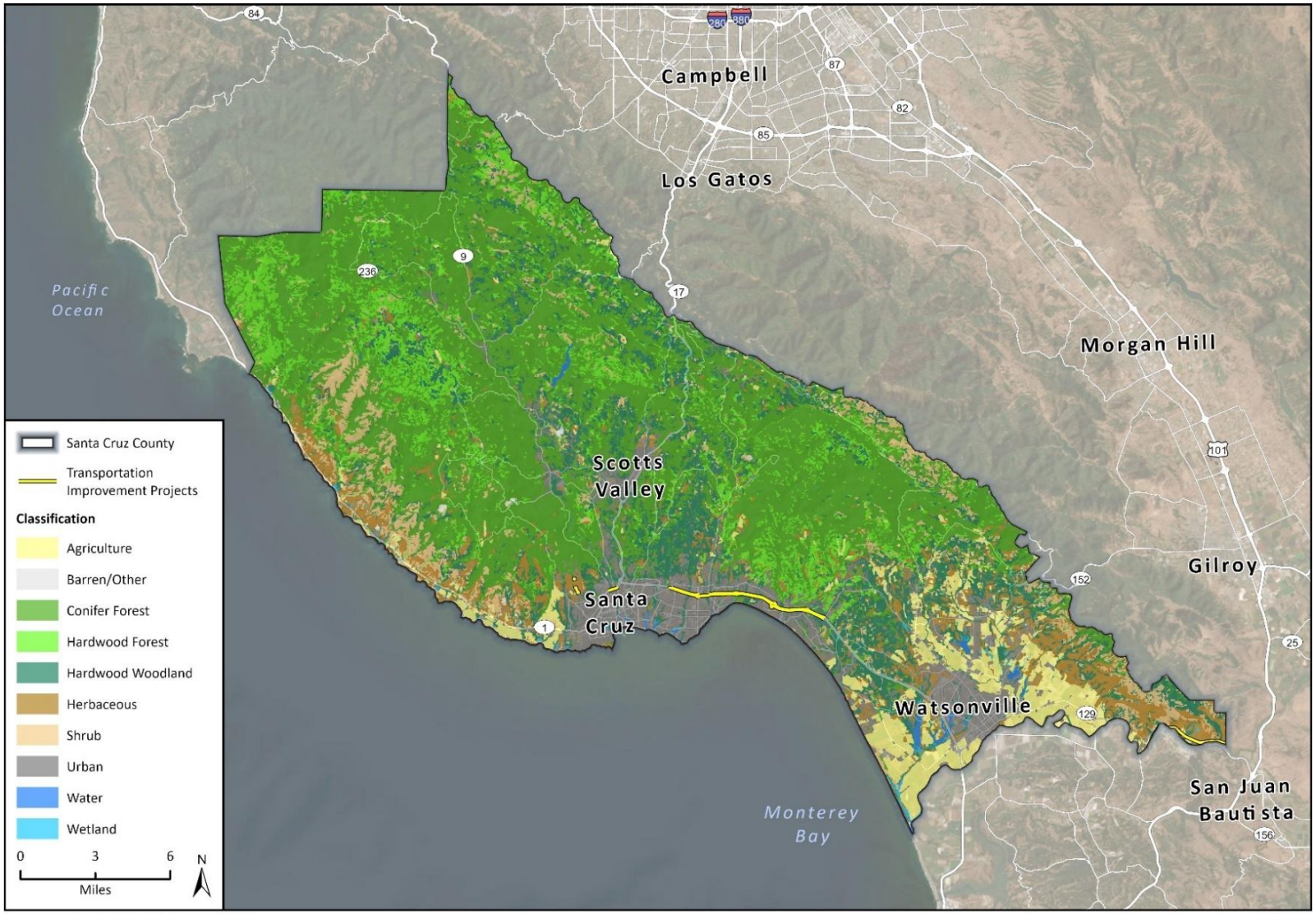


Figure 4.4-3 Habitat Classifications in Santa Cruz County



Riparian habitats occur in and along the major rivers (e.g., Salinas, Pajaro, and San Benito Rivers), as well as along the many creeks, streams, arroyos, and ravines found in these counties. Riparian areas are rich in wildlife species, providing foraging, migration, roosting and nesting/breeding habitat. The following are descriptions of types of tree-dominated habitats that occur within three miles of transportation projects outlined in the 2050 MTP/SCS.

Conifer Forest and Conifer Woodland

Conifer forest and conifer woodland closed-cone pine-cypress forests are typically dominated by a single species, either closed-cone pines (*Pinus* spp.) or western cypresses (*Hesperocyparis* spp.). The height and canopy closure of this habitat type is variable depending upon site characteristics including soil type, the age of the stand and the floristic composition. Closed-cone pine-cypress forests are considered fire climax or fire-dependent vegetation types. This habitat type is typically found within rocky and infertile soils along the extreme coast or on very shallow infertile soils contain stunted, wind-pruned individuals. Closed-cone pine-cypress forest types that occur in the counties include but are not limited to the *Pinus radiata* Forest Alliance and the Hesperocyparis macrocarpa Woodland Special Stands as described by CNPS (2025a).

Redwood

Redwood forests in the counties include some areas of old-growth forest, with larger areas of second growth. Second growth redwood habitats are characterized by an even-aged structure with an open park-like appearance. Coast redwood (*Sequoia sempervirens*) is the dominant tree species. Understory vegetation in old-growth redwood is usually very dense and composed of tall shrubs. Redwoods are very vigorous sprouters with sprouts eventually forming the dominant canopy. Redwood and associated conifers also reproduce well by seed. Redwood forest typically corresponds to the *Sequoia sempervirens* Forest Alliance as described by CNPS (2025a).

Blue Oak-foothill Pine

This habitat is typically diverse in structure both vertically and horizontally and is composed primarily of a mix of hardwoods, conifers and shrubs. Shrub distributions tend to be clumped, with interspersed patches of annual grassland. Woodlands of this type generally tend to only have small accumulations of dead and downed woody material, compared with other tree habitats in California. Blue oak (*Quercus douglasii*) and foothill pine (*Pinus sabiniana*) typically comprise the overstory of this habitat, with blue oak usually most abundant. In the Coast Range, associated tree species include coast live oak (*Quercus agrifolia*), valley oak (*Quercus lobata*) and California buckeye (*Aesculus californica*). In rocky areas, interior live oak sometimes dominates the overstory especially on north-facing slopes at higher elevations. At lower elevations, where blue oaks make up most of the canopy, the understory tends to be primarily annual grasses and forbs. At higher elevations where foothill pines and even interior live oaks sometimes comprise the canopy, the understory usually includes patches of shrubs in addition to the annual grasses and forbs. Shrub species that can be associated with this habitat type include various buckbrush (*Ceanothus* spp.) species and manzanita (*Arctostaphylos* spp.). Other species found in this habitat type can include California coffeeberry (*Frangula californica*), poison-oak (*Toxicodendron diversilobum*), and silver lupine (*Lupinus albifrons*). This habitat is generally located in the foothills

of the Central Valley, between 500 and 3,000 feet in elevation. Blue oak-foothill pine habitat typically corresponds to the *Quercus douglasii* Woodland Alliance or *Pinus sabiniana* Woodland Alliance as described by CNPS (2025a).

Montane Hardwood

A typical montane hardwood habitat is composed of a pronounced hardwood tree layer, with an infrequent and poorly developed shrub stratum and a sparse herbaceous layer. In the Coast Range, canyon live oak (*Quercus chrysolepis*) often forms pure stands on steep canyon slopes and rocky ridge tops. It is replaced at higher elevations by scattered huckleberry oak (*Quercus vacciniifolia*) amongst an overstory of various conifers including ponderosa pine (*Pinus ponderosa*), Coulter pine (*Pinus coulteri*), California white fir (*Abies concolor*) and Jeffrey pine (*Pinus jeffreyi*). At mid-elevations, typical associates include Douglas-fir (*Pseudotsuga menziesii*), tanoak (*Notholithocarpus densiflorus*), Pacific madrone (*Arbutus menziesii*), California black oak (*Quercus kelloggii*), and bristlecone fir (*Abies bracteata*). At lower elevations, knobcone pine (*Pinus attenuata*), foothill pine, Oregon white oak (*Quercus garryana*) and coast live oak are abundant. Understory vegetation is mostly scattered woody shrubs and a few forbs. Elevations range from 300 feet near the Pacific Ocean up to 9,000 feet. Montane hardwood typically corresponds to the *Quercus chrysolepis* Forest Alliance, as described by CNPS (2025a).

Valley Oak Woodland

This habitat can range in structure from savanna-like to forest-like stands. The canopies tend to be partially closed and comprised mostly of winter-deciduous, broad-leaved species such as valley oak. Dense stands typically grow in valley soils along natural drainages and decrease with the transition from lowlands to uplands. Shrubs are also associated with this habitat in lowland areas, especially along drainages. Valley oak stands with little or no grazing tend to develop a partial shrub layer of bird disseminated species, such as poison oak, toyon (*Heteromeles arbutifolia*) and California coffeeberry. Ground cover consists of a well-developed carpet of annual grasses and forbs such as wild oat (*Avena* spp.), bromes (*Bromus* spp.), and ryegrass (*Festuca perennis*). Valley oak woodland typically corresponds to the *Quercus lobata* Woodland Alliance as described by CNPS (2025a).

Valley Foothill Riparian

This habitat type is associated with drainages, particularly those with low velocity flows, flood plains and gentle topography. This habitat is generally comprised of a canopy tree layer dominated by cottonwoods (*Populus* spp.), sycamore (*Platanus racemosa*) and/or valley oak and an understory shrub layer typically consisting of willows (*Salix* spp.) and/or mulefat (*Baccharis salicifolia*). Valley foothill riparian can correspond to multiple alliances as described by CNPS (2025a) depending upon the species composition. These alliances can include, but are not limited to, *Platanus racemosa* Woodland Alliance and the various *Populus* alliances depending upon dominant species present.

Coastal Oak Woodland

Coastal oak woodlands are common to mesic coastal foothills of California. The woodlands do not form a continuous belt but occur in a mosaic closely associated with mixed chaparral, coastal scrub and annual grasslands. In Monterey, San Benito, and Santa Cruz counties these woodlands are commonly dominated by coast live oak. At drier sites, other species such as blue oak and foothill pine may also be interspersed. The understory of dense stands tends to be composed of shade tolerant shrubs and herbaceous plant species such as California blackberry (*Rubus ursinus*), poison oak, miner's lettuce (*Claytonia perfoliata*) and toyon. In areas with more open canopies the understory may be more dominated by grassland species such as bromes and oats. Coastal oak woodland typically corresponds to the *Quercus agrifolia* alliance as described by CNPS (2025a).

Eucalyptus Forest

This habitat type ranges from single-species thickets with little or no shrubby understory to scattered trees over a well-developed herbaceous and shrubby understory. In most cases, eucalyptus groves form a dense stand with a closed canopy. Blue gum eucalyptus (*Eucalyptus globulus*) and red gum eucalyptus (*Eucalyptus camaldulensis*) are the most common eucalyptus species found in these stands. The understory of these areas tends to have extensive patches of leaf litter with limited vegetation but may include species such as poison oak and toyon.

Shrub Dominated Habitats

Shrub-dominated habitats, such as chaparral and coastal scrub, are comprised primarily of woody, evergreen shrubs and occur primarily along the coastal bluffs as well as areas associated with the Coast Range within Monterey, San Benito, and Santa Cruz counties (Figure 4.4-1, Figure 4.4-2, and Figure 4.4-3). The following are descriptions of shrub-dominated habitats that occur within three miles of transportation projects outlined in the 2050 MTP/SCS.

Chamise-Redshank Chaparral

Regionally this chaparral habitat type is dominated by pure or nearly pure stands of chamise (*Adenostoma fasciculatum*). Mature chamise-redshank chaparral is single layered, generally lacking well-developed herbaceous ground cover and over story trees. Shrub canopies frequently overlap, producing a nearly impenetrable canopy of interwoven branches. Fire occurs regularly in chamise-redshank chaparral and influences habitat structure. Within the AMBAG region, chamise-redshank chaparral typically corresponds to the *Adenostoma fasciculatum* Shrubland Alliance as described by CNPS (2025a).

Coastal Scrub

This habitat type is typically dominated by shrub species with mesophytic leaves and shallow root systems. This habitat type can differ in composition depending upon proximity to the coastline. California sagebrush (*Artemisia californica*) tends to be common in all coastal scrub habitats. From Mount Diablo south to Santa Barbara County, black sage (*Salvia mellifera*) and California buckwheat (*Eriogonum fasciculatum*) become more abundant in mesic areas. Coastal scrub can

correspond to multiple alliances as described by CNPS (2025a) depending upon the species composition. These alliances can include, but are not limited to, *Artemisia californica* Shrubland Alliance, *Baccharis pilularis* Shrubland Alliance and the *Salvia mellifera* Shrubland Alliance.

Mixed Chaparral

Mixed chaparral is a structurally homogeneous brushland type dominated by shrubs with thick, stiff, heavily cutinized evergreen leaves. Shrub height and crown cover vary with age since last burn, precipitation, aspect, and soil type. At maturity, cismontane mixed chaparral typically is a dense, nearly impenetrable thicket. On poor sites, serpentine soils or transmontane slopes, shrub cover may be considerably reduced, and shrubs may be shorter. Leaf litter and standing dead material may accumulate in stands that have not burned for several decades. Mixed chaparral can correspond to multiple alliances as described by CNPS (2025a) depending upon the species composition. These alliances can include, but are not limited to, *Ceanothus cuneatus* Shrubland Alliance and the *Arctostaphylos* sp. Shrubland Alliances.

Herbaceous Habitats

Herbaceous habitats are generally comprised of areas dominated by grasses and other non-woody species. The majority of this habitat in Monterey, San Benito, and Santa Cruz counties is comprised of non-native grasslands (Figure 4.4-1, Figure 4.4-2, and Figure 4.4-3). Native perennial grasslands, which are dominated by perennial bunch grasses, such as purple needlegrass (*Nassella pulchra*), were historically abundant within Monterey, San Benito, and Santa Cruz counties but are now currently patchy in distribution statewide. The following section describes annual grasslands, which are the predominant herbaceous habitat type occuring within three miles of transportation projects outlined in the 2050 MTP/SCS.

Annual Grasslands

This habitat type is composed primarily of non-native annual herbs and forbs and typically lacks shrub or tree cover. The physiognomy and species composition of annual grasslands is highly variable and also varies considerably on a temporal scale. Grazing is a common land use within this habitat type. Common grass species include wild oats, soft chess brome (*Bromus hordeaceus*), ripgut brome (*Bromus diandrus*) and red brome (*Bromus madritensis*). Common forb species can include species of filaree (*Erodium* spp.) and bur clover (*Medicago polymorpha*). California poppy can also be quite common in this habitat type. Annual grassland can correspond to multiple alliances as described by CNPS (2025a) depending upon the species composition. These alliances can include, but are not limited to, *Avena* (*barbata, fatua*) semi-natural stands and *Bromus* (*diandrus, hordeaceus*) – *Brachypodium distachyon* semi-natural stands.

Developed, Sparsely/Non-Vegetated and Cropland Habitats

Developed and sparsely to non-vegetated habitats and croplands are abundant in the AMBAG region (Figure 4.4-1, Figure 4.4-2, and Figure 4.4-3). Developed habitats are usually sparsely or non-vegetated and are associated with urban and agricultural areas and are highly disturbed.

Species that occur in these areas are typically adapted to anthropogenic disturbance and/or comprised of ornamental species. Sparsely vegetated habitats also tend to be associated with rock outcrops and cliffs. The following are descriptions of developed and sparsely/non-vegetated habitats that occur within three miles of transportation projects outlined in the 2050 MTP/SCS.

Cropland

This habitat type is characterized by areas in active agriculture used to grow annual or perennial herbaceous crops and is an entirely man-made habitat. The structure of vegetation can vary in size, shape and growing pattern. The dominant cropland use is row crops and can also include hay and grain. Subcategories of cropland habitat classifications include, but are not limited to, dryland grain crop, irrigated hayfield crop and irrigated row and field crop. Orchards and vineyards are classified separately.

Orchard/Vineyard

This habitat type is characterized by typically open, single-species tree- or woody vine-dominated habitats. Depending on the tree or vine type and pruning methods, they are usually low, bushy plants with an open understory to facilitate harvest. Trees such as citrus, avocados and olives are evergreen and other common tree crops such as walnuts and stonefruits are deciduous. The understory is usually composed of low growing grasses and other herbaceous plants but may be managed to prevent understory growth totally or partially, such as along tree rows. Vineyards, comprised of grape vines, also share similar characteristics. Subcategories of orchard/vineyard habitat classifications include, but are not limited to, deciduous orchard and evergreen orchard.

Urban

This habitat type is also a completely man-made habitat comprising residential, commercial and industrial developed areas. Plant species within urban habitats are typically comprised of ornamental plants and non-native invasive plant species, with large, developed areas lacking vegetation.

Barren

This habitat type is defined by the absence of vegetation. Any habitat with less than two percent total herbaceous vegetation cover and less than 10 percent relative cover by tree or shrub species is defined as barren (Mayer and Laudenslayer 1988). Structure and composition of the substrate is largely determined by the region of the state as well as surrounding environment. Examples of barren habitats include areas of exposed parent rock or talus.

b. Drainages and Wetlands

Drainages

The AMBAG region contains two primary watersheds: the Salinas River Valley, which is the third-longest river in California and traverses the length of Monterey County; and the Pajaro River Valley, the primary tributary of which begins in San Benito County and runs through southeastern Santa Cruz County. The Salinas River originates at the Santa Margarita Reservoir in San Luis

Obispo County and extends northward to the Monterey Bay. The headwaters of the Salinas River are generally undeveloped, while the remainder of the valley is predominantly agricultural with several urban areas, the largest being the City of Salinas. The majority of the Pajaro River watershed consists of undeveloped grassland and shrubland in San Benito County, although a large portion of the lower watershed from the City of Hollister west to the Pacific Ocean is under agricultural cultivation.

Other major rivers and their associated watersheds within the AMBAG region include San Lorenzo River, Carmel River, Big Sur River, Little Sur River, Nacimiento River, San Antonio River, and San Benito River. Several creeks and tributaries are associated with each of these watersheds (Figure 4.4-4, Figure 4.4-5, and Figure 4.4-6). The drainages within these watersheds are of biological importance as they provide valuable foraging, breeding, and movement habitat for a wide variety of animal species, including sensitive species such as steelhead (*Oncorhynchus mykiss*), coho salmon (*Oncorhynchus kisutch*), and California red-legged frog (*Rana draytonii*). Many of these rivers and their tributaries are also federally designated critical habitat for salmonid species (National Marine Fisheries Service [NMFS] 2025).

Wetlands and Aquatic Habitats

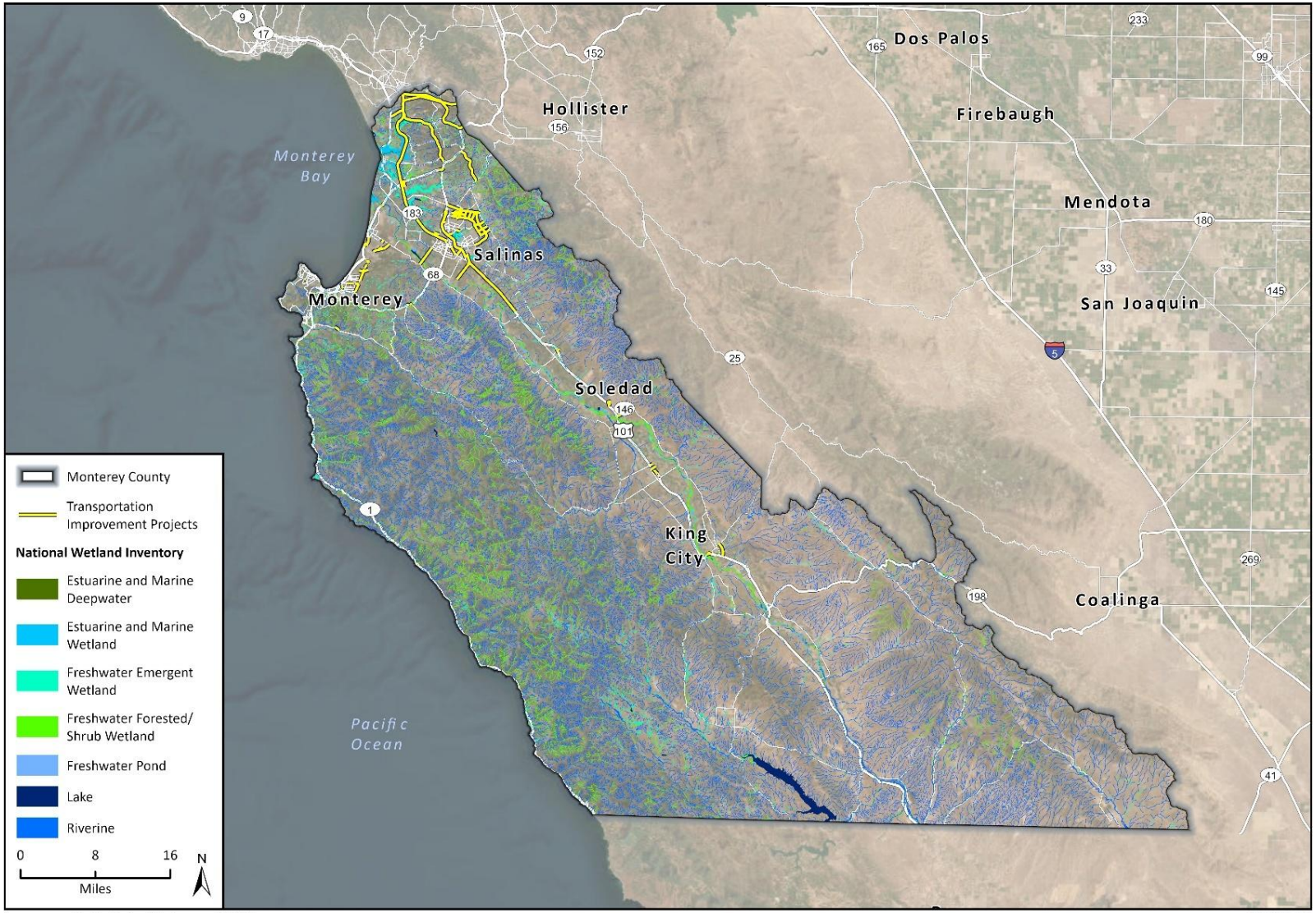
Wetlands are regarded as important biological resources both because of their rarity and because they provide a variety of ecosystem services. Several types of wetlands exist in the subject counties, including freshwater marshes and vernal pools.

In addition to vernal pools, several areas within three miles of 2050 MTP/SCS transportation projects contain wetlands mapped by the USFWS *National Wetlands Inventory* (NWI) (USFWS 2025a). A general description of each of the classifications used in the NWI is provided below. Of those wetland types mapped by the NWI, estuarine habitats are also mapped by the CWHR. Estuarine and marine type wetlands do not occur in San Benito County.

Vernal Pools

These seasonal wetlands are small depressions that fill with water during the winter, gradually drying during the spring and becoming completely dry in the summer. These pools are found in only a few places in the world outside of California. Vernal pool vegetation is adapted to the cycle of brief inundation followed by seasonal drying. Vernal pools are characterized by herbaceous plants that may begin their growth as aquatic or semi-aquatic plants and transition to a dry land environment as the pool dries, while other species germinate in the mud as the pool begins to dry. Most vernal pool plants are annual herbs, many of which are endemic to vernal pools. Wildlife species supported by vernal pools include California tiger salamander (*Ambystoma californiense*) and vernal pool fairy shrimp (*Branchinecta lynchi*).

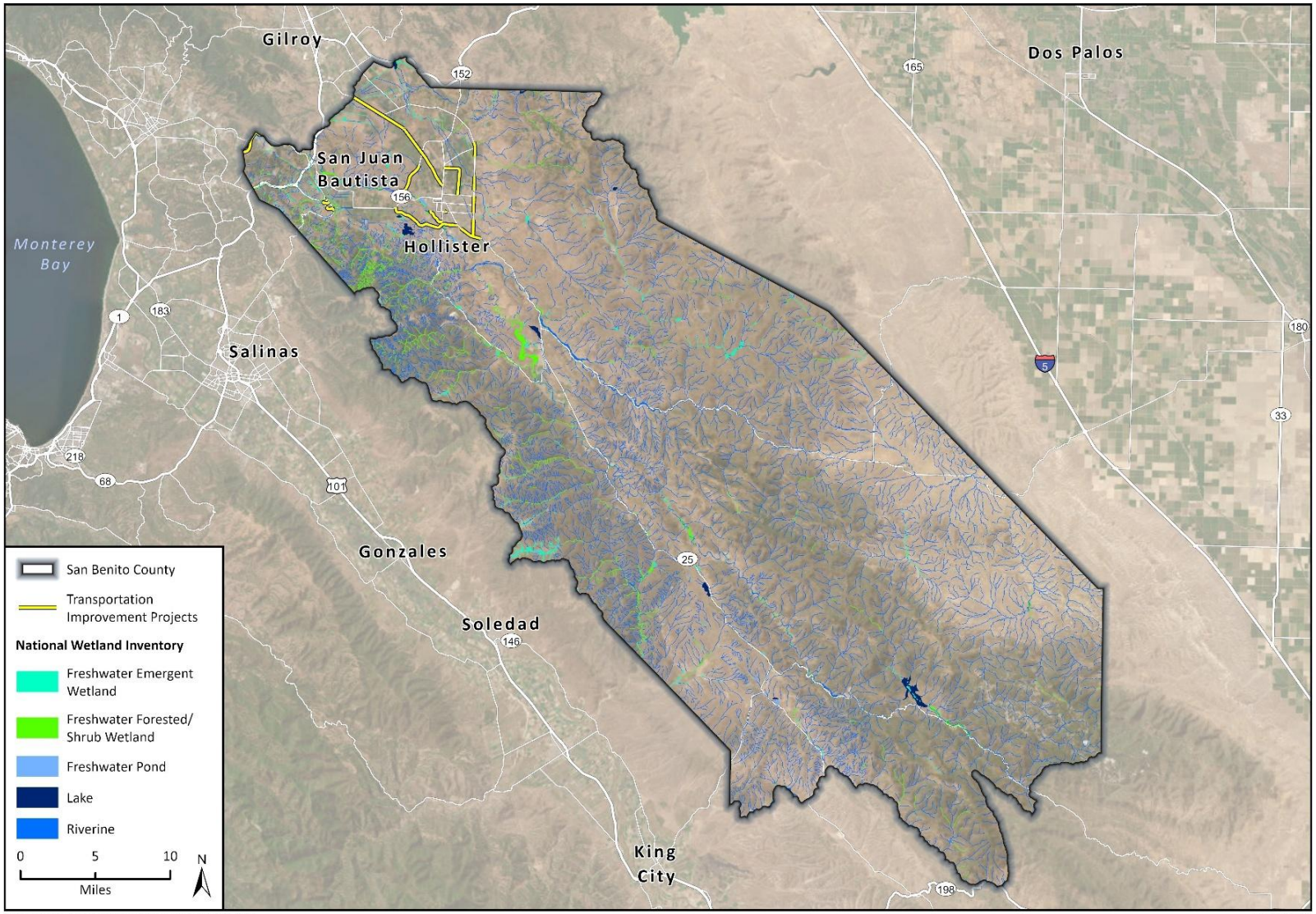
Figure 4.4-4 Wetlands and Aquatic Resources in Monterey County



Imagery provided by Esri and its licensors © 2025.
Additional data provided by National Wetland Inventory 2025, AMBAG 2025.

23-14882_BIO
4.4-4 Monterey County Wetlands and Aquatic Resources Map

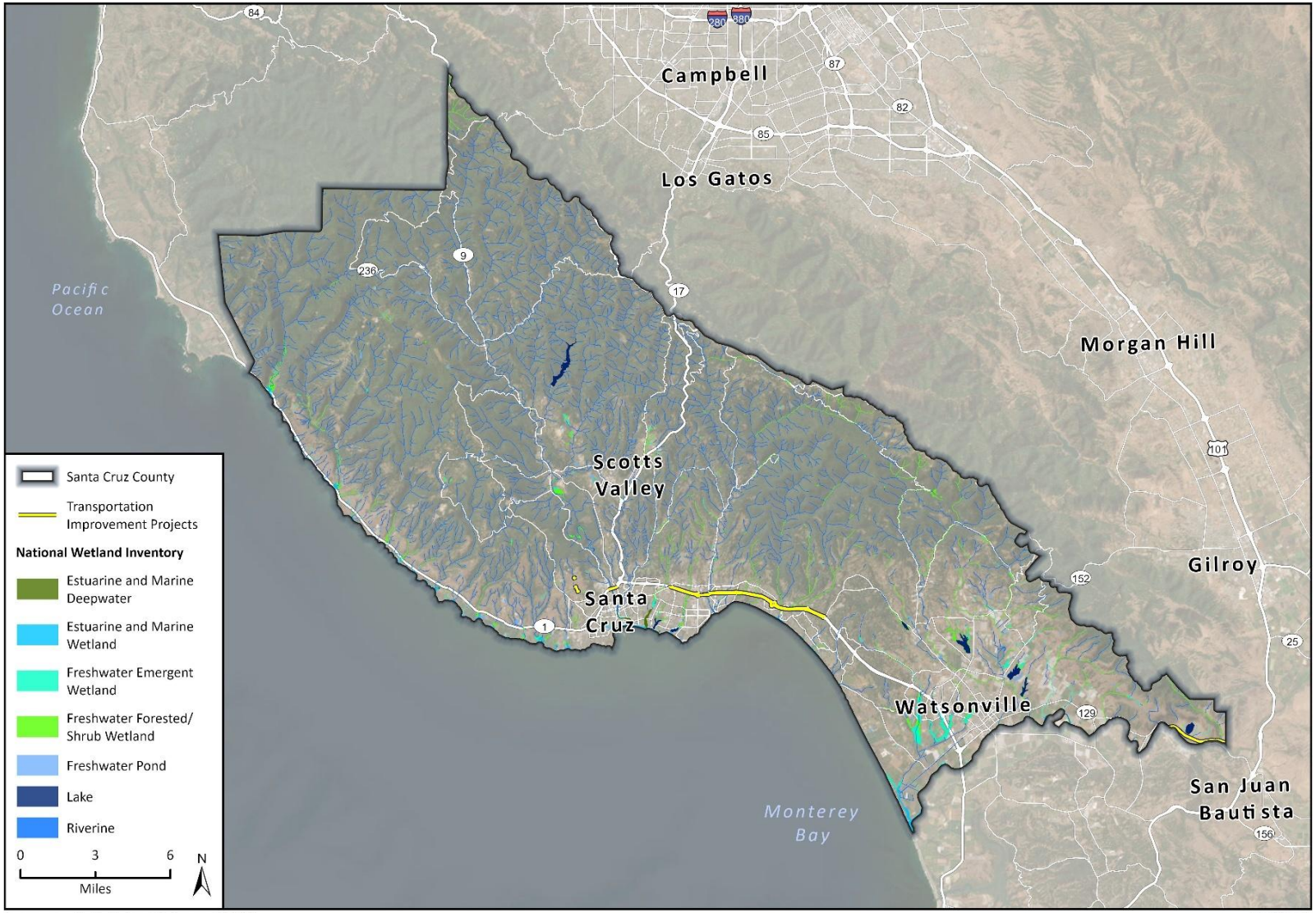
Figure 4.4-5 Wetlands and Aquatic Resources in San Benito County



Imagery provided by Esri and its licensors © 2025.
Additional data provided by National Wetland Inventory 2025, AMBAG 2025.

23-14882_BIO
4.4-5 San Benito County Wetlands and Aquatic Resources Map

Figure 4.4-6 Wetlands and Aquatic Resources in Santa Cruz County



Imagery provided by Esri and its licensors © 2025.
Additional data provided by National Wetland Inventory 2025, AMBAG 2025.

23-14882_BIO
4.4-6 Santa Cruz County Wetlands and Aquatic Resources Map

Estuarine and Marine Deep-Water Wetlands

These deep-water wetlands are composed of the deep-water portion of estuarine or marine systems. Estuarine systems are composed of tidal habitats and adjacent tidal wetlands that are influenced by water runoff from and often semi-enclosed by land. They are located along low energy coastlines and have variable salinity. Marine systems of this type are generally open ocean and occur along high energy coastlines with salinities exceeding 30 parts per thousand (ppt) and little or no dilution except outside the mouths of estuaries. Estuarine and marine habitats are limited to the coastline, adjacent to the Monterey Bay.

Estuarine and Marine Wetlands

These wetlands are composed of estuarine and marine systems as described above; however, they are not deep-water. These areas can be subtidal or intertidal with a variety of vegetated and non-vegetated bottoms. Beaches, bars, and flats are also included.

Freshwater Emergent Wetlands

Freshwater emergent wetlands include all non-tidal waters dominated by emergent herbaceous plant species, mosses and/or lichens. Wetlands of this type are also low in salinity. The NWI also includes in this category wetlands that lack vegetation if they are less than 20 acres in size, do not have an active wave-formed or bedrock shoreline feature, have a low water depth less than 6.6 feet. Freshwater emergent wetlands are characterized by erect, rooted herbaceous hydrophytes. Dominant vegetation is generally perennial monocots. All emergent wetlands are inundated or saturated frequently enough that the roots of the vegetation prosper in an anaerobic environment. The wetlands may vary in size from small clumps to vast areas covering several kilometers. The acreage of Freshwater Emergent Wetlands in California has decreased dramatically since the turn of the century due to drainage and conversion to other uses, primarily agriculture.

Freshwater Forested/Shrub Wetlands

These wetlands include non-tidal waters that are dominated by trees and shrubs, with emergent herbaceous plants, mosses and/or lichens. The NWI also includes within this category wetlands that lack vegetation can be included in this class if they also exhibit the same criteria as described for freshwater emergent wetlands. Freshwater forested/shrub wetlands are generally dominated by woody vegetation such as shrubs and trees. This wetland category also can include riparian habitats.

Freshwater Ponds

Freshwater ponds include non-tidal waters, typically less than 20 acres in size and typically with vegetative cover along the edges such as trees, shrubs, emergent herbaceous plants, mosses and/or lichens. Freshwater ponds can be man-made or natural and typically consist of an area of standing water with variable amounts of shoreline. These wetlands and deep-water habitats are

dominated by plants that grow on or below the surface of the water. This wetland type is also mapped by the CWHR and categorized as lacustrine (lake) habitat which includes vernal pools; however, we have recognized vernal pools as unique features and thus provided a separate description that was previously presented.

Lakes

Lakes are a lacustrine system which includes wetlands and deep-water habitats that are located in a topographic depression or dammed river channel. These areas tend to be greater than 20 acres. Vegetation cover within this habitat is generally less than 30 percent and often occurs in the form of emergent or surface vegetation. Substrates are composed of at least 25 percent cover of particles smaller than stones. Lakes can be manmade and include reservoirs.

Riverine

Riverine habitats are stream systems that include all wetlands and deep-water habitats contained in natural or artificial channels that contain periodically or continuously flowing water. This system may also form a connecting link between two bodies of standing water. Substrates generally consist of rock, cobble, gravel, or sand. Features mapped as riverine wetlands in the NWI include drainages as previously described. The AMBAG region contains two rivers: the Salinas River, which traverses the length of Monterey County, and the Pajaro River, which begins in San Benito County and runs through southeastern Santa Cruz County.

c. Sensitive Natural Communities

Several natural communities considered sensitive by the CDFW occur within the AMBAG region. The California Natural Diversity Database (CNDDB) lists 21 natural communities that occur with these counties (CDFW 2025a). These sensitive communities are also listed in Table 4.4-1 below. The Sensitive Natural Communities List in the CNDDB is not currently maintained and no new information has been added in several years. However, CDFW maintains a List of Vegetation Alliances and Associations[1] (CDFW 2025c). According to the CDFW's Vegetation Program, Alliances with state ranks of S1-S3 are considered imperiled and thus, potentially of special concern.

[1] CDFW classifies vegetation at the two finest levels of alliance and association. The alliance is defined by plant species composition, habitat conditions, physiognomy, and diagnostic species; at least one of the diagnostic species is typically found in the uppermost or dominant stratum (Jennings et al. 2009). The association is the most detailed classification level and reflects more specific characteristics of vegetation such as finer-level differences in species composition, topography, soils, substrate, climate, hydrology, and disturbance regime (FGDC 2008). Unlike alliances, associations often recognize two or more diagnostic species found in different vegetation layers (Sawyer et al. 2009).

Table 4.4-1 Sensitive Communities Documented within Monterey, San Benito, and Santa Cruz Counties

Communities Considered Sensitive by the CDFW	County
Alkali Seep	Monterey
Central Dune Scrub	Monterey, Santa Cruz
Central Maritime Chaparral	Monterey
Coastal and Valley Freshwater Marsh	Monterey, Santa Cruz
Coastal Brackish Marsh	Monterey, Santa Cruz
Maritime Coast Range Ponderosa Pine Forest	Santa Cruz
Monterey Cypress Forest	Monterey
Monterey Pine Forest	Monterey, Santa Cruz
Monterey Pygmy Cypress Forest	Monterey
North Central Coast Calif. Roach/Stickleback/Steelhead Stream	Santa Cruz
North Central Coast Drainage Sacramento Sucker/Roach River	Santa Benito
North Central Coast Fall-Run Steelhead Stream	Monterey
North Central Coast Short-Run Coho Stream	Santa Cruz
Northern Bishop Pine Forest	Monterey
Northern Coastal Salt Marsh	Monterey, Santa Cruz
Northern Interior Cypress Forest	Santa Cruz
Northern Maritime Chaparral	Santa Cruz
Sycamore Alluvial Woodland	Monterey
Valley Needlegrass Grassland	Monterey
Valley Oak Woodland	Monterey
Valley Sink Scrub	Monterey

Sources: CNDDB (CDFW 2025a)

Because this analysis is at the AMBAG region level and programmatic, vegetation mapping and analysis at the alliance and association level is not practical and would be conducted at the project level. However, some sensitive vegetation alliances and associations are already known to occur within Monterey, San Benito, and Santa Cruz counties as a subset of the habitats described in Sections 4.4.1.a and 4.4.1b. For instance, some oak woodland alliances within these counties, notably *Quercus lobata* Woodland Alliance, which most resembles the valley oak woodland described in Section 4.4.1.a, are considered sensitive.

d. Special-Status Species

Appendix D provides a list of special-status species that are known to occur or have the potential to occur within Monterey, San Benito, and Santa Cruz Counties. For the purpose of this EIR, special-status species are those plants and animals listed, proposed for listing, or candidates for listing as threatened or endangered by the USFWS under the federal Endangered Species Act;

those listed or proposed for listing as rare, threatened, or endangered by the CDFW under the California Endangered Species Act (CESA); animals designated as "Species of Special Concern," "Fully Protected," or "Watch List" by the CDFW. The CNDDB also provides records of other special animals that CDFW is tracking but are not currently designated as a special-status species. Because of the programmatic nature of the analysis and the duration in which the 2050 MTP/SCS will be implemented, these species were also included as "special-status" considering the CDFW is currently collecting data and tracking these species and therefore there is potential for their status to be elevated in the future. Additionally, special-status plants with California Rare Plant Rank (CRPR) of 1 through 4 were included. CDFW standards state that plants with a CRPR 1A, 1B, 2A and 2B may meet definitions of rare or endangered under CEQA Sections 15380 (b) and (d). By CNPS standards, the plants of CRPR Ranks 1A, 1B, 2A and 2B meet the definitions of Sections 2062 and 2067 of the California Fish and Game Code (CFGC), and are eligible for state listing, thus should be considered under CEQA §15380. According to CDFW, "In general, CNPS Rank 3 plants (plants about which more information is needed) and Rank 4 plants (plants of limited distribution) may not warrant consideration under CEQA Guidelines §15380. These plants may be included on special-status plant lists such as those developed by counties where they would be addressed under CEQA Guidelines §15380. Factors such as regional rarity vs. statewide rarity should be considered in determining whether cumulative impacts to a Rank 4 plant are significant even if individual project impacts are not." Plants with a California Rare Plant Rank (CRPR) of 1, 2, 3, and 4, which are defined as:

- **CRPR 1A** = Plants presumed extinct in California;
- **CRPR 1B.1** = Rare or endangered in California and elsewhere; seriously endangered in California (over 80 percent of occurrences threatened/high degree and immediacy of threat);
- **CRPR 1B.2** = Rare or endangered in California and elsewhere; fairly endangered in California (20-80 percent occurrences threatened);
- **CRPR 1B.3** = Rare or endangered in California and elsewhere, not very endangered in California (<20 percent of occurrences threatened or no current threats known);
- **CRPR 2** = Rare, threatened or endangered in California, but more common elsewhere;
- **CRPR 3** = Plants needing more information (most are species that are taxonomically unresolved; some species on this list meet the definitions of rarity under CNPS and CESA);
- **CRPR 4.1** = Plants of limited distribution (watch list), seriously endangered in California;
- **CRPR 4.2** = Plants of limited distribution (watch list), fairly endangered in California (20-80 percent occurrences threatened); and
- **CRPR 4.3** = Plants of limited distribution (watch list), not very endangered in California.

Species of Special Concern (SSC) is a category used by the CDFW for those species which are considered indicators of regional habitat changes or are considered to be potential future protected species. Species of Special Concern do not have any special legal status except that which may be afforded by the Fish and Game Code. The SSC category is intended by the CDFW for use as a management tool to include these species into special consideration when decisions are made concerning the development of natural lands, and these species are considered sensitive as described under the CEQA Appendix G questions.

Queries of the USFWS Information, Planning, and Conservation (IPaC) (USFWS 2025b), CNDDB (CDFW 2025a) and the CNPS Online Inventory of Rare and Endangered Plants of California (CNPS 2025) were conducted to obtain comprehensive information regarding state and federally listed species considered to have potential to occur within Santa Cruz, San Benito and Monterey counties.

Federally designated critical habitat for 19 species also occurs in the AMBAG region (Figure 4.4-7, Figure 4.4-8, and Figure 4.4-9). Note that final designated critical habitat for the Coho Salmon – Central California coast ESU (*Oncorhynchus kisutch*) (not graphically depicted) includes all river/stream reaches (listed in Table 5 of the *Designated Critical Habitat: Central California Coast and southern Oregon/Northern California Coasts Coho Salmon; Final Rule* [NMFS 1999]) and their tributaries that are accessible to listed coho salmon from Punta Gorda in Northern California south to the San Lorenzo River in central California. 2050 MTP/SCS transportation projects occur in federally designated critical habitats (USFWS 2025b; 2025c) for 19 species. These critical habitats are also listed in Table 4.4-2.

The AMBAG region is home to several species protected by federal and state agencies. Special-status animal species can be found in a variety of habitats these counties host. The CNDDB (CDFW 2025a), CNPS (2025) and IPaC (USFWS 2025b) together list 402 special-status species (270 plant species [including CRPR 3 and 4] and 132 animal species [inclusive of special animals]) that occur within Monterey, San Benito, and Santa Cruz counties. The status and habitat requirements of those species are presented in Appendix D.

Figure 4.4-7 Federally Designated Critical Habitat in Monterey County

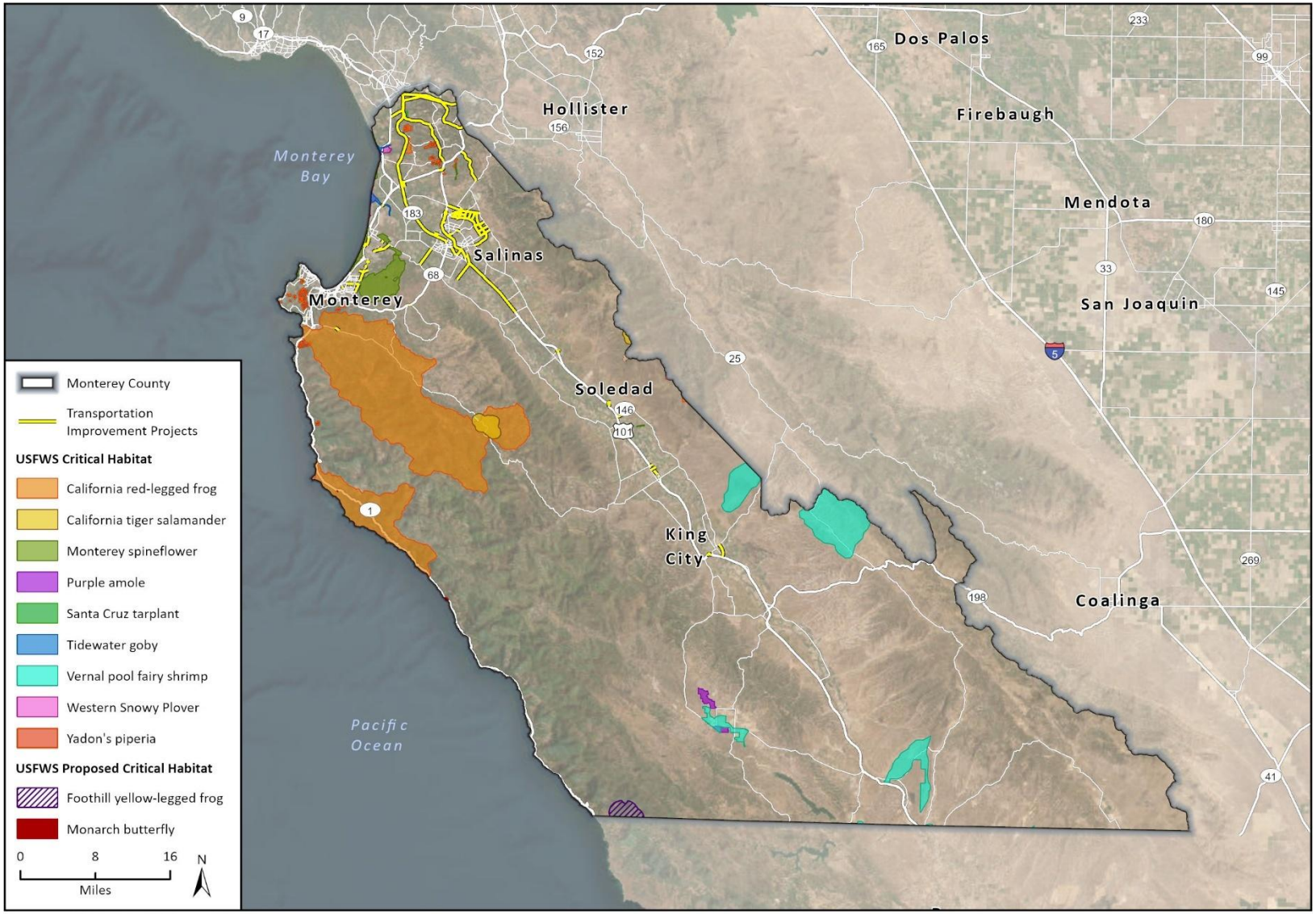
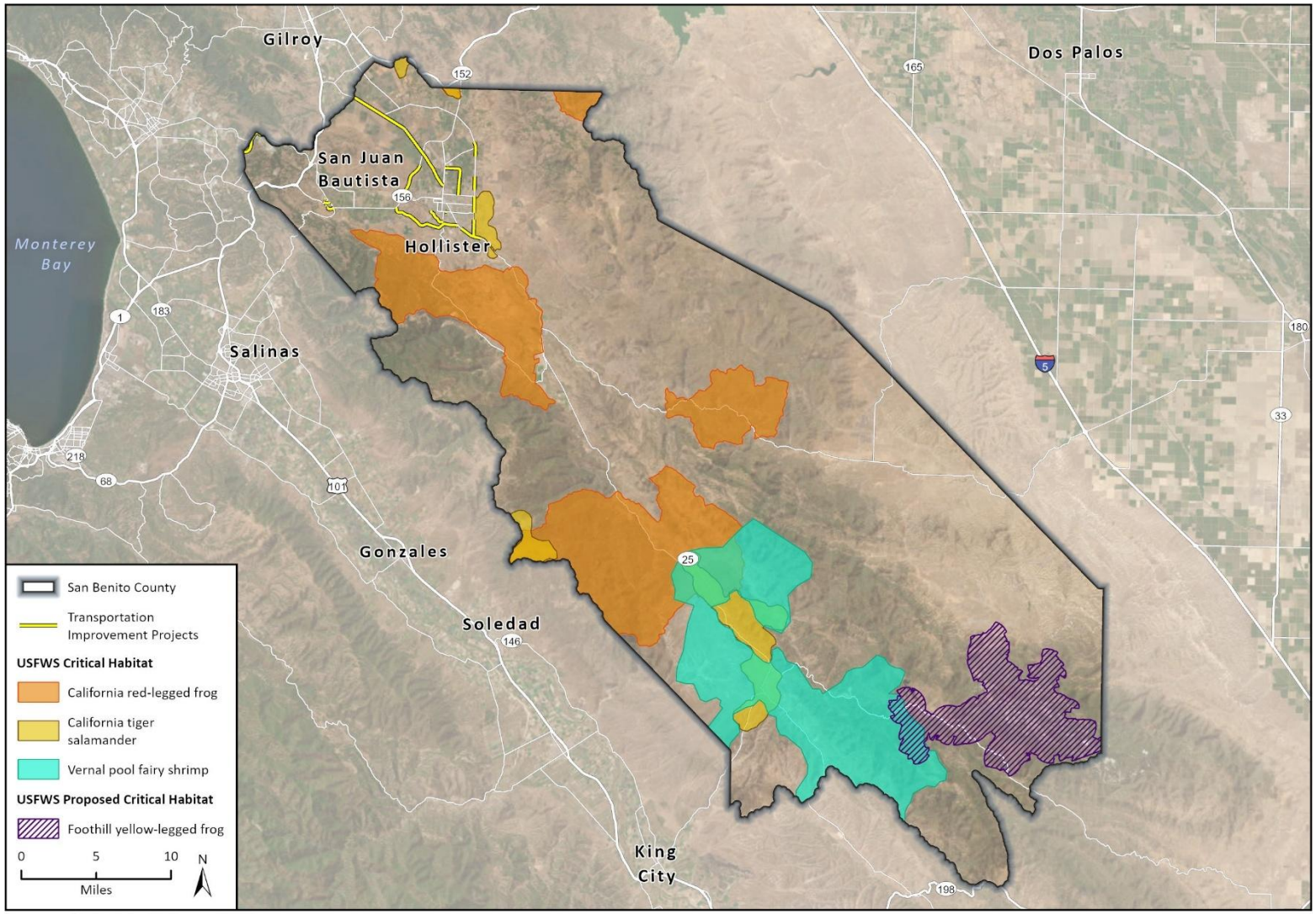


Figure 4.4-8 Federally Designated Critical Habitat in San Benito County



Imagery provided by Esri and its licensors © 2025.
Additional data provided by USFWS 2025, AMBAG 2025.

23-14882_BIO
4.4-8 San Benito County Critical Habitat Map

Figure 4.4-9 Federally Designated Critical Habitat in Santa Cruz County

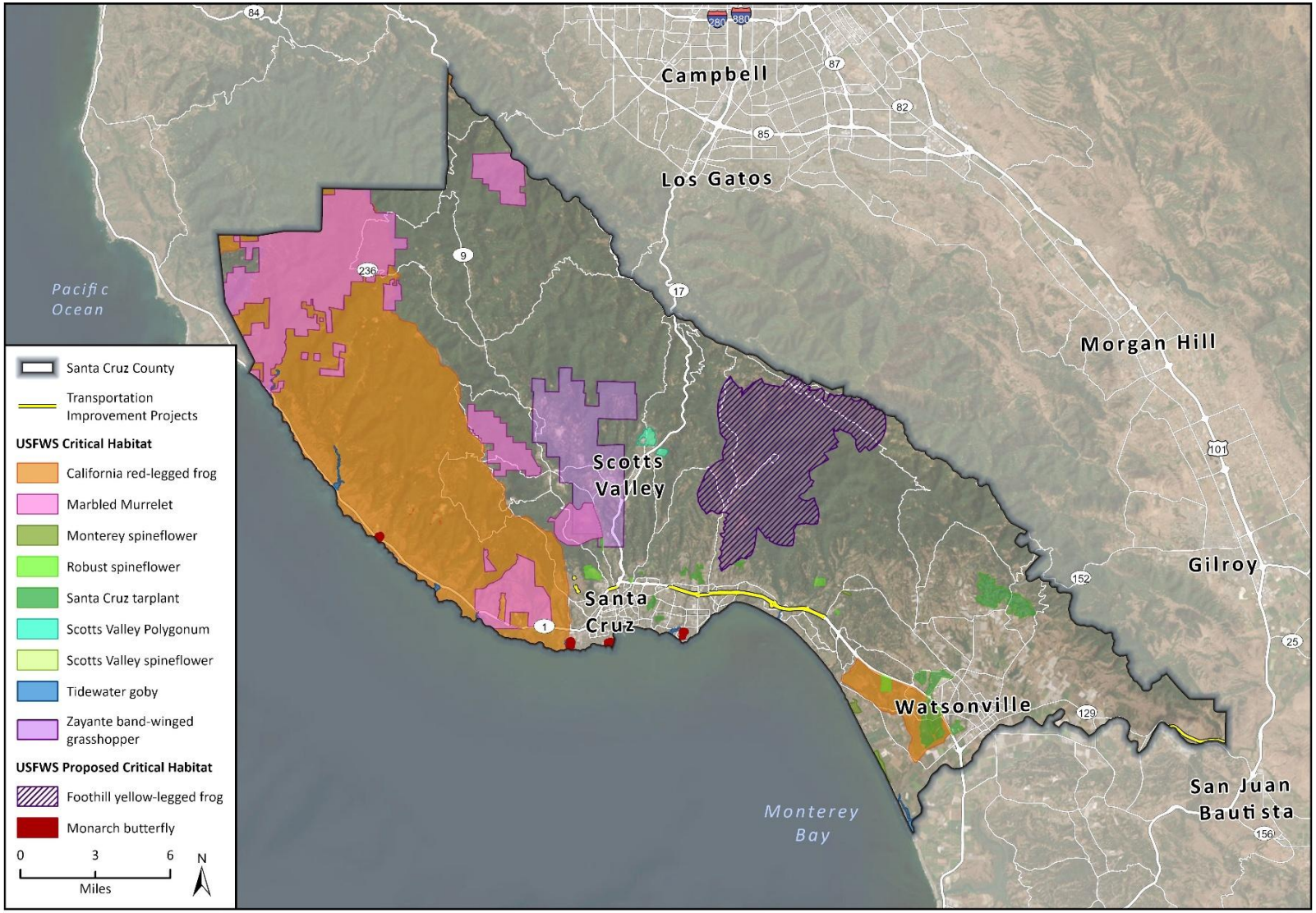


Table 4.4-2 Federal Designated Critical Habitat within Monterey, San Benito, and Santa Cruz Counties

Critical Habitat	County
California red-legged frog (*Rana draytonii*)[1]	Monterey, San Benito, Santa Cruz
California tiger salamander (*Ambystoma californiense*)[1]	Monterey, San Benito
foothill yellow-legged frog (*Rana boylii*, proposed)	Monterey, San Benito, Santa Cruz
Coho Salmon – Central California coast ESU (*Oncorhynchus kisutch*)	Santa Cruz
monarch butterfly *(Danaus plexippus*, proposed)	Monterey, Santa Cruz
marbled murrelet (*Brachyramphus marmoratus*)[1]	Santa Cruz
Monterey spineflower (*Chorizanthe pungens* var. *pungens*)	Monterey, Santa Cruz
purple amole (*Chlorogalum purpureum*)	Monterey
robust Spineflower (*Chorizanthe robusta* var. *robusta*)	Santa Cruz
Santa Cruz tarplant (*Holocarpha macradenia*)[1]	Monterey, Santa Cruz
Scott's Valley polygonum (*Polygonum hickmanii*)	Santa Cruz
Scotts Valley Spineflower (*Chorizanthe robusta* var. *hartwegii*)	Santa Cruz
steelhead – Central California Coast Destinct Poulation Segment (DPS) (*Oncorhynchus mykiss irideus*)[1]	Santa Cruz
steelhead – South-Central California Coast DPS (*Oncorhynchus mykiss irideus*)[1]	Monterey, San Benito, Santa Cruz
tidewater goby (*Eucyclogobius newberryi*)	Monterey, Santa Cruz
vernal pool fairy shrimp (*Branchinecta lynchi*)	Monterey, San Benito
western snowy plover (*Charadrius alexandrinus nivosus*)	Monterey, Santa Cruz
Yadon's Piperia (*Piperia yadonii*)	Monterey
zayante band-winged grasshopper (*Trimerotropis infantilis*)[1]	Santa Cruz

[1] Species with Critical Habitat where MTP/SCS transportation projects are located.

Sources: USFWS IPaC (2025b)

e. Wildlife Movement Corridors

Wildlife movement corridors, or habitat linkages, are generally defined as connections between habitat patches that allow for physical and genetic exchange between otherwise isolated animal populations. Such linkages may serve a local purpose, such as providing a linkage between foraging and denning areas, or they may be regional in nature. Some habitat linkages may serve as migration corridors, wherein animals periodically move away from an area and then subsequently return. Others may be important as dispersal corridors for young animals. A group of habitat linkages in an area can form a wildlife corridor network. A wildlife corridor network can often result in a corridor redundancy which allows for the availability of alternative pathways for movement. A redundant network may increase dispersal opportunities in the event that one or more of the corridors are blocked, severed, or made temporally dysfunctional by disturbance such as fire, drought, or insect outbreaks.

The habitats within the link do not necessarily need to be the same as the habitats that are being linked. Rather, the link merely needs to contain sufficient cover and forage to allow temporary inhabitation by ground-dwelling species. Typically, habitat linkages are contiguous strips of natural areas, though dense plantings of landscape vegetation can be used by certain disturbance-tolerant species. Depending upon the species using a corridor, specific physical resources (such as rock outcroppings, vernal pools, or oak trees) may need to be located within the habitat link at certain intervals to allow slower-moving species to traverse the link. For highly mobile or aerial species, habitat linkages may be discontinuous patches of suitable resources spaced sufficiently close together to permit travel along a route in a short period of time. Wildlife movement corridors can be both large and small scale.

The mountainous regions of Monterey, San Benito, and Santa Cruz counties may support wildlife movement on a regional scale while riparian corridors and waterways may provide more local scale opportunities for wildlife movement throughout each County. The CDFW *Biogeographic Information and Observation System* (BIOS; CDFW 2025b) mapped three essential connectivity areas (ECAs) within Monterey, San Benito, and Santa Cruz counties: throughout the inland mountainous region of Santa Cruz County; along the coastal mountainous region of Monterey County with a portion extending across the Salinas Valley and into the Diablo Range along the Monterey - San Benito County line; and in the southeast portion of San Benito County and crossing into Fresno County. The ECAs are not regulatory delineations but have been identified by the California Essential Habitat Connectivity Project as lands likely important to wildlife movement between large, mostly natural areas at the statewide level. ECAs were mapped on a statewide level and should be considered areas identified at a coarse scale that can inform land planning efforts; however, ECAs do not include more detailed linkage designs developed at a finer resolution based on the needs of specific species and ecological processes.

Fourteen important movement corridors are also identified from the report, *Missing Linkages: Restoring Connectivity to the California Landscape* (Penrod et al., 2001). These movement corridors are generally associated with rivers and watercourses including the Pajaro and Salinas Rivers and areas within the Santa Lucia Range, Santa Cruz Mountains and Diablo Range. These areas are identified as important movement corridors for species such as San Joaquin kit fox (*Vulpes macrotis mutica*), mountain lion, steelhead, riparian birds, and other small carnivores.

4.4.2 Regulatory Setting

Federal, state, and local authorities, under a variety of statutes and guidelines, share regulatory authority over biological resources. The primary authority for general biological resources lies within the land use control and planning authority of local jurisdictions, which in this instance are the counties of Monterey, San Benito, and Santa Cruz, as well as other local jurisdictions including cities within these counties. CDFW is a trustee agency for biological resources throughout the state as defined in CEQA and also has direct jurisdiction under the CFGC, which includes, but is not limited to, resources protected by the State of California under CESA. In addition, the Regional Water Quality Control Board (RWQCB) is responsible agency for waters of the state.

a. Federal Laws, Regulations, and Policies

Endangered Species Act

Under the ESA, authorization is required to "take" a listed species. Take is defined under the ESA Section 3 as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Under federal regulation (50 CFR Sections 17.3, 222.102); "harm" is further defined to include habitat modification or degradation where it would be expected to result in death or injury to listed wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering. Critical habitat is a specific geographic area(s) that is essential for the conservation of a threatened or endangered species and 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. ESA Section 7 outlines procedures for federal interagency cooperation to conserve federally listed species and designated critical habitat.

Section 7(a)(2) of the ESA and its implementing regulations require federal agencies to consult with USFWS or NMFS to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species, or result in the destruction or adverse modification of critical habitat. For projects where federal action is not involved and take of a listed species may occur, the project proponent may seek to obtain an incidental take permit under ESA Section 10(a). Section 10(a) allows USFWS to permit the incidental take of listed species if such take is accompanied by a Habitat Conservation Plan (HCP) that includes components to minimize and mitigate impacts associated with the take.

USFWS and NMFS share responsibility and regulatory authority for implementing ESA (7 USC Section 136, 16 USC Section 1531 et seq.).

Migratory Bird Treaty Act

The Migratory Bird Treaty Act authorizes the Secretary of the Interior to regulate the taking of migratory birds. The act provides that it is unlawful, except as permitted by regulations, "to pursue, hunt, take, capture, kill, attempt to take, capture, or kill, possess, […] any migratory bird, or any part, nest, or egg of any such bird" (16 USC Section 703[a]). The Bald and Golden Eagle Protection Act is the primary law protecting eagles, including individuals and their nests and eggs. USFWS implements the Migratory Bird Treaty Act (16 United States Code [USC] Section 703-711) and the Bald and Golden Eagle Protection Act (16 USC Section 668). Under the Act's Eagle Permit Rule (50 CFR 22.26), USFWS may issue permits to authorize limited, non-purposeful take of bald eagles and golden eagles.

Marine Mammal Protection Act

Under the Marine Mammal Protection Act, established in 1972, all marine mammals are protected under federal law. This act prohibits hunting, harassment, capture, or killing of all marine mammals. This law protects cetaceans (whales, dolphins, and porpoises), pinnipeds (seals

and sea lions), sirenians (manatees and dugongs), sea otters and polar bears within the waters of the United States.

Magnusen-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) regulates marine fisheries in U.S. federal waters. The act was first passed in 1976 and revised in 1996 and 2007. The purpose of the act is to provide long-term biological and economic sustainability of U.S. marine fisheries.

NMFS has regulatory authority for implementing the Magnuson-Stevens Act. NMFS requires regional fishery management councils develop Fisheries Management Plans (FMP) specific to their regions, fisheries and fish stocks. For waters off the U.S. West Coast, the Pacific Fishery Management Council has developed four FMPs, which are implemented through our fisheries regulations for coastal pelagic species, groundfish species, highly migratory species and salmon species. These FMPs also identify Essential Fish Habitat which is broadly defined as those waters and substrate necessary to fish for spawning, breeding, feeding or growth to maturity.

Clean Water Act

Congress enacted the Clean Water Act (CWA) “to restore and maintain the chemical, physical, and biological integrity of the Nation's waters.” The CWA establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. The basis of the CWA was enacted in 1948 and was called the Federal Water Pollution Control Act, but the law was significantly reorganized and expanded in 1972. “Clean Water Act” became the law’s common name with amendments in 1972.

Section 404 of the CWA establishes a program to regulate the discharge of dredged or fill material into waters of the United States, including wetlands. Section 404 of the CWA authorizes the Secretary of the Army, acting through the United States Army Corps of Engineers (USACE), to issue permits regulating the discharge of dredged or fill materials into the "navigable waters at specified disposal sites." Section 404 requires that a permit be issued before dredged or fill material may be discharged into waters of the United States, unless the activity is exempt from regulation under Section 404 (e.g., certain farming and forestry activities). Also, in accordance with Section 401 of the Clean Water Act, applicants for a Section 404 permit must obtain water quality certification from the appropriate RWQCB. The Central Coast RWQCB has jurisdiction in Monterey, San Benito, and Santa Cruz counties.

b. State Laws, Regulations, and Policies

Endangered Species Act and Fully Protected Species

CESA (CFGC Section 2050 et. seq.) prohibits take of State-listed threatened and endangered species without a CDFW incidental take permit. Take under CESA is restricted to direct harm of a listed species and does not prohibit indirect harm by way of habitat modification.

Protection of fully protected species is described in CFGC Sections 3511, 4700, 5050 and 5515. These statutes prohibit take or possession of fully protected species. Incidental take of fully protected species may be authorized under an approved Natural Community Conservation Plan.

California Fish and Game Code Sections 3503, 3503.5 and 3511

CFGC sections 3503, 3503.5 and 3511 describe unlawful take, possession, or destruction of birds, nests and eggs. Fully protected birds (CFGC Section 3511) may not be taken or possessed except under specific permit. CFGC Section 3503.5 protects all birds-of-prey and their eggs and nests against take, possession, or destruction of nests or eggs.

Oak Woodlands Conservation Act

The Oak Woodlands Conservation Act (CFGC Sections 1360 through 1372) was enacted to protect oak woodland habitats that were being diminished by development, firewood harvesting, and agricultural conversions. The Oak Woodlands Conservation Program was established as a result of the act and is intended to provide project funding opportunities for private landowners, conservation organizations, and cities and counties to conserve and restore oak woodlands. The program authorizes the Wildlife Conservation Board to purchase oak woodland conservation easements and provide grants for land improvements and oak restoration efforts. Section 21083.4 of CEQA requires counties to determine if a project within their jurisdiction may result in conversion of oak woodlands that would have a significant adverse effect on the environment. If the lead agency determines that 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.

Native Plant Protection Act

CDFW also has authority to administer the Native Plant Protection Act (CFGC Section 1900 et seq.). The Act requires CDFW to establish criteria for determining if a species, subspecies, or variety of native plant is endangered or rare. Under Section 1913(c) of the Native Plant Protection Act, the owner of land where a rare or endangered native plant is growing is required to notify the department at least 10 days in advance of changing the land use to allow for salvage of the plant(s).

Section 1600 et seq. of the California Fish and Game Code

CFGC Section 1600 et seq. prohibits, without prior notification to CDFW, the substantial diversion or obstruction of the natural flow of, or substantial 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. In order for these activities to occur, CDFW must receive written notification regarding the activity in the manner prescribed by the department and may require a Lake or Streambed Alteration Agreement. Lakes, ponds, perennial and intermittent streams and associated riparian vegetation, when present, are subject to this regulation.

Natural Community Conservation Planning Act

The Natural Communities Conservation Planning (NCCP) Act was established by the California Legislature, is directed by CDFW, and is implemented by the state, as well as public and private partnerships to protect habitat in California. The NCCP Act takes a regional approach to preserving habitat. An NCCP identifies and provides for the regional protection of plants, animals, and their habitats, while allowing compatible and appropriate economic activity. Once an NCCP has been approved, CDFW may provide take authorization for all covered species, including fully protected species, under CFGC Section 2835.

Porter-Cologne Water Quality Control Act

The State Water Resources Control Board (SWRCB) and each of nine local RWQCBs have jurisdiction over "waters of the State" pursuant to the Porter-Cologne Water Quality Control Act which are defined as any surface water or groundwater, including saline waters, within the boundaries of the State. SWRCB adopted a State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (Procedures), for inclusion in the forthcoming Water Quality Control Plan for Inland Surface Waters and Enclosed Bays and Estuaries and Ocean Waters of California. The Procedures consist of four major elements: 1) a wetland definition; 2) a framework for determining if a feature that meets the wetland definition 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 (SWRCB 2021).

California Coastal Act

The mission of the California Coastal Commission is to "protect, conserve, restore and enhance environmental and human-based resources of the California coast and ocean for environmentally sustainable and prudent use by current and future generations." The California Coastal Act of 1976 and Local Coastal Programs certified by the Commission pursuant to the Coastal Act contain specific policies aimed at preserving biological resources, such as wetlands, riparian habitat, and marine habitat, and restrict what types of uses are allowed in these habitats and what impacts are allowed to these resources. The Coastal Commission approves Coastal Development Permits for development found to be consistent with the Coastal Act, and local governments approve Coastal Development Permits for projects found to be consistent with their Local Coastal Program.

California Streets and Highways Code Section 156.3

Assessments and remediation of potential barriers to fish passage for transportation projects using State or federal transportation funds are required. Such assessments must be conducted for any projects that involve stream crossings or other alterations and must be submitted to CDFW. New projects must be constructed so that they do not present a barrier to fish passage.

c. Local Laws, Regulations, and Ordinances

The general plans and zoning ordinances of the cities within the Monterey Bay area regulate design and the built environment within those communities, while the general plans for each county perform the same function within unincorporated areas. In all cases, the general plans contain elements which address protection of biological resources. Typically, these elements consist of goals, policies and actions that protect natural resources, such as environmentally sensitive habitats, special-status species, native trees, creeks, wetland, and riparian habitats. Local jurisdictions approve development if it is consistent with those elements of the General Plan.

Some resources are afforded protection via local ordinances such as those that protect trees, riparian corridors, and environmentally sensitive habitats. Each county and many cities in the AMBAG region have municipal codes which protect natural resources and addresses compliance with environmental regulations. For example, local ordinances and policies may be in place that protect native and nonnative trees in urban landscapes, as well as in unincorporated county lands. These ordinances and policies vary in their definitions of protected trees (e.g., certain species, minimum diameter at breast height, trees that form riparian corridors or a combination thereof) and in the requirements for ordinance or policy compliance. In addition, counties and cities may have local ordinances or policies that are intended to protect other biological resources such as wetlands and drainages, riparian habitat, and other sensitive habitat areas.

Many cities within the AMBAG region have similar biological resources goals and policies in their respective general plans. Cities throughout Monterey, San Benito, and Santa Cruz counties have adopted General Plans that contain policies etc. related to bio resources. Policies for several cities are included as examples and representative of other policies throughout the counties. When additional CEQA analysis is conducted for individual projects facilitated by the 2050 MTP/SCS, local policies relevant to that project will be considered.

Monterey County

The Conservation/Open Space Element of the Monterey County General Plan (Monterey County 2010) includes goals to protect the biological resources found within the county. The goals and policies of the Monterey County General Plan are aimed at protecting and conserving listed species and their habitat, critical habitat, as well as coastal, marine and river environments. In addition, the Monterey County General Plan includes Policy OS-5.24 which requires all discretionary projects as well as roadway and public infrastructure projects provide movement opportunities for wildlife.

Cities in Monterey County

The City of Monterey's General Plan (City of Monterey 2019), adopted in January 2005 and last amended in June 2019, contains goals, policies, and programs related to biological resources in the Conservation Element and Open Space Element. Goal d. of the Conservation Element contains policies and programs to protect the character and composition of existing native

vegetation communities and protect biological diversity represented by special-status plant and wildlife species (Policies d.1, d.3, d.4, d.5, and d.6; Programs d.6.1through d.6.6). Goals a. and b. in the open Space Element recognizes that the Monterey Bay is the City's most significant natural resource and includes policies to preserve the Monterey Bay and the shoreline and beaches in providing access to the Monterey Bay as well as preserving specific areas for habitat conservation (Policies a.2, a.3, b.1, b.2, and b.4).

The Conservation/Open Space Element for the City of Salinas (City of Salinas 2002) includes Goal COS-5 to protect and enhance the remaining identified and significant ecological and biological resources within and surrounding the community. This is supported by Policies COS-5.1 and -5.2 specifically protecting creek and river corridors as well as regional parks. The Conservation/Open Space Element also includes an Implementation Program with actions to implement the adopted General Plan Policies. The Implementation Program outlines the responsible implementing agency or department as well as source of funding for each action relating to ecological and biological resources.

San Benito County

The Natural and Cultural Resources Element of the San Benito County 2035 General Plan (San Benito County 2015) includes goals to protect the biological resources found within the county. The goals and policies are aimed at protecting and preserving wildlife habitat as well as other important habitat areas such as wetlands, as well as includes a goal to protect water quantity and quality in natural water bodies within the county. In addition, the San Benito County 2035 General Plan includes Policies NCR-2.6 and -2.7 aimed at protecting and promoting regeneration of oak woodlands and requires applicants to prepare a mitigation plan where oak impacts cannot be avoided, as well as Policy NCR-2.4 that indicates that the County shall protect and enhance wildlife migration and movement corridors and requires road and development sites to be designed to maintain habitat connectivity.

San Benito County is in the process of developing a multi-species and multi-phased county-wide joint HCP and NCCP called the San Benito County Conservation Plan (SBCCP). The plan is being developed by the County with technical assistance from USFWS and CDFW. This plan would cover many of the species occurring within the County, however it is still in the early planning phase, and has not been developed in detail yet.

Cities in San Benito County

The City of Hollister General Plan (City of Hollister 2005), adopted in 2005 and amended in 2007, contains goals, policies, and implementation measures related to biological resources in the Natural Resources and Conservation Element. Goal NRC 1 contains policies and implementation measures to assure enhanced habitat for native plants and animals, and special protection for threatened or endangered species. Policies NRC 1.1 through NRC 1.7 support that goal and include specific implementation measures such as requiring wetlands delineations (NRC.X) and requiring pre-construction surveys for nesting raptors (NRC.U) and burrowing owls (NRC.K).

The City of San Juan Bautista's 2035 General Plan's Conservation Element (City of San Juan Bautista 2015) contains goals, objectives, policies, and programs related to biological resources.

Goal CO 4 aims for the protection of wildlife and associated habitats through the protection of state and federally listed species and their critical habitats (Objective CO 4.1). Policy CO 4.1.1 is to comply with federal and state laws regarding the protection of special-status species and habitats.

Santa Cruz County

The Conservation and Open Space Element of the Santa Cruz County General Plan and Local Coastal Program (Santa Cruz County 1924) includes objectives to protect the biological resources found within the county. The objectives and policies are aimed at maintaining biological diversity, preserving, protecting and restoring riparian corridors and wetlands, as well as other aquatic and marine habitats. The Santa Cruz General Plan and Local Coastal Program also includes Policies 5.1.1 through 5.1.11 aimed at protecting Environmentally Sensitive Habitat Areas.

Cities in Santa Cruz County

The City of Santa Cruz 2030 General Plan (City of Santa Cruz 2012) contains goals, policies, and actions related to biological resources in the Natural Resources and Conservation Element. Goal NRC 1 contains policies and actions to protect, enhance, and sustainably manage creek systems, riparian environments, and wetlands. Policies NRC 1.1 through 1.3 support that goal by requiring setbacks adjacent to creeks and wetlands (Action NRC 1.1.1), re-vegetating plants native to creeks and wetlands (Action NRC 1.1.4), and conserving creek, riparian, and wetland resources in the City (Action NRC 1.3.1).

The City of Watsonville's Environmental Resources Management Element in the 2005 General Plan's goals, policies and implementation pertaining to biological resources include Goals 9.1 through 9.12 to preserve natural resources and provide for open space, conservation, and limitations on the extent of future urbanization. Implementation Policies 9.A through 9.F are intended to protect open space and direct development away from areas with significant natural resources.

Fort Ord Habitat Management Plan/Conservation Plan

The Fort Ord Habitat Management Plan was published by the USACE in 1997 in compliance with the USFWS Final 2017 Biological Opinion for disposal and reuse of former Fort Ord lands. The Habitat Management Plan establishes guidelines for the conservation and management of plant and wildlife species and their habitat that occur on former Fort Ord lands. The Habitat Management Plan promotes preservation, enhancement, and restoration of habitat and populations of Habitat Management Plan covered species while allowing development on selected properties that promotes economic recovery after closure of the Base.

4.4.3 Impact Analysis

a. Methodology and Significance Thresholds

Data used for this analysis includes aerial photographs, topographic maps, and data on special-status species and sensitive habitat information obtained from the CNDDB (2025a), BIOS (2025b), the CNPS Online Inventory of Rare and Endangered Plants (CNPS 2025b), the USFWS IPaC (2025b), and accepted scientific texts to identify species. The USFWS Critical Habitat Mapper (2025a) and USFWS NWI (2025a) were also queried. Potential areas of disturbance associated with the 2050 MTP/SCS were compared to the identified biological resource occurrences to determine whether an impact may occur.

Appendix G of the *CEQA Guidelines* identifies the following criteria for determining whether a project's impacts would have a significant impact on biological resources:

1. Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;
2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service;
3. 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;
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;
5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
6. Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

b. Project Impacts and Mitigation Measures

The following section describes biological resources impacts associated with the transportation improvements and future land use scenario included in the 2050 MTP/SCS. Impacts and associated mitigation measures would apply in Monterey, San Benito, and Santa Cruz counties. Section 4.4.3(c) summarizes the specific 2050 MTP/SCS transportation projects that may result in the types of biological resources impacts discussed below. In general, implementation of proposed transportation improvements and the reasonably foreseeable future development facilitated under the land use scenario envisioned by the 2050 MTP/SCS would result in impacts to biological resources as described in the following sections.

Threshold 1:	Would the project have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

Impact BIO-1 IMPLEMENTATION OF TRANSPORTATION IMPROVEMENTS AND THE LAND USE SCENARIO ENVISIONED BY THE 2050 MTP/SCS WOULD HAVE SUBSTANTIAL ADVERSE IMPACTS ON SPECIAL-STATUS PLANT AND ANIMAL SPECIES, EITHER DIRECTLY OR THROUGH HABITAT MODIFICATIONS. IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

For the purposes of this analysis, special-status plant and animal species include those designations described under Section 4.4.1.d above. Most of the transportation improvements proposed under the 2050 MTP/SCS consist of expansions or modifications of existing facilities. However, these projects would impact areas occupied by special-status plant and animal species. As mentioned above, there are 402 special-status species known to occur or with potential to occur within the AMBAG region. Many of these species are given high levels of protection by the federal government through listing under the ESA or by the State government through listing under CESA or designation of fully protected status (animals only). The remaining species shown in Appendix D are protected through CEQA and/or through local ordinances. Most special-status species have very limited ranges within the subject counties and have specific habitat requirements. Many special-status species may also tend to be associated with sensitive habitats, such as riparian habitats and drainages.

As noted in Section 2.5.2, as future projects envisioned in the 2050 MTP/SCS are planned and designed, site-specific environmental review will be conducted by the agencies responsible for implementing such projects. In the event that impacts to listed species would occur, an incidental take permit would be required from CDFW, USFWS, and/or NMFS (where applicable) in compliance with the ESA and CESA. Nevertheless, some special-status species would experience substantial adverse effects affected at the locations where projects under the 2050 MTP/SCS would occur; therefore, significant impacts would occur.

For example, transportation projects such as those that occur over or in the vicinity of rivers and creeks are within suitable habitat for species such as California red-legged frog (federally threatened and state SSC), steelhead – South-Central California Coast DPS, steelhead – Central California Coast DPS (both DPS are federally threatened and state SSC) and Coho Salmon – Central California Coast ESU (Evolutionary Significant Unit) (federally endangered and state endangered). Many of the creeks and rivers found within coastal watersheds, such as those in Monterey and Santa Cruz counties, are considered accessible by steelhead and currently support or have historically supported steelhead and Coho salmon populations (Titus, Erman, and Snider 2010).

In addition to the rivers and creeks that may be impacted, future transportation projects under the 2050 MTP/SCS could impact upland habitats and the sensitive species that may occupy them. For example, coast horned lizards (*Phrynosoma blainvillii*), a state SSC, may be present in scrub, grassland, and some woodland habitats near roads where transportation projects could occur. The federally threatened and state threatened California tiger salamander can also occupy

annual grassland habitats containing small mammal burrows if such habitat is within 1.24 miles (the dispersal distance of the species) of known or potentially suitable breeding habitat. The state candidate endangered Crotch bumble bee (*Bombus crotchii*) may nest and forage in field and woodlands near transportation projects. Several special-status bat species may be affected by transportation projects where they occur under bridges or similar structures, or in native habitat adjacent to construction areas. Furthermore, the wide variety of habitats within the 2050 MTS/SCS area can support many species of nesting birds, including sensitive species such as the state fully protected white-tailed kite (*Elanus luecurus*), state threatened Swainson's hawk (*Buteo swainsoni*), and the state SSC burrowing owl (*Athene cunicularia*). Disturbance of special-status plants, such as Monterey gilia (*Gilia tenuiflora* ssp. *arenaria*, state threatened and federally endangered) would result in reductions in local population size, habitat fragmentation, or lower reproductive success.

Direct impacts to special-status species include injury or mortality occurring during implementation and/or operation of transportation projects under the 2050 MTP/SCS. Direct impacts also include habitat modification and loss such that it results in mortality or otherwise alters foraging and breeding behaviors substantially enough to cause injury. Indirect impacts could be caused by the spread of invasive non-native species that out-compete native species and/or alter habitat towards a state that is unsuitable for special-status species. For example, the spread of certain weed species can reduce the biodiversity of native habitats, potentially eliminating special-status plant species and reducing the availability of suitable forage and breeding sites for special-status animal species. Indirect impacts could also result from increased access by humans and domestic animals, particularly in areas where trails may be planned. Increased human and domestic animal (especially dog and cat) presence can disrupt the normal behaviors of native animal species and foster the spread of non-native invasive plant species.

In addition to direct and indirect impacts that may result from transportation improvement projects, the 2050 MTP/SCS also contains a future land use scenario that emphasizes infill development and transit-oriented development. This land use scenario focuses on concentrating future development in existing urbanized areas, which would minimize impacts to biological resources in non-urbanized areas. However, it is possible that sensitive plant and animal species would be located on future infill and transit-oriented development sites, as well as more undeveloped project sites. As a result, future development projects would impact plant and animal species that may be present on or in proximity to undeveloped areas. Many special-status animal species are associated with creeks even in the most densely developed urban areas. Both native and non-native trees and shrubs throughout urban areas may support nesting birds and other sensitive species, such as monarch butterfly (proposed federally threatened). Impacts of land use projects would be significant because substantial adverse effects on special-status species would occur.

Mitigation Measures

For transportation projects under their jurisdiction, TAMC, SBtCOG, and SCCRTC shall, and transportation project sponsor agencies can and should, implement the following mitigation measures for applicable transportation projects identified in Appendix B, where feasible and necessary based on project and site-specific considerations. Cities and counties in the AMBAG

region can and should implement these measures, where relevant to land use projects implementing the 2050 MTP/SCS. Project-specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

BIO-1(a) Biological Resources Screening and Assessment

On a project-by-project basis, a preliminary biological resource screening shall, or can and should, be performed as part of the environmental review process to determine whether the project has any potential to impact biological resources. If it is determined that the project has no potential to impact biological resources, no further action is required. If the project would have the potential to impact biological resources, prior to construction, the implementing agency shall retain a qualified biologist to conduct a biological resources assessment (BRA) to document the existing biological resources and to determine the potential impacts to those resources. Depending on the results of the BRA, design alterations, further technical studies (i.e., protocol surveys) and/or consultations with the USFWS, NMFS, CDFW and/or other local, state, and federal agencies may be required. These protocols may include, but are not limited to:

- Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants (USFWS 2000)
- Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities (CDFW 2018)
- Survey Considerations for California Endangered Species Act (CESA) Candidate Bumble Bee Species (CDFW 2023)
- Interim Survey Guidelines to Permittees for Recovery Permits under Section 10(a)(1)(A) of the Endangered Species Act for the Listed Vernal Pool Branchiopods (USFWS 1996)
- Revised Guidance on Site Assessment and Field Surveys for the California Red-legged Frog (USFWS 2005)
- Interim Guidance on Site Assessment and Field Surveys for Determining Presence or a Negative Finding of the California Tiger Salamander (USFWS and CDFW 2003)
- Considerations for Conserving the Foothill Yellow-legged Frog (CDFW 2018)
- Visual Encounter Survey Protocol for Rana Boylii in Lotic Environments (University of California, Davis 2017)
- Draft USGS Western Pond Turtle (Emys marmorata) Visual Survey Protocol for the Southcoast Ecoregion (U.S. Geological Survey 2006)
- Interim Golden Eagle Inventory and Monitoring Protocols; and Other Recommendations (USFWS 2010)
- Swainson's Hawk Survey Protocols, Impact Avoidance, and Minimization Measures for Renewable Energy Projects in the Antelope Valley of Los Angeles and Kern Counties, California (California Energy Commission and CDFW 2010)
- Staff Report on Burrowing Owl Mitigation (CDFW 2012)

- Methods for Surveying Marbled Murrelets in Forests: A Revised Protocol of Land Management and Research (Pacific Seabird Group 2003)
- Standardized Recommendations for Protection of the San Joaquin Kit Fox Prior to or During Ground Disturbance (USFWS 1999)

The following mitigation measures [BIO-1(b) through BIO-1(j)] shall be incorporated only as applicable into the BRA for projects where specific resources are present or may be present and impacted by the project.

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for transportation projects are RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects are cities and counties. This mitigation measure shall, or can and should, be applied during project permitting and environmental review.

BIO-1(b) Special-Status Plant Species Surveys

If completion of the project-specific BRA determines that special-status plant species have potential to occur on-site, the implementing agency shall require surveys for special-status plants to be completed prior to any vegetation removal, grubbing, or other construction activity of each project (including staging and mobilization). The surveys shall be floristic in nature and shall be seasonally timed to coincide with the target species. Surveys shall be conducted in accordance with the most current protocols established by the CDFW, USFWS, and the local jurisdictions if said protocols exist. A report of the survey results shall be submitted to the implementing agency for review. If special-status plant species are identified, Mitigation Measure BIO-1(c) shall apply.

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for transportation projects are RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects are cities and counties. This mitigation measure shall, or can and should, be applied during project permitting and environmental review, prior to project construction but no earlier than two years before construction commences.

BIO-1(c) Special-Status Plant Species Avoidance, Minimization and Mitigation

If state- or federally-listed and/or CRPR 1 and 2 species are found during special-status plant surveys [pursuant to Mitigation Measure BIO-1(b)], then the implementing agency shall require the project to be re-designed to avoid impacting these plant species to the extent feasible. If CRPR 3 and 4 species are found, the biologist shall evaluate to determine if they meet criteria to be considered special-status, and if so, the same process as identified for CRPR 1 and 2 species shall apply.

If special-status plants species cannot be avoided and would be impacted by a project implemented under the 2050 MTP/SCS, the implementing agency shall require all impacts to be mitigated at an appropriate ratio to fully offset project impacts, as determined by a qualified biologist for each species as a component of habitat restoration. A restoration plan shall be prepared and submitted to implementing agency overseeing the project for approval.

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for transportation projects are RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects are cities and counties. This mitigation measure shall, or can and should, be implemented prior to issuance of project construction permits and approvals.

BIO-1(d) Endangered/Threatened Animal Species Habitat Assessment and Protocol Surveys

If the BRA determines that suitable habitat may be present for federally and/or state endangered or threatened animal species, the implementing agency shall require protocol habitat assessments/surveys to be completed in accordance with CDFW and/or USFWS/NMFS protocols prior to issuance of any construction permits/project approvals.

Alternatively, in lieu of conducting protocol surveys, the implementing agency may choose to assume presence within the project footprint and proceed with development of appropriate avoidance measures, consultation and permitting, as applicable.

If the target species is detected during protocol surveys, or protocol surveys are not conducted and presence is assumed based on suitable habitat, Mitigation Measure BIO-1(e) shall apply.

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for transportation projects are RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects are cities and counties. This mitigation measure shall, or can and should, be implemented prior to issuance of project construction permits and approvals.

BIO-1(e) Endangered/Threatened Animal Species Avoidance and Compensatory Mitigation

If habitat is occupied or presumed occupied by federal and/or state listed species and would be impacted by the project, the implementing agency shall require re-design of the project in coordination with a qualified biologist to avoid impacting occupied/presumed occupied habitat to the extent feasible. If occupied or presumed occupied habitat cannot be avoided, the implementing agency shall provide the total acreages for habitat that would be impacted prior to the issuance of construction permits/approvals. The implementing agency shall purchase credits at a USFWS, NMFS and/or CDFW approved conservation bank if available for the affected species and/or provide compensatory mitigation to offset impacts to federal and/or state listed species habitat.

Compensatory mitigation shall be provided at an appropriate ratio to fully offset project impacts, as determined by a qualified biologist for permanent impacts. Compensatory mitigation may be combined/nested with special-status plant species and sensitive community restoration where applicable. Temporary impact areas shall be restored to pre-project conditions.

If on and/or off-site mitigation sites are identified the implementing agency shall retain a qualified biologist to prepare a Habitat Mitigation and Monitoring Plan (HMMP) to ensure the success of compensatory mitigation sites that are to be conserved for compensation of permanent impacts to federal and/or state listed species. The HMMP shall identify long term site management needs, routine monitoring techniques, techniques and success criteria, and shall determine if the conservation site has restoration needs to function as a suitable mitigation site. The HMMP shall be submitted to the agency overseeing the project for approval.

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for transportation projects are RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects are cities and counties. This mitigation measure shall, or can and should, be implemented prior to issuance of project construction permits and approvals.

BIO-1(f) Endangered/Threatened Species Avoidance and Minimization During Construction

The implementing agency shall apply the following measures to aquatic and terrestrial species, where appropriate. Implementing agencies shall select from these measures as appropriate depending on site conditions, the species with potential for occurrence and the results of the biological resources screening and assessment (Mitigation Measure BIO-1[a]).

- Pre-construction surveys for federal and/or state listed species with potential to occur shall be conducted where suitable habitat is present by a qualified biologist not more than 48 hours prior to the start of construction activities. The survey area shall include the proposed disturbance area and all proposed ingress/egress routes, plus a 100-foot buffer. If any life stage of federal and/or state listed species is found within the survey area, the qualified biologist shall recommend an appropriate course of action, which may include consultation with USFWS, NMFS and/or CDFW. The results of the pre-construction surveys shall be submitted to the implementing agency for review and approval prior to start of construction.
- Ground disturbance shall be limited to the minimum necessary to complete the project. The project limits of disturbance shall be flagged. Areas of special biological concern shall have highly visible orange construction fencing.
- All work shall be conducted during the day-time hours to the maximum extent feasible. Any night lighting shall be minimized, and directed to illuminate the work site only.
- All food waste shall be secured in a closed container and removed from the site at the end of each work day.
- All projects occurring within/adjacent to aquatic habitats (including riparian habitats and wetlands) shall be completed between April 1 and October 31, to avoid impacts to sensitive aquatic species.

- All projects occurring within or adjacent to sensitive habitats that may support federally and/or state endangered/threatened species shall have a qualified biologist present during all initial ground disturbing/vegetation clearing activities. Once initial ground disturbing/vegetation clearing activities have been completed, said biologist shall conduct daily pre-activity clearance surveys for endangered/threatened species. Alternatively, and upon approval of the CDFW and/or USFWS/NMFS or as outlined in project permits, said biologist may conduct site inspections at a minimum of once per week to ensure all prescribed avoidance and minimization measures are begin fully implemented.
- No endangered/threatened species shall be captured and relocated without authorization from the CDFW and/or USFWS/NMFS.
- If pumps are used for dewatering activities, all intakes shall be completely screened with wire mesh not larger than five millimeters to prevent animals from entering the pump system.
- If at any time during construction of the project an endangered/threatened species enters the construction site or otherwise may be impacted by the project, all project activities shall cease. At that point, a qualified biologist shall recommend an appropriate course of action, which may include consultation with USFWS, NMFS and/or CDFW.
- All vehicle maintenance/fueling/staging shall occur more than 100 feet from any riparian habitat or water body. Suitable containment procedures shall be implemented to prevent spills.
- No equipment shall be permitted to enter wetted portions of any affected drainage channel.
- All equipment operating within streambeds (restricted to conditions in which water is not present) shall be in good conditions and free of leaks. Spill containment shall be installed under all equipment staged within stream areas and extra spill containment and clean up materials shall be located in close proximity for easy access.
- At the end of each workday, excavations shall be secured with cover or a ramp shall be provided to prevent wildlife entrapment.
- All trenches, pipes, culverts or similar structures shall be inspected for animals prior to burying, capping, moving, or filling.

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for transportation projects are RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects are cities and counties. This mitigation measure shall, or can and should, be implemented prior to and ongoing through project construction.

BIO-1(g) Non-Listed Special-Status Animal Species Avoidance and Minimization

Depending on the species identified in the BRA, the implementing agency shall select from among the following to reduce the potential for impacts to non-listed special-status animal species:

- Pre-construction clearance surveys shall be conducted within 14 days prior to the start of construction (including staging and mobilization) to identify all special-status animal species that may occur on-site. All non-listed special-status species shall be relocated from the site. A report of the pre-construction survey shall be submitted to the implementing agency for their review and approval prior to the start of construction.
- A qualified biologist shall be present during all initial ground disturbing activities, including vegetation removal, to recover special-status animal species unearthed by construction activities.
- Upon completion of the project, a qualified biologist shall prepare a final compliance report documenting all compliance activities implemented for the project, including the pre-construction survey results.

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for transportation projects are RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects are cities and counties. This mitigation measure shall, or can and should, be implemented prior to, during, and after project construction.

BIO-1(h) Preconstruction Surveys for Nesting Birds

For construction activities occurring during the nesting season (generally February 1 to September 15), surveys for nesting birds covered by the CFGC, the Migratory Bird Treaty Act and Bald and Golden Eagle Protection Act shall be conducted by a qualified biologist retained by the implementing agency no more than 10 days prior to vegetation removal activities.

A qualified biologist shall conduct preconstruction surveys for raptors. The survey for the presence of bald and golden eagles shall cover all areas within of the disturbance footprint plus a one-mile buffer where access can be secured. The survey area for all other nesting bird and raptor species shall include the disturbance footprint plus a 300-foot and 500-foot buffer, respectively.

If active nests (nests with eggs or chicks) are located, the qualified biologist shall establish an appropriate avoidance buffer ranging from 250 to 500 feet based on the species biology and the current and anticipated disturbance levels occurring in vicinity of the nest.

For special status raptor nests an avoidance buffer of up to one mile shall be established on a case-by-case basis in consultation with the USFWS and/or CDFW. The size of the buffer may be influenced by the existing conditions and disturbance regime, relevant landscape characteristics, and the nature, timing and duration of the expected disturbance. The buffer shall be established between February 1 and August 31; however, buffers may be relaxed earlier than August 31 if a qualified ornithologist determines that a given nest has failed or that all surviving chicks have fledged and the nest is no longer in use.

If on-site activities halt for more than 14 days during the nesting season, surveys for nesting birds shall be repeated prior to work resuming on-site.

A report of these preconstruction nesting bird surveys and nest monitoring (if applicable) shall be submitted to the implementing agency for review and approval prior to the start of construction.

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for transportation projects are RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects are cities and counties. This mitigation measure shall, or can and should, be implemented once prior to commencement of project construction, and then during construction activities as needed.

BIO-1(i) Worker Environmental Awareness Program

Prior to initiation of construction activities, all personnel associated with project construction shall attend Worker Environmental Awareness Program training, conducted by a qualified biologist retained by the implementing agency, to aid workers in recognizing special-status resources and review of the limits of construction and mitigation measures required. A fact sheet conveying this information shall also be prepared for distribution to all contractors, their employers and other personnel involved with construction of the project.

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for transportation projects are RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects are cities and counties. This mitigation measure shall, or can and should, be applied during project permitting and environmental review.

Significance After Mitigation

Implementation of the above mitigation measures would reduce impacts to special-status species and their habitat to less than significant levels because the mitigation measures require pre-project surveys and biological monitoring, focused biological surveys, avoidance or minimization of project related disturbance or loss of special-status species, compensation for disturbed or loss of special-status species habitat and coordination with permitting agencies, as required prior to project implementation. However, it cannot be guaranteed that all future project level impacts to special-status species can be mitigated to a less than significant level for all species. Additionally, complete avoidance is the only mitigation for fully protected species, which may not be feasible under some circumstances. There are no other feasible potential mitigation measures. Therefore, impacts would remain significant and unavoidable.

Threshold 2:	Would the project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?
Threshold 3:	Would the project 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?

Impact BIO-2 IMPLEMENTATION OF TRANSPORTATION IMPROVEMENTS AND THE LAND USE SCENARIO ENVISIONED BY THE 2050 MTP/SCS WOULD RESULT IN SUBSTANTIAL ADVERSE IMPACTS ON SENSITIVE HABITATS, INCLUDING SENSITIVE NATURAL COMMUNITIES, AND STATE AND FEDERALLY PROTECTED WETLANDS. THIS IMPACT WOULD BE SIGNIFICANT AND UNAVOIDABLE.

Sensitive habitats, including oak woodlands, could occur at locations of transportation improvement projects and land use development sites. As noted in Section 4.4.1.c, vegetation Alliances with State ranks of S1-S3 are considered imperiled and thus, potentially of special concern and sensitive (CDFW 2025c). Direct impacts to sensitive habitats include loss of habitat during construction of individual projects. Indirect impacts include habitat degradation caused by the introduction of invasive plant species incidentally from construction equipment and through selection of invasive landscape plants, as well as erosion of disturbed areas.

Transportation improvement projects and land use development that may be implemented under the 2050 MTP/SCS would impact sensitive habitats, including sensitive natural communities and wetlands, as mapped on Figure 4.4-4, Figure 4.4-5, and Figure 4.4-6. Some examples of potential impacts include but are not limited to: construction and reconstruction/widening of bridges over rivers and creeks, including the Salinas River, San Benito River, Branciforte Creek and Soquel Creek. These features include rivers, streams, and lakes, including the banks of these features. These features are potentially subject to USACE, RWQCB, CDFW, and California Coastal Commission oversight. These types of projects would have potential to impact riparian areas, as well as water bodies. In addition, projects such as multiuse trails and bike paths may also involve development along riparian corridors or construction of bridges across rivers and creeks. Riparian areas provide wildlife habitat and movement corridors, enabling both terrestrial and aquatic organisms to move along river systems between areas of suitable habitat. Construction of the proposed facilities could have both direct impacts associated with the disturbance of riparian flora and fauna and indirect impacts caused by increased erosion and sedimentation, which can adversely affect downstream water quality. Construction could also impact aquatic features and may require a CDFW Lake or Streambed Alteration Agreement, RWQCB Section 401 Water Quality Certification, USACE Section 404 permit, and coastal development permitting. While compliance with applicable regulations and required permits would avoid or reduce impacts to sensitive natural communities, impacts would be significant.

The future land use scenario envisioned by the 2050 MTP/SCS would emphasize development within existing urbanized areas, although some development would occur in undisturbed areas. As a result, future infill and transit-oriented development projects are likely to result in only limited impacts riparian habitat or sensitive habitat, though areas that have been relatively free

of ground disturbance may contain sensitive native habitats such as central dune scrub, oak woodlands, or northern maritime chaparral or other vegetation alliances and associations that are deemed sensitive by the CDFW. Furthermore, some areas mapped by CWHR as somewhat disturbed habitats, such as annual grasslands, may at the local scale include sensitive native vegetation with unique assemblages of native plants, such as areas dominated by native wildflowers, vernal pools and native grasslands.

In conclusion, implementation of the 2050 MTP/SCS would have substantial adverse impacts on sensitive habitats, including sensitive natural communities, and state and federally protected wetlands, and this impact is therefore significant.

Mitigation Measures

For transportation projects under their jurisdiction, TAMC, SBtCOG and SCCRTC shall, and transportation project sponsor agencies can and should, implement the following mitigation measures for applicable transportation projects identified in Appendix B, where feasible and necessary based on project and site-specific considerations. Cities and counties in the AMBAG region can and should implement these measures, where relevant to land use projects implementing the 2050 MTP/SCS. Project specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

BIO-2(a) Aquatic Resources Delineation and Impact Avoidance

If the results of Mitigation Measure BIO-1(a) indicates projects implemented under the 2050 MTP/SCS occur within or adjacent to wetland, drainages, riparian habitats, or other areas that may fall under the jurisdiction of the CDFW, USACE, RWQCB and/or California Coastal Commission, a qualified biologist shall complete an aquatic resources delineation in accordance with the requirement set forth by each agency. The result shall be submitted to the implementing agency, USACE, RWQCB, CDFW and/or California Coastal Commission, as appropriate, for review and approval, and the project shall be designed to minimize impacts to jurisdictional areas to the extent feasible. The delineation shall serve as the basis to identify potentially jurisdictional areas to be protected during construction, through implementation of the avoidance and minimization identified in Mitigation Measure B-2(c).

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for transportation projects are RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects are cities and counties. This mitigation measure shall, or can and should, be applied during project permitting and environmental review.

BIO-2(b) Wetlands, Drainages, and Riparian Habitat Compensatory Mitigation

Impacts to jurisdictional wetlands, drainages, and riparian habitat shall be mitigated at an appropriate ratio to fully offset project impacts, as determined by a qualified biologist retained by the implementing agency, and shall occur on-site or as close to the impacted habitat as possible. A mitigation and monitoring plan shall be developed by a qualified biologist to ensure

the success of compensatory mitigation sites that are to be conserved for compensation of permanent impacts to jurisdictional water and wetlands. The mitigation and monitoring plan can be prepared in combination with HMMP defined under Mitigation Measure BIO-1(e) above, if applicable. The mitigation and monitoring plan shall identify long term site management needs, routine monitoring techniques, techniques and success criteria, and shall determine if the conservation site has restoration needs to function as a suitable mitigation site. The mitigation and monitoring plan shall be submitted to the regulatory agencies with permitting authority over the project. Alternatively, mitigation shall be accomplished through purchase of credits from an agency-approved wetlands mitigation bank.

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for transportation projects are RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects are cities and counties. This mitigation measure shall, or can and should, be applied during project permitting and environmental review.

BIO-2(c) Wetlands, Drainages, and Riparian Habitat Best Management Practices During Construction

The following best management practices shall be required by the implementing agency for development within or adjacent to wetlands, drainages, or riparian habitat:

- Access routes, staging and construction areas shall be limited to the minimum area necessary to achieve the project goal and minimize impacts to other waters including locating access routes and ancillary construction areas outside of jurisdictional areas.
- To control sedimentation during and after project implementation, appropriate erosion control materials shall be deployed to minimize adverse effects on jurisdictional areas in the vicinity of the project.
- Project activities within the jurisdictional areas should occur during the dry season (typically between April 1 and October 31) in any given year, or as otherwise directed by the regulatory agencies.
- During construction, no litter or construction debris shall be placed within jurisdictional areas. All such debris and waste shall be picked up daily and properly disposed of at an appropriate site.
- Raw cement, concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances which could be hazardous to aquatic species resulting from project related activities, shall be prevented from contaminating the soil and/or entering wetlands, drainages or riparian habitat.
- All refueling, maintenance and staging of equipment and vehicles shall occur at least 100 feet from bodies of water or within secondary containment, and in a location where a potential spill would not drain directly toward aquatic habitat (e.g., on a slope that drains away from the water source). Prior to the onset of work activities, a plan must be in place for prompt and effective response to any accidental spills.

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for transportation projects are RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects are cities and counties. This mitigation measure shall, or can and should, be applied during project permitting and environmental review, and implemented prior to project construction and during construction activities.

BIO-2(d) Landscaping Plan

If landscaping is proposed for a specific project, a qualified biologist/landscape architect retained by the implementing agency shall prepare a landscape plan. Drought tolerant, locally native plant species shall be used. Noxious, invasive and/or non-native plant species that are recognized on the Federal Noxious Weed List, California Noxious Weeds List and/or California Invasive Plant Council Inventory shall not be permitted. Species selected for planting shall be regionally appropriate native species that are known to occur in the adjacent native habitat types.

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for transportation projects are RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects are cities and counties. This mitigation measure shall, or can and should, be applied during project permitting and environmental review.

BIO-2(e) Sensitive Natural Community Avoidance and Mitigation

If the results of Mitigation Measure BIO-1(a) indicates projects implemented under the 2050 MTP/SCS would impact sensitive natural communities in addition to riparian habitat which is addressed by Mitigation Measure BIO-2(b), the implementing agency shall avoid impacts to sensitive natural communities through final project design modifications if feasible.

If the implementing agency determines that sensitive natural communities cannot be avoided, impacts shall be mitigated on-site or offsite at an appropriate ratio to fully offset project impacts, as determined by a qualified biologist based on any applicable resource agency guidelines. Temporarily impacted areas shall be restored to pre-project conditions. A Restoration Plan shall be developed by a qualified biologist and submitted to the implementing agency for approval. Mitigation for impacts to sensitive natural communities can be developed and included in the HMMP defined under Mitigation Measure BIO-1(e) above, if applicable. The mitigation and monitoring plan shall identify long term site management needs, routine monitoring techniques, techniques and success criteria.

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for transportation projects are RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects are cities and counties. This mitigation measure shall, or can and should, be applied during project permitting and environmental review.

BIO-2(f) Invasive Weed Prevention and Management Program

Prior to start of construction for each project that occurs within or adjacent to native habitats, an Invasive Weed Prevention and Management Program shall be developed by a qualified biologist retained by the implementing agency to prevent invasion of native habitat by non-native plant species. The plan shall be submitted to the implementing agency for review and approval. A list of target species shall be included, along with measures for early detection and eradication.

The plan, which shall be implemented by the implementing agency, shall also include, but not be limited to, the following measures to prevent the introduction of invasive weed species:

- During construction, limit the use of imported soils for fill. If the use of imported fill material is necessary, the imported material must be obtained from a source that is known to be free of invasive plant species.
- To minimize colonization of disturbed areas and the spread of invasive species, the contractor shall stockpile topsoil and redeposit the stockpiled soil after construction or transport the topsoil to a permitted landfill for disposal.
- All erosion control materials, including straw bales, straw wattles, or mulch used on-site must be free of invasive species seed.
- Exotic and invasive plant species shall be excluded from any erosion control seed mixes and/or landscaping plant palettes associated with the proposed project.
- All disturbed areas shall be hydroseeded with a mix of locally native species or sterile annuals upon completion of work in those areas.

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for transportation projects are RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects are cities and counties. This mitigation measure shall, or can and should, be applied during project permitting and environmental review, and implemented prior to project construction and during construction activities.

Significance After Mitigation

Compliance with the above mitigation measures would reduce impacts to sensitive communities and wetlands to less than significant levels because the mitigation measures require focused biological surveys, best management practices to avoid and minimize impacts, compensation for loss of sensitive communities and wetlands, and coordination with permitting agencies, as required prior to project implementation. However, it cannot be guaranteed that all future project level impacts can be mitigated to a less than significant level for all sensitive habitats. There are no other feasible potential mitigation measures. As such, impacts would remain significant and unavoidable.

Threshold 4:	Would the project 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?

Impact BIO-3 IMPLEMENTATION OF TRANSPORTATION IMPROVEMENTS AND THE LAND USE SCENARIO ENVISIONED BY THE 2050 MTP/SCS WOULD SUBSTANTIALLY INTERFERE WITH WILDLIFE MOVEMENT, INCLUDING FISH MIGRATION, AND/OR IMPEDE THE USE OF A NATIVE WILDLIFE NURSERY. THIS IMPACT WOULD BE SIGNIFICANT AND UNAVOIDABLE.

As discussed above in Section 4.4.1, Setting, the AMBAG region contains three mapped ECAs (CDFW 2025b). These areas are composed primarily of wildlands but also include some agricultural and developed areas (mostly rural residential) and many are bisected by major roadways. As such, several transportation projects in the 2050 MTP/SCS may overlap with areas of mapped ECAs or other locally important wildlife movement corridors including rivers and watercourses within the region.

Transportation infrastructure projects in the 2050 MTP/SCS primarily involve expansion of existing facilities in urbanized or already developed areas, rather than the construction of new or extension of existing infrastructure into undeveloped portions of each county. However, expansion of existing roadways can decrease connectivity as widening of roads creates a larger barrier and make movement more difficult, especially if roadways prior to widening and expansion were narrow enough and traffic volumes low enough that movement was still possible. Construction of new roadways and crossings across rivers and drainages would introduce new potential barriers to movement. In addition to the roadways themselves, transportation improvement projects could include new fencing segments or walls that could hinder wildlife movement. Temporary disruption of wildlife movement could also occur during construction if temporary water diversions are required for projects located within creeks and rivers. For example, temporary water diversions may impact movement of native and migratory salmonid species. Likewise, improperly designed culverts beneath roadways can impede fish migration. In addition, construction activity and noise could also temporarily alter the behavior wildlife in the area and therefore temporarily disrupt wildlife movement patterns.

New roadways, bike paths, and trails would also increase human activity in areas where sensitive biological resources could occur and have the potential to indirectly disrupt behavior of animals which could in turn disrupt wildlife movement patterns. In particular, new bridge, trail, and road transportation projects could increase human activity (and domestic animals) in the vicinity of riparian areas, wildlife nurseries or corridors and potentially sensitive habitats. Increased noise and human presence during construction, as well as increased trash which may attract predators to the project site and discourage wildlife use of surrounding natural habitat.

The future land use scenario envisioned by the 2050 MTP/SCS would encourage infill and transit oriented development within existing urbanized areas. The majority of the future infill and transit oriented development projects would likely be in areas that provide limited or no wildlife movement, although some development would occur in more undisturbed areas. However, even

the elimination of limited wildlife movement opportunities could further isolate areas of native habitat occupied by both sensitive and common native wildlife species.

As noted in Section 4.4.1.f, the city and county general plans include policies that require projects within the region to be designed to maintain wildlife movement and habitat connectivity. Nevertheless, based on the above analysis, impacts related to transportation projects and impacts related to the future land use scenario envisioned by the 2050 MTP/SCS would be significant.

Mitigation Measures

For transportation projects under their jurisdiction, TAMC, SBtCOG, and SCCRTC shall, and transportation project sponsor agencies can and should, implement the following mitigation measures for applicable transportation projects identified in Appendix B, where feasible and necessary based on project and site-specific considerations. Cities and counties in the AMBAG region can and should implement these measures, where relevant to land use projects implementing the 2050 MTP/SCS. Project specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

BIO-3(a) Project Design for Wildlife Connectivity

The implementing agency shall implement the following measures. All projects including long segments of fencing and lighting shall be designed to minimize impacts to wildlife. Where fencing or other project components are required for public safety concerns, these project components shall be designed to permit wildlife movement by incorporating design features such as:

- A minimum 16 inches between the ground and the bottom of the fence to provide clearance for small animals;
- A minimum 12 inches between the top two fence wires, or top the fence with a wooden rail, mesh, or chain link instead of wire to prevent animals from becoming entangled;
- If fencing or other project components must be designed in such a manner that wildlife passage would not be permitted, wildlife crossing structures such as overpasses, underpasses, culverts, etc., shall be incorporated into the project design as appropriate;
- Lighting installed as part of any project shall be designed to be minimally disruptive to wildlife (see mitigation measure AES-3(a) Roadway Lighting for lighting requirements); and
- Vegetative buffers, consisting of California native plant and tree species, shall be installed where feasible to provide a natural noise barrier between roadway projects and sensitive wildlife habitat, including movement corridors. The buffer shall be maintained in perpetuity to ensure noise levels from the roadway are minimized within adjacent sensitive habitat.

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for transportation projects are RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects re cities and counties. This mitigation measure shall, or can and should, be applied during project permitting and environmental review.

BIO-3(b) Maintain Connectivity in Drainages

Permanent structures that would impede wildlife movement shall be avoided to the extent feasible within any drainage or river that serves as a wildlife migration corridor.

In addition, upon completion of construction within any drainage, areas of stream channel and banks that are temporarily impacted shall be returned to pre-construction contours and in a condition that allows for unimpeded passage through the area once the work has been complete.

If water is to be diverted around work sites, a diversion plan shall be submitted to the implementing agency for review and approval prior to issuance of project construction permits/approvals. The diversion shall be designed in a way as to not impede movement while the diversion is in place.

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for transportation projects are RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects are cities and counties. This mitigation measure shall, or can and should, be applied during project permitting and environmental review.

BIO-3(c) Construction Best Management Practices to Minimize Disruption to Wildlife

The following construction best management practices shall be incorporated by the implementing agency into all grading and construction plans to minimize temporary disruption to wildlife that could hinder wildlife movement:

- Designation of a 20 mile per hour speed limit in all construction areas.
- Daily construction work schedules shall be limited to daylight hours only.
- Mufflers shall be used on all construction equipment and vehicles shall be in good operating condition.
- All trash shall be placed in sealed containers and shall be removed from the project site a minimum of once per week.
- No pets are permitted on the project site during construction.

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for transportation projects are RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects are cities and counties. This mitigation measure shall, or can and should, be implemented prior to the issuance or project grading and construction permits.

Significance After Mitigation

Compliance with the above mitigation measures would reduce impacts to wildlife movement by requiring projects to be designed in a way that maintains connectivity. However, it cannot be guaranteed that movement of terrestrial species will not be impeded at the regional scale due to the large scale of the 2050 MTP/SCS. No additional feasible mitigation measures are available to

reduce impacts on wildlife movement. Therefore, impacts would remain significant and unavoidable.

Threshold 5: Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

Impact BIO-4 IMPLEMENTATION OF TRANSPORTATION IMPROVEMENTS AND THE LAND USE SCENARIO ENVISIONED BY THE 2050 MTP/SCS WOULD NOT CONFLICT WITH ANY LOCAL POLICIES OR ORDINANCES PROTECTING BIOLOGICAL RESOURCES, SUCH AS A TREE PRESERVATION POLICY. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Trees and other biological resources which are protected by city and/or county ordinances and/or policies could be encountered at the locations where projects administered under the 2050 MTP/SCS would occur, and therefore there is potential for conflict with local ordinances and/or policies. Most of the transportation projects in the 2050 MTP/SCS are expansions or maintenance of existing roads. Because ground disturbances would be fairly limited as a result, the removal of native trees and disturbances to other biological resources protected by local policies or ordinances would likely be minimal for most projects. However, some transportation projects in the 2050 MTP/SCS would occur in more undisturbed and potentially biologically sensitive areas. As such, there remains the potential for conflict with local policies and ordinances from construction of individual transportation projects.

In addition to potential conflicts with local policies and/or ordinances that may result from transportation improvement projects, the 2050 MTP/SCS also contains a future land use scenario that emphasizes infill development and transit oriented development. This land use scenario focuses future development concentrated in existing urbanized areas, although some development would occur in more undisturbed areas. There remains the potential for conflict with local policies and ordinances from development associated with the future land use scenario.

All future development projects as part of the future land use scenario as well as the transportation projects proposed for implementation under the 2050 MTP/SCS would be required to follow city and county development requirements, including compliance with local policies, ordinances and applicable permitting procedures related to protection biological resources. Project-level analysis would identify significant conflicts with local policies and ordinances as well as minimize, mitigate or avoid those impacts through the design, siting and permitting process, and provide mitigation for any significant impacts as a condition of project approval and permitting. Therefore, the potential for development projects under the future land use scenario as well as proposed transportation projects to conflict with local policies or ordinances protecting biological resources is less than significant.

Mitigation Measures

None required.

Threshold 6:	Would the project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Impact BIO-5 IMPLEMENTATION OF TRANSPORTATION IMPROVEMENTS AND THE LAND USE SCENARIO ENVISIONED BY THE 2050 MTP/SCS WOULD NOT CONFLICT WITH THE PROVISIONS OF AN ADOPTED HABITAT CONSERVATION PLAN, NATURAL COMMUNITY CONSERVATION PLAN, OR OTHER APPROVED LOCAL, REGIONAL, OR STATE HABITAT CONSERVATION PLAN. THERE WOULD BE NO IMPACT.

There are no adopted regional HCP, NCCP, or other approved local, regional, or state habitat conservation plans within Monterey, San Benito, and Santa Cruz counties at the time of Draft EIR preparation and therefore no conflict with the 2050 MTP/SCS would occur. As described in Section 4.4.2, *Regulatory Setting*, the SBCCP is in development but is not yet adopted or approved. Therefore, no conflicts would occur as they relate to conflicts with existing adopted or approved local, regional, or state conservation plans.

Mitigation Measures

None required.

c. Specific MTP/SCS Projects that May Result in Impacts

All proposed transportation projects listed in Appendix B and summarized in Chapter 2, *Project Description* have the potential to cause or contribute to direct or indirect impacts to biological resources such as those discussed above. This section is not intended to provide project-specific impact determinations under CEQA. The intent of this summary is to support potential future streamlining efforts as a screening tool to facilitate early identification of projects likely to result in the impacts identified above. Streamlining opportunities are discussed in Section 1.5, *Implementation Issues and Future Environmental Review*, in Chapter 1, *Introduction.*

4.4.4 Cumulative Impacts

a. Methodology

The cumulative analysis presented below primarily relies on a projections-based approach, using regional land use and growth forecasts for the AMBAG region and adjoining counties to evaluate cumulative conditions. The project is assessed within the existing and foreseeable future environmental setting, and a determination is made as to whether its incremental contribution would be cumulatively considerable when considered alongside both the overall envisioned land use scenario and specific large-scale planned projects. Refer to Section 6.4, *Cumulative Impacts*, in Chapter 6, *Other CEQA Required Discussions*, for a discussion on cumulative impact methodology.

b. Impact Analysis

The cumulative impact analysis area for biological resources consists of the AMBAG region and the adjoining counties. This cumulative extent encompasses the mosaic of representative habitat types (and associated biological resources) affected by the transportation projects and land use pattern envisioned in the 2050 MTP/SCS, including creeks and drainages, natural communities, agriculture, and coastal development. Future transportation projects and growth in the region could impact resources in the surrounding counties, and the interaction between the affected environment and MTP/SCS projects would be limited to this area.

IMPACT BIO-C-1 DEVELOPMENT IN THE CUMULATIVE IMPACT ANALYSIS AREA WOULD HAVE SUBSTANTIAL ADVERSE IMPACTS ON SPECIAL-STATUS PLANT AND ANIMAL SPECIES, SENSITIVE NATURAL COMMUNITIES, AND INTERFERE WITH WILDLIFE MOVEMENT. CUMULATIVE IMPACTS WOULD BE SIGNIFICANT AND THE CONTRIBUTION OF THE 2050 MTP/SCS WOULD BE CUMULATIVELY CONSIDERABLE.

Biological resources impacts resulting from cumulative development within the cumulative impact analysis area would include direct and indirect impacts to sensitive/special-status species or their habitat; impacts to riparian, wetland, or other sensitive natural communities; or interference with wildlife movement. As discussed above, there are 402 special-status species known to occur or with potential to occur within the AMBAG region. Given the extent of future development anticipated in the cumulative impact analysis area, these cumulative impacts would likely be significant. Implementation of transportation projects and land use development patterns under the 2050 MTP/SCS would contribute to these impacts. Due to the potential direct and indirect impacts that may occur as a result of the 2050 MTP/SCS, the proposed 2050 MTP/SCS contribution to this impact would be cumulatively considerable.

Implementation of Mitigation Measures BIO-1(a) through BIO-3(c), which set requirements for surveys and actions to be taken if biological resources have potential to be impacted by the 2050 MTP/SCS transportation and land use projects, would reduce potential impacts to biological resources. However, even with implementation of mitigation measures, cumulative impacts to biological resources would be significant, and the proposed Plan's contribution to the impact would be cumulatively considerable.

This page intentionally left blank.

4.5 Cultural Resources

This section analyzes impacts to historical and archaeological resources within the AMBAG region. Tribal cultural resources are addressed in Section 4.16.

4.5.1 Setting

a. Prehistoric Background

The prehistoric populations of the AMBAG region included the Esselen, Ohlone, Salinan, and Northern Valley Yokuts. Monterey County was occupied by the Esselen in the west, the Costanoan in the north, and the Salinan to the south. The Costanoan occupied the northwestern portion of San Benito County; the Northern Valley Yokuts were in the southeastern part of the county, and the Salinan occupied the southwestern area of San Benito County. The Costanoan also occupied Santa Cruz County.

The Esselen inhabited the upper Carmel Valley in the Santa Lucia Mountains between Point Sur and Lopez Point, with their inland boundary extending to just east of the Salinas River. The Esselen occupied seasonal villages depending on resource availability (Breschini and Haversat 2001).

Costanoan territory extended from the point where the San Joaquin and Sacramento rivers issue into the San Francisco Bay to Point Sur, 135 miles south of San Francisco, with the interior Coast Ranges likely constituting their inland boundary (Kroeber 1925). The Costanoan were semi-sedentary with a settlement system characterized by base camps of tule reed houses and seasonal specialized camps (Skowronek 1998). Subsistence was based on hunting, gathering, and fishing. Mussels and acorns were particularly important food resources (Kroeber 1925, Skowronek 1998).

Salinan territory ranged from Carmel Valley south to Morro Bay. They occupied permanent villages. Salinan subsistence was centered on the gathering of acorns and other edible plants and the hunting of animals such as dove, quail, rabbit, and deer (Taylor 2013).

Northern Valley Yokut populations were concentrated along waterways in the San Joaquin River. Settlements typically comprised single-family dwellings, sweathouses, and ceremonial structures. Subsistence activities focused on areas in the San Joaquin Valley with water resources, emphasizing salmon and acorns (Kroeber 1925).

b. Historic Background

Europeans first visited the Monterey Coast in 1602 when Sebastian Vizcaíno arrived (Bean 1968). The Spanish presidio and mission, which was later moved to Carmel, were established by Captain Gaspar de Portolá in Monterey in 1770; they served as the capital of the California missions until 1803 (Bean 1968: 40; Johnson 1979:83). Mission San Antonio de Padua, in southern Monterey County, was founded in 1791. Missions Santa Cruz, located in the current city of Santa Cruz and Nuestra Señora de la Soledad, in central Monterey County, were founded in 1791. Mission San Juan Bautista, in northwestern San Benito County, was founded in 1797 (Bean 1968; 45).

The Mission Period was characterized by the acculturation of Native American populations into the Mission system of sedentary lifestyles and cultivation (rather than hunting and gathering), and the conversion to Christianity.

In 1791, Comandante General Pedro de Nava authorized the establishment of presidial pueblos (civilian lands around military forts) with detailed regulations for their organization. The Pueblo of Monterey grew in population as Spanish soldiers married and raised families or retired to this location. In 1796, Marques de Branciforte and Governor Diego de Borica created the Villa de Branciforte adjacent to Mission Santa Cruz lands, a pueblo to be colonized by retired soldiers and their families. However, no soldiers could be convinced to move to the Villa de Branciforte and the settlement failed (Bean 1968).

In 1822, the word of Mexico's independence from Spain arrived in California. Hallmarks of the Mexican Period in California include the secularization of mission lands, which was fully accomplished by 1836, and the issuance of large and numerous land grants to soldiers and prominent citizens. The Treaty of Guadalupe Hidalgo was signed in 1848, ending the Mexican American War and officially making California a territory of the United States. U.S. jurisdiction over California had really begun two years earlier, when on July 7, 1846, Commodore John D. Sloat raised the U.S. flag after the "Battle of Monterey," after 50 U.S. Marines and 100 Navy sailors landed unopposed and captured the city without firing a shot. The Gold Rush brought a multitude of new settlers to California in 1848 and the construction of the transcontinental railroad in 1869 contributed further to California's population boom (Bean 1968).

Monterey and Santa Cruz counties were created in 1850 as two of the original counties in California. San Benito County was separated from Monterey County in 1874. Early American settlements in the area developed around the residences of earlier Hispanic settlers and on new colony settlements (Bean 1968).

c. Cultural Resources Inventory

To compile a listing of recognized significant historic and prehistoric resources in Monterey, San Benito, and Santa Cruz counties, information was obtained from the State Office of Historic Preservation website. The statewide Historical Resources Inventory is not available for public review according to the California Historical Information System Information Center Rules of Operation Manual (Section III.A). Therefore, this section does not include a complete list of all recorded cultural resources in the AMBAG region. The Historical Resources Inventory would be consulted after the determination of an Area of Potential Effect under project level analysis of MTP/SCS transportation projects.

Table 4.5-1, Table 4.5-2, and Table 4.5-3 present identified cultural resources in Monterey, San Benito, and Santa Cruz counties respectively. Included in each table are sites listed on the National Register of Historic Places (National Register), sites designated as a California State Landmark, sites listed in the California Register of Historical Resources (California Register) and those that are considered California Points of Historical Interest. Resources listed on the National Register are also automatically listed on the California Register. The National Register, authorized

by the National Historic Preservation Act (NHPA), lists the Nation's significant cultural resources. Resources listed in the National Register are protected under the NHPA. The State Office of Historic Preservation maintains the California Register, which lists cultural resources important to the history of California; these are protected under CEQA. California Points of Historical Interest refers to resources of local significance.

Table 4.5-1 presents identified cultural resources in Monterey County, where there are 50 National Register listings, 25 California State Landmarks, two California Register listings, and three Points of Historical Interest.

Table 4.5-1 Monterey County Historical Resources

City or Community	Resource Name	National Register	State Landmark	California Register	Point of Historical Interest
Pacific Grove	Asilomar Conference Grounds	X	X		
Carmel Valley	Berwick Manor and Orchard	X			
Monterey	Black, Mary C. W., Studio House	X			
Salinas	Black, Samuel M., House	X			
Salinas	Bontadelli, Peter J., House	X			
Salinas	Boronda, Jose Eusebio, Adobe	X			
Monterey	Bromfield/Berne House			X	
Pacific Grove	Buck, Frank Laverne House	X			
Monterey County	Carmel Valley Road-Boronda Road Eucalyptus Trees	X			
Monterey	Casa De Oro		X		
Castroville	Castroville Japanese Language School	X			
Pacific Grove	Centrella Hotel	X			
Pacific Grove	Chautauqua Hall		X		
Monterey	Colton Hall		X		
Gonzales	Community Church of Gonzales	X			
King City	Cueva Pintada	X			
Monterey	Custom House	X	X		
Big Sur	Deetjen's Big Sur Inn	X			
Jolon	Dutton Hotel, Stagecoach Station	X			
Monterey	El Castillo	X			
Monterey	Finch, James W., House	X			
Salinas	First and Second Filipino Regiments Monument				X
Monterey	First Theater in California		X		
Gonzales	Gabilan Lodge No. 372- Independent Order of Odd Fellows	X			
Jolon	Gil, Jose Mario, Adobe	X			

City or Community	Resource Name	National Register	State Landmark	California Register	Point of Historical Interest
Watsonville	Glass House, Casa Materna of the Vallejos		X		
Pacific Grove	Gosby House Inn	X			
Monterey	Gutierrez Adobe		X		
Salinas	Harvey-Baker House			X	
Salinas	Hill Town Ferry		X		
Monterey	House of Four Winds		X		
Monterey	House of Governor Alvarado		X		
Carmel	Jeffers, Robinson, House	X			
Salinas	José Eusebio Boronda Adobe Casa		X		
King City	King City Joint Union High School Auditorium	X			
Lucia	Kirk Creek Campground	X			
Salinas	Krough House	X			
Monterey	Landing Place of Sebastian Vizcaino and Fray Junípero Serra		X		
Monterey	Larkin House		X		
Soledad	Los Coches Rancho	X			
Monterey	Marsh, G.T. and Sons	X			
Monterey	Merritt, Josiah, Adobe	X			
King City	Milpitas Ranch House	X			
Soledad	Mission Nuestra Señora de la Soledad		X		
King City	Mission San Antonio de Padua		X		
Carmel	Mission San Carlos Borroméo de Carmelo		X		
Salinas	Monterey County Jail	X			
Monterey	Monterey Old Town Historic District	X			
Salinas	Nesbitt, Sheriff William Joseph, House	X			
Monterey	Old Pacific House		X		
Pebble Beach	Olvida Penas	X			
Carmel By-the-Sea	Outlands in the Eighty Acrea	X			
Monterey	Pacific Biological Laboratories	X			
Aromas	Pajaro River				X
Monterey	Parmelee, Lou Ellen House	X			
Pacific Grove	Point Pinos Lighthouse	X			
Big Sur	Point Sur Light Station	X			

City or Community	Resource Name	National Register	State Landmark	California Register	Point of Historical Interest
Pajaro	Porter-Vallejo Mansion	X			
Big Sur	Post, Joseph W., House	X			
Salinas	Rancho Las Palmas	X			
San Lucas	Rancho San Lucas	X			
Soledad	Richardson Adobe		X		
Monterey	Robert Louis Stevenson House		X		
Figueroa	Royal Presidio Chapel of San Carlos Borroméo		X		
Jolon	San Antonio De Padua Mission	X			
Salinas	Sargent, B. V., House	X			
Greenfield	Site Number 4 MNT 85	X			
Salinas	Site of the Battle of Natividad		X		
Monterey	Soberanes Adobe		X		
Salinas	Steinbeck, John House	X			
Monterey	Stevenson House	X			
Carmel-by-the-Sea	Sunset Center	X			
Salinas	Temporary Detention Camps for Japanese Americans-Salinas Assembly Center		X		
Jolon	Tidball Store	X			
Pacific Grove	Trimmer Hill	X			X
Monterey	Vásquez House		X		
Monterey County	Whaler's Cabin	X			

Source: California Office of Historic Preservation 2025

Table 4.5-2 presents identified cultural resources in San Benito County, where there are 13 National Register listings, five California State Landmarks, two Points of Historical Interest, and no California Register listings.

Table 4.5-2 San Benito County Historical Resources

City or Community	Resource Name	National Register	State Landmark	Point of Historical Interest
San Juan Bautista	Anza House	X		
San Juan Bautista	Castro-Breen Adobe	X	X	
Soledad	Chalone Creek Archaeological Sites	X		
Hollister	Downtown Hollister Historic District	X		
San Juan Bautista	Fremont Peak		X	
Hollister	Hawkins, Joel and Rena, House	X		
Hollister	Hollister Carnegie Library	X		
San Juan Bautista	Marentis House	X		
Hollister	McCallum, Roy D. House	X		
San Juan Bautista	Mission San Juan Bautista and Plaza		X	
Hollister	Monterey Street Historic District	X		
San Benito County	New Idria Mine		X	
San Juan Bautista	The Pear Tree			X
San Juan Bautista	Plaza Hotel	X	X	
San Juan Bautista	Rozas House	X		
San Juan Bautista	San Juan Bautista Congregational Church, Glad Tidings Chu			X
San Juan Bautista	San Juan Bautista Plaza Historic District	X		
San Juan Bautista	Wilcox, Benjamin, House	X		

Source: California Office of Historic Preservation 2025

Table 4.5-3 presents identified cultural resources in Santa Cruz County. Within Santa Cruz County there are 43 National Register listings, seven California State Landmarks, seven Points of Historical Interest, and no California Register listings.

Table 4.5-3 Santa Cruz County Historical Resources

City or Community	Resource Name	National Register	State Landmark	Point of Historical Interest
Santa Cruz	Bank of Santa Cruz County	X		
Aptos	Bayview Hotel	X		
Big Basin	Big Basin Redwoods State Park		X	
Watsonville	Bockius, Godfrey M., House	X		
Santa Cruz	Branciforte Adobe	X		
Santa Cruz	Brown, Allan, Site	X		
Santa Cruz	Carmelita Court	X		
Watsonville	Castro, Jose Joaquin, Adobe	X		
Santa Cruz	Cope Row Houses	X		
Santa Cruz	Cowell Lime Works Historic District	X		
Davenport	Davenport Jail	X		
Freedom	Discovery of California Redwoods			X
Santa Cruz	Evergreen Cemetery			X
Felton	Felton Covered Bridge	X	X	
Felton	Felton Presbyterian Church	X		
Santa Cruz	Garfield Park Branch Library	X		
Santa Cruz	Glen Canyon Covered Bridge	X		
Scotts Valley	Glenwood		X	
Santa Cruz	Golden Gate Villa	X		
Santa Cruz County	Grace Episcopal Church	X		
Capitola	Hihn Building	X		
Capitola	Hihn Building, Superintendent's Office			X
Santa Cruz	Hinds, A. J., House	X		
Santa Cruz	Hotel Metropole	X		
Watsonville	Judge Lee House	X		
Watsonville	Lettunich Building	X		
Santa Cruz	Live Oak Ranch	X		
Santa Cruz	Looff Carousel and Roller Coaster on the Santa Cruz Beach Boardwalk	X		
Watsonville	Madison House	X		
Watsonville	Mansion House Hotel	X		
Santa Cruz	Mission Hill Area Historic District	X		
Scotts Valley	Mountain Charlie Big Tree			X
Santa Cruz	Neary-Rodriguez Adobe	X		
Santa Cruz	Octagon Building	X		
Capitola	Old Riverview Historic District	X		

City or Community	Resource Name	National Register	State Landmark	Point of Historical Interest
Ben Lomond	Phillpshurst-Riverwood	X		
Santa Cruz	Rancho San Andrés Castro Adobe		X	
Watsonville	Redman House	X		
Capitola	Rispin Mansion	X		
Santa Cruz	Robinson, Elias H., House	X		
Santa Cruz County	Sand Hill Bluff Site			X
Santa Cruz	Santa Cruz Beach Boardwalk		X	
Santa Cruz	Santa Cruz County Hall of Records - Octagon Building			X
Santa Cruz	Santa Cruz Downtown Historic District	X		
Scotts Valley	Scott, Hiram D., House	X		
Santa Cruz	Site of Center of Villa de Branciforte		X	
Capitola	Six Sisters-Lawn Way Historic District	X		
Watsonville	Stoesser Block and Annex	X		
Capitola	Superintendent's Office		X	
Felton	Toll House, Toll House Resort Motel			X
Santa Cruz	US Post Office- Santa Cruz Main	X		
Aptos	Valencia Hall	X		
Capitola	Venetian Court Apartments	X		
Santa Cruz	Veterans Memorial Building	X		
Watsonville	Watsonville City Plaza	X		
Watsonville	Watsonville-Lee Road Site	X		

Source: California Office of Historic Preservation 2025

4.5.2 Regulatory Setting

a. Federal Laws, Regulations, and Policies

National Historic Preservation Act

The NHPA of 1966, as amended, is the primary mandate governing projects under federal jurisdiction that may affect cultural resources. Section 106 of the NHPA requires federal agencies, or those they fund or permit, to consider the effects of their actions on the properties that may be eligible for listing or that are listed in the National Register. The regulations implementing Section 106 are codified in 36 CFR Part 800. To determine whether an undertaking could affect National Register-eligible properties, cultural resources must be inventoried and evaluated for listing in the National Register. The criteria applied to evaluate the significance of cultural resources are defined as follows.

The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling and association and that have any of the following characteristics:

(a) Associated with events that have made a significant contribution to the broad patterns of our history

(b) Associated with the lives of persons significant in our past

(c) Embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction

(d) Have yielded, or may be likely to yield, information important in prehistory or history

The Department of Transportation Act

Passed in 1966, the Department of Transportation Act (49 United States Code 303, formerly 49 United States Code 1651(b)(2) and 49 United States Code 1653f) includes Section 4(f), which states that the Federal Highway Administration and other U.S. Department of Transportation agencies cannot approve the use of land from public and private historical sites unless certain conditions apply. These conditions are the following: If there is no feasible and prudent avoidance alternative to the use of land, and if the action includes all possible planning to minimize harm to the property resulting from such use; or if the Federal Highway Administration determines the use of the property will have a *de minimis* impact.

Archaeological Resources Protection Act

The Archaeological Resources Protection Act was enacted in 1979 to protect archaeological resources and sites that are on public lands and tribal lands, to foster increased cooperation and exchange of information between government representatives, the professional archaeological community, and private individuals. Section 4 of the statute and Sections 16.5-16.12 of the uniform regulations describe the requirements that must be met before federal authorities can issue a permit to excavate or remove any archaeological resource on federal or tribal lands. The curation requirements of artifacts, other materials excavated or removed, and the records related to the artifacts and materials are described in Section 5 of the Act. This section also authorizes the Secretary of the Interior to issue regulations describing in more detail the requirements regarding these collections.

b. State Laws, Regulations, and Policies

California Register of Historical Resources

The California Register of Historical Resources (CRHR) program was designed for use by state and local agencies, private groups, and citizens to identify, evaluate, register, and protect California's historical resources. A historical resource can include any object, building, structure, site, area, or place that is determined to be historically or archaeologically significant. The CRHR is an authoritative guide to the state's significant archaeological and historic architectural resources.

The list of these resources can be used for state and local planning purposes; the eligibility determinations can be used for state historic preservation grant funding and listing in the CRHR provides a certain measure of protection under CEQA.

California Historical Landmarks Program

The Historical Landmarks Program was instated to register buildings or landmarks of historical interest. Historical Landmarks are defined as sites, buildings, or features that have a statewide historical, cultural, anthropological, or other significance. To be designated as a Historical Landmark by the Director of California State Parks, the resource must meet set criteria, be recommended for designation by the State Historical Resources Commission and be approved by the property owners. The goals of the program include the preservation and maintenance of registered landmarks, most of which include missions, early settlements, battles, and gold rush sites (Public Resources Code [PRC] Sections 5020.4, 5021, 5022, 5022.5, 5031 and 5032).

California Environmental Quality Act

Archaeological Resources

CEQA 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 any 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

Impacts to Historical Resources

Section 15064.5 of the *CEQA Guidelines* states that "a project with an effect that may cause a substantial adverse change in the significance of a historical resource is a project that may have a significant effect on the environment." The CEQA Guidelines (Section 15064.5(a)) define an "historical resource" as including the following:

1. A resource listed in, or eligible for listing in, the California Register of Historical Resources
2. A resource listed in a local register of historical resources (as defined at PRC Section 5020.1(k)
3. A resource identified as significant in a historical resources survey meeting the requirements of PRC Section 5024.1(g)

4. 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. (Generally, a resource is considered by the lead agency to be "historically significant" if the resource meets the criteria for listing in the CRHR

CEQA Guidelines (Section 15064.5(b)[1]) define "substantial adverse change" as "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired." Generally, the significance of a historical resource is "materially impaired" when a project demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its inclusion in or eligibility for the CRHR, or its inclusion in a local register of historical resources (CEQA Guidelines Section 15064.5(b)(2)).

Standard Mitigation Measures Under CEQA

HISTORICAL RESOURCES

Mitigation measures for historical resources impacts are discussed in State CEQA Guidelines Section 15126.4. Generally, by following the Secretary of the Interior's Standards for the Treatment of Historic Properties or the Secretary of the Interior's Standards for Rehabilitation, impacts can be considered as mitigated to a level less than significant. For historical resources that are archaeological sites, according to the State CEQA Guidelines Section 15126.4(b)(3), public agencies should, whenever feasible, seek to avoid damaging effects on any historical resource of an archaeological nature.

UNIQUE ARCHEOLOGICAL RESOURCES

A cultural resource is also significant if it is a unique *archaeological resource*, which is defined in §21083.2(g) as 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 any of the following criteria:

1. Contains information needed to answer important scientific research questions and that 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

If an archaeological resource qualifies as a "historical resource," potential adverse impacts must be considered in the same manner as a historical resource pursuant to CEQA Guidelines Section 15064.5(c)(2)). If the archaeological site does not qualify as a historical resource but does qualify as a unique archaeological resource, then the archaeological site is treated in accordance with PRC Section 21083.2 (CEQA Guidelines Section 15064.5(c)(3)).

California Public Resources Code Section 5024 and State-Owned Lands

Historical resources on State-owned lands are subject to the requirements of PRC Section 5024. PRC Section 5024.5(f) requires State agencies to submit to 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 registered or eligible for registration as California Historical Landmarks. The SHPO has 30 days after receipt of the notice for review and comment. If the SHPO determines that a proposed action would have an adverse effect on a listed historical resource, the relevant State agency shall adopt prudent and feasible measures that will eliminate or mitigate the adverse effects.

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 descendant of the deceased. The act stipulates the procedures that the descendants may follow for treating or disposing of the remains and associated grave goods.

Health and Safety Code Section 7050.5

Section 7050.5 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 Native American, the coroner must contact the NAHC.

Public Resources 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 burial falls within the jurisdiction of the NAHC. Section 5097.5 of the PRC 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.

California Health and Safety Code Sections 7050.5, 7051, and 7054

HSC Sections 7050.5, 70051, and 7051, and 7054 specify the provisions for the protection of human burial remains. Section 7050.5 of the HSC states the following:

> In the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the human remains are discovered has determined, in accordance with Chapter 10 (commencing with Section 27460) of Part 3 of Division 2 of Title 3 of the Government Code, that the remains are not subject to the provisions of Section 27491 of the Government Code or any other related provisions of law concerning investigation of the circumstances, manner and cause of any death, and the recommendations concerning the treatment and disposition of the human remains have been made to the person responsible for the excavation, or to his or her authorized representative, in the manner provided in Section 5097.98 of the Public Resources Code. The coroner shall make his or her determination within two working days from the time the person responsible for the excavation, or his or her authorized representative, notifies the coroner of the discovery or recognition of the human remains. If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes the human remains to be those of a Native American, or has reason to believe that they are those of a Native American, he or she shall contact, by telephone within 24 hours, the Native American Heritage Commission.

Section 7051 of the HSC states the following:

> Every person who removes any part of any human remains from any place where it has been interred, or from any place where it is deposited while awaiting interment, cremation, or hydrolysis, with intent to sell it or to dissect it, without authority of law, or written permission of the person or persons having the right to control the remains under Section 7100, or with malice or wantonness, has committed a public offense that is punishable by imprisonment pursuant to subdivision (h) of Section 1170 of the Penal Code.

Section 7054 of the HSC states the following:

> (a) (1) Except as authorized pursuant to the sections referred to in subdivision (b), every person who deposits or disposes of any human remains in any place, except in a cemetery, is guilty of a misdemeanor.
>
> (2) Every licensee or registrant pursuant to Chapter 12 (commencing with Section 7600) of Division 3 of the Business and Professions Code and the agents and employees of the licensee or registrant, or any unlicensed person acting in a capacity in which a license from the Cemetery and Funeral Bureau is required, who, except as authorized pursuant to the sections referred to in subdivision (b), deposits or disposes of any human remains in any place, except in a cemetery, is guilty of a misdemeanor that shall be punishable by imprisonment in a county jail not exceeding one year, by a fine not exceeding ten thousand dollars ($10,000), or both that imprisonment and fine.
>
> (b) Cremated remains or hydrolyzed human remains may be disposed of pursuant to Sections 7054.6, 7116, 7117, and 103060.

(c) Subdivision (a) of this section shall not apply to the reburial of Native American remains under an agreement developed pursuant to subdivision (l) of Section 5097.94 of the Public Resources Code, or implementation of a recommendation or agreement made pursuant to Section 5097.98 of the Public Resources Code.

Public Resources Code Section 5097.98

PRC Section 5097.98 addresses the disposition of Native American burials, protects such remains, and established the NAHC to resolve any related disputes. Section 5097.98 of the PRC states the following:

(a) Whenever the commission receives notification of a discovery of Native American human remains from a county coroner pursuant to subdivision (c) of Section 7050.5 of the Health and Safety Code, it shall immediately notify those persons it believes to be most likely descended from the deceased Native American. The descendants may, with the permission of the owner of the land, or his or her authorized representative, inspect the site of the discovery of the Native American human remains and may recommend to the owner or the person responsible for the excavation work means for treatment or disposition, with appropriate dignity, of the human remains and any associated grave goods. The descendants shall complete their inspection and make recommendations or preferences for treatment within 48 hours of being granted access to the site.

(b) Upon the discovery of Native American remains, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located, is not damaged or disturbed by further development activity until the landowner has discussed and conferred, as prescribed in this section, with the most likely descendants regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. The landowner shall discuss and confer with the descendants all reasonable options regarding the descendants' preferences for treatment.

Native American Graves Protection and Repatriation Act

Health and Safety Code Sections 8010–8011 establishes a State repatriation policy intent that is consistent with and facilitates implementation of the federal Native American Graves Protection and Repatriation Act. The act strives to ensure that all California Indian human remains and funerary objects are treated with appropriate dignity and respect. It also states the intent for the State to provide mechanisms for aiding California Indian tribes, including non-federally recognized tribes, in filing repatriation claims and getting responses to those claims.

California Health and Safety Code Sections 18950 through 18961

The State Historic Building Code (HSC; Sections 18950–18961) provide alternative building regulations and building standards for the rehabilitation, preservation, restoration (including related reconstruction), or relocation of buildings or structures designated as historic buildings. Such alternative building standards and building regulations are intended to facilitate the

restoration or change of occupancy 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.

c. Local Laws, Regulations, and Policies

The general plans and zoning ordinances of the cities within the Monterey Bay region regulate design and the built environment within those communities, while the general plans for each county perform the same function within unincorporated areas. In all cases, the general plans and zoning typically prescribe policies related to the protection of cultural resources.

Monterey County

The Monterey County General Plan Open Space Element (Monterey County 2010) contains policies that pertain to cultural resources as show below.

> **Policy OS-6.1.** Important representative and unique archaeological sites and features shall be identified and protected for all parcels with undisturbed natural conditions (i.e., ungraded properties), consistent with State Office of Historic Preservation guidelines and definitions employed on a statewide basis, including Phase I, II and III archaeological studies.
>
> **Policy OS-6.3.** New development proposed within moderate or high sensitivity zones, or within 150 feet of a known recorded archaeological and/or cultural site, shall complete a Phase I survey including use of the regional State Office of Historic Preservation or the California Native American Heritage Commission's list of sacred and traditional sites. Routine and Ongoing Agricultural Activities shall be exempted from this policy in so far as allowed by state or federal law.
>
> **Policy OS-6.4.** Development proposed in low sensitivity zones are not required to have an archaeological survey unless there is specific additional information that suggests archaeological resources are present.
>
> **Policy OS-6.6.** Efforts by historical, educational, or other organizations to improve the public's recognition of the County's cultural heritage and the citizen's responsibilities for archaeological or cultural resource preservation shall be encouraged. The County shall adopt a uniform set of guidelines to define Phase I, II and III significance assessment and data recovery programs. Similar guidelines shall be created to set standards for requirements for consultation with Native Californian descendants to establish procedures for determining the presence or absence of sacred or traditional sites. These guidelines shall address monitoring requirements and participation in cultural resource data recovery programs.

Chapter 18.25 of the Monterey County Code of Ordinances (Preservation of Historic Resources) contains the policies and procedures for administering historic resources in Monterey County.

The City of Monterey General Plan includes goals and policies to protect historic and cultural resources, including maintaining cultural resources master plans for districts of the city, encouraging development that enhances historic resources, and working with local stakeholders on preservation and conservation efforts. The City of Seaside 2040 General Plan includes goals

and policies to establish an inventory of known cultural and historic resources in the city, expand historic preservation efforts, and to promote historic places and cultural tourism. The City of Marina General Plan has policies to protect and preserve archaeological resources, and to maintain the historic significance of areas that define the City such as the former Fort Ord. Cities throughout Monterey County have similar goals and policies in their respective general plans.

San Benito County

The Land Use Element and Natural and Cultural Resources Element of the San Benito County 2035 General Plan (San Benito County 2015a) includes goals and policies to protect Native American, archaeological, and historical resources. Cultural resources goals and policies are listed below.

> **Policy LU-1.10 Development Site Suitability.** The County shall encourage specific development sites to avoid natural and manmade hazards, including, but not limited to, active seismic faults, landslides, slopes greater than 30 percent and floodplains. Development sites shall also be on soil suitable for building and maintaining well and septic systems (i.e., avoid impervious soils, high percolation, or high groundwater areas and pro- vide setbacks from creeks). The County shall require adequate mitigation for any development located on environmentally sensitive lands (e.g., wetlands, erodible soil, archaeological resources, important plant, and animal communities).

Goal NCR-7. To protect, preserve and enhance the unique cultural and historic resources in the county.

> **Policy NCR-7.11 Prohibit Unauthorized Grading.** The County shall prohibit unauthorized grading, collection, or degradation of Native American, archaeological, or paleontological resources.
>
> **Policy NCR-7.12 Archaeological Artifacts.** The County shall require an archaeological report prior to the issuance of any project permit or approval in areas determined to contain significant historic or prehistoric archaeological artifacts and when the development of the project may result in the disturbance of the site. The report shall be written by a qualified cultural resource specialist and shall include information as set forth in the county's archaeological report guidelines available at the County Planning Department.

The San Benito County Code, Title 19 (Land Use and Environmental Regulations), Chapter 19.05 (Architectural Site Review Ordinance) protects and preserves cultural resources in areas where cultural resources are known or not yet to be discovered by providing regulations for the protection, enhancement, and perpetuation of archaeological sites.

The City of Hollister General Plan EIR has mitigation measures that address historic preservation and impacts to cultural resources. While these have not been integrated into the General Plan as of the writing of this report, development within city limits would be subject to State law and the mitigation that addresses historic resources. The San Juan Bautista 2035 General Plan includes

goals and policies to address historic preservation that interleaves with their community design vision and includes maintaining and preserving the integrity of local historic resources.

Santa Cruz County

The Santa Cruz County General Plan and Local Coastal Program (Santa Cruz County, 2024) Agriculture, Natural Resources + Conservation Element includes policies to protect archaeological and historical resources. Applicable policies are listed below.

Policy ARC-8.1.1 (LCP) Evaluation of Native American Cultural Sites. Protect all archaeological resources until they can be evaluated. Prohibit any disturbance of Native American Cultural Sites, archaeological sites, or identified tribal cultural resources without an appropriate permit. Maintain the Native American Cultural Sites ordinance.

Policy ARC-8.1.2 (LCP) Site Surveys. Require an archaeological site survey (surface reconnaissance) as part of the environmental review process for all projects with very high site potential within the Archaeological Sensitive Areas, as designated on the General Plan/LCP Resources and Constraints Maps (Appendix F).

Policy ARC-8.1.3 (LCP) Development Around Archaeological Resources. Protect identified archaeological resources from development by restricting improvements and grading activities to portions of the property not containing these resources, where feasible, or by preservation of the archaeological site through project design and/or use restrictions as determined by a professional archaeologist, and through tribal consultations where required.

Policy ARC-8.1.4 (LCP) Archaeological Evaluations. Require the applicant for development proposals on any identified archaeological site to provide an evaluation, by a certified archaeologist, of the significance of the resource and what protective measures are necessary to preserve important and unique archaeological sites and to mitigate any impacts of proposed development consistent with General Plan /LCP Land Use Plan objectives and policies and California state law. Avoidance shall be the preferred mitigation measure.

Policy ARC-8.1.5 Accidental Discovery of Archaeological Resources. If archaeological resources or human remains are discovered accidentally during grading or construction, the activity shall cease and the property owner shall notify the proper authority in accordance with the Native American Cultural Sites ordinance.

Policy ARC-8.1.6 (LCP) Environmental Review. Environmental review shall be required for any project with the potential to significantly impact archaeological or tribal cultural resources.

Policy ARC-8.1.7 (LCP) Consultation for Discretionary Projects. The County shall consult with any California Native American tribe that requests notice of projects in the geographic area traditionally affiliated with the tribe prior to the release of a Negative Declaration or Environmental Impact Report, pursuant to Public Resources Code sections 21073 and 21080. If tribal cultural resources are identified, the County shall work with the affected tribe to identify appropriate mitigation measures to protect the resource.

Policy ARC-8.1.8 (LCP) Consultation for General Plan Amendments. The County shall consult with California Native American tribes as identified by the California Native American Heritage Commission (NAHC) prior to an amendment or update to the General Plan and prior to the designation of open space in order to identify and protect Native American cultural resources on land affected by the proposal, pursuant to California Government Code Section 65352.3.

Policy ARC-8.2.1 Historic Preservation Program. Maintain, update, and strengthen, where appropriate, the County Historic Resource Preservation ordinance with the assistance of the Historic Resources Commission in accordance with the State Office of Historic Preservation.

Policy ARC-8.2.2 Historic Resources Inventory. Maintain and update a County Historic Resources Inventory to describe those historic structures, objects, properties, sites, and districts which have been designated by the Board of Supervisors for protection of their heritage values.

Policy ARC-8.2.3 Development Activities. For development activities on property containing historic resources, require protection, enhancement, and/or preservation of the historic, cultural, architectural, engineering, or aesthetic values of the resource consistent with regulations in the Historic Preservation ordinance as determined by the Historic Resources Commission.

Policy ARC-8.2.4 Historic Resources Commission Review. Require that applicants for development proposals on property containing a designated historic resource submit plans for the protection and preservation of the historic resource values to the Historic Resources Commission for its review and approval; require an evaluation and report by a professional historian or a cultural resources consultant when required by the Commission. To expedite the review process, allow minor alterations to be reviewed by trained County Staff.

Policy ARC-8.2.5 Encourage Protection of Historic Structures. Encourage and support public and private efforts to protect and restore historic structures and to continue their use as an integral part of the community. See also Policy PPF-2.3.2: Cultural and Historical Resources.

Policy ARC-8.2.6 Maintain Designation as a Certified Local Government. Support existing and further develop local historic resource programs in order to maintain the California State Department of Parks and Recreation's designation of Santa Cruz County as a Certified Local Government (CLG).

Policy ARC-8.2.7 Historic Resource Property Maintenance. Encourage the maintenance and upkeep of historic resources to avoid the need for major rehabilitation and to reduce the risks of demolition, loss through fire or neglect, or impacts from natural disasters.

Policy ARC-8.2.8 Environmental Review. Environmental review shall be required for any project with the potential to significantly impact historic resources.

The Santa Cruz County Municipal Code Title 16 (Environmental and Resource Protection) outlines criteria for Native American cultural studies (chapter 14.60) and historic preservation (Chapter 16.42). Chapter 16.40 defines when archaeological surveys and reports are required, as well as required actions when Native American cultural sites or human remains are discovered during the review of a proposed project or during excavation or other ground disturbing activities. Chapter 16.42 defines the significance and designation of protected historic resources on the Santa Cruz County Inventory of Historic Resources and development procedures for designated historic resources.

As with many jurisdictions in the County, the City of Santa Cruz has goals and policies that address historic preservation and cultural resources protection in the city, including mapping sensitive resources, notifying project applicants if sensitive resources are anticipated on project sites, and managing discoveries, including of human remains, in accordance with local, State, and federal requirements.

4.5.3 Impact Analysis

a. Methodology and Significance Thresholds

For this discussion, the term cultural resource broadly includes historical and archaeological resources. The significance of a cultural resource impact is determined by whether that resource meets the criteria discussed above. Where the significance of a site is unknown, it is presumed to be a significant CEQA defined "historical resource" for the purpose of the impact evaluation in this EIR. Listings of historical resources in Monterey, San Benito and Santa Cruz counties were obtained from the State Office of Historic Preservation. Potential areas of disturbance associated with the 2050 MTP/SCS projects were compared to the identified historical sites listed on Table 4.5-1, Table 4.5-2 and Table 4.5-3 to determine whether an impact to a known cultural resource may occur. As discussed above, Table 4.5-1, Table 4.5-2 and Table 4.5-3 are based on information available online through the State Historic Preservation Office and do not reflect the complete California Historical Resources Information System, which would be consulted on a project-by-project basis.

Appendix G of the CEQA Guidelines identifies the following criteria for determining whether a project's impacts would have a significant impact on cultural resources:

1. Cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5;
2. Cause a substantial adverse change in the significant of an archaeological resource pursuant to §15064.5; or
3. Disturb any human remains, including those interred outside of formal cemeteries.

b. Project Impacts and Mitigation Measures

The following section describes cultural resource impacts associated with the transportation improvements and future land use scenario in the 2050 MTP/SCS. Table 4.5-4 included in Section 4.5.3(c), below, summarizes the specific transportation projects that may result in cultural resources impacts. In general, implementation of proposed transportation improvements and

the reasonably foreseeable future development facilitated under the land use scenario envisioned by the 2050 MTP/SCS would result in cultural resources impacts as described in the following sections.

Threshold 1: Would the project cause a substantial adverse change in the significance of a historical resource pursuant to §15064.5?

Impact CUL-1 IMPLEMENTATION OF PROPOSED TRANSPORTATION IMPROVEMENTS AND THE LAND USE SCENARIO ENVISIONED BY THE 2050 MTP/SCS WOULD CAUSE A SUBSTANTIAL ADVERSE CHANGE IN BUILT ENVIRONMENT CULTURAL RESOURCES THAT ARE HISTORICAL RESOURCES AS DEFINED IN STATE CEQA GUIDELINES SECTION 15064.5. IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

With regard to known significant historic structures, the location and nature of the proposed 2050 MTP/SCS projects were evaluated relative to the location of the historic properties listed in Table 4.5-1, Table 4.5-2 and Table 4.5-3. Projects that involve bridge replacements and removal of other structures older than 50 years could generate an impact to historic structures. Furthermore, projects that are adjacent to or near historic structures would alter the integrity of those structures by changing their environmental context.

The 2050 MTP/SCS also has a future land use scenario that emphasizes infill development near transit, such as train stations and multimodal transportation hubs in existing urbanized areas, though some development in outlying areas would still occur. However, because future infill near transit could be located near or adjacent to existing historic structures, the integrity of such structures could be indirectly or directly impacted as a result. Moreover, if future infill near transit would involve redevelopment/demolition of existing structures, it is possible that such structures could have historical significance (as determined by site specific evaluation) given the presence of structures that are over 50 years old within the AMBAG region, particularly within existing urbanized areas. These impacts could occur in outlying areas as well; however, they are more likely to occur in infill areas due to the presence of existing development that may be considered historic. Redevelopment or demolition could result in the permanent loss of historic structures. Similarly, while proposed transportation projects would not impact known historic structures, it is possible that such projects may require reconstruction or demolition of transportation infrastructure or other structures that are over 50 years old, and which may be considered historically significant as determined by site specific evaluation. Such reconstruction or demolition would result in the permanent loss of historic structures.

In general, prior to commencement of any action, development, or land use changes on lands subject to federal jurisdiction or for projects involving federal funding, a cultural resource survey and an environmental analysis must be prepared, including a historic resources assessment. Historic structures are protected under the regulations of the National Historic Preservation Act and the Department of Transportation Act of 1966. AMBAG-sponsored projects would be subject to local ordinance requirements within the jurisdiction in which they occur, including General Plan provisions that protect cultural resources. Nevertheless, impacts would be significant because there would be substantial adverse changes to historic structures that meet the

definition of "historical resources." Thus, the following mitigation measures would be required for any project that may impact historical resources.

Mitigation Measures

To minimize impacts to historical resources for transportation projects under AMBAG jurisdiction, working with TAMC, SBtCOG, and SCCRTC shall, and transportation project sponsor agencies can and should, implement the following mitigation developed for the 2050 MTP/SCS program where applicable for transportation projects that result in impacts to historic resources, and where feasible and necessary based on project- and site-specific considerations. Cities and counties in the AMBAG planning region can and should implement these measures, where relevant to land use projects implementing under the 2050 MTP/SCS. Project specific environmental documents may adjust these mitigation measures as necessary to respond to site specific conditions.

CR-1 Historical Resources Impact Minimization

Prior to individual project permit issuance, the implementing agency of a 2050 MTP/SCS project involving earth disturbance or construction of permanent above ground structures or roadways shall, or can and should, prepare a map defining the Area of Potential Effects (APE). This map shall indicate the areas of primary and secondary disturbance associated with construction and operation of the facility and will help in determining whether known historical resources are located within the impact zone. If a structure greater than 45 years in age is within the identified APE, a survey and evaluation of the structure(s) to determine their eligibility for recognition under State, federal, or local historic preservation criteria shall be conducted. The evaluation shall be prepared by an architectural historian, or historical architect meeting the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation, Professional Qualification Standards. The evaluation shall comply with CEQA Guidelines section 15064.5(b). Study recommendations shall be implemented, which may include, but would not be limited to, the following:

- Realign or redesign projects to avoid impacts on known historic resources where possible
- If avoidance of a significant architectural/built environment resource is not feasible, additional mitigation options include, but are not limited to, specific design plans for historic districts, or plans for alteration or adaptive re-use of a historical resource that follows the Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitation, Restoring, and Reconstructing Historic Buildings
- Comply with existing local regulations and policies that exceed or reasonably replace any of the above measures that protect historic resources

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for transportation projects are RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects are cities and counties. This mitigation measure shall, or can and should, be applied during permitting and environmental review.

Significance After Mitigation

Redevelopment or demolition that may be required to implement transportation improvements and/or infill development may result in the permanent loss or damage to historic structures. While implementation of Mitigation Measure CR-1 would reduce impacts to the extent feasible, some project specific impacts may be unavoidable. Therefore, this impact would remain significant and unavoidable. No additional mitigation measures to reduce this impact to less than significant levels are feasible.

Threshold 2: Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

Impact CUL-2 IMPLEMENTATION OF PROPOSED TRANSPORTATION IMPROVEMENTS AND THE LAND USE SCENARIO ENVISIONED BY THE 2050 MTP/SCS WOULD CAUSE A SUBSTANTIAL ADVERSE CHANGE IN THE SIGNIFICANCE OF ARCHAEOLOGICAL RESOURCES AS DEFINED IN STATE CEQA GUIDELINES SECTION 15064.5. IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

It is known that archaeological resources are present throughout the AMBAG region. Therefore, it is possible to encounter known and unknown archaeological resources during implementation of transportation improvement projects under the 2050 MTP/SCS, particularly when ground-disturbing activities are involved. Many of the improvements proposed under the 2050 MTP/SCS consist of minor expansions of existing facilities that would not involve construction in previously undisturbed areas. However, depending on the location and extent of the proposed improvement and ground disturbance, known and/or unknown cultural resources could be impacted. Project specific analysis would be required as individual projects are proposed.

The 2050 MTP/SCS considers a future land use scenario that emphasizes infill near transit and in existing urbanized areas. However, it is possible that archaeological resources could be located on or near future infill development sites, and in undisturbed areas that would be developed during implementation of the 2050 MTP/SCS. Project grading and excavation for development sites would disturb these undiscovered resources.

In general, prior to commencement of any action, development, or land use changes on lands subject to federal jurisdiction or for projects involving federal funding, a cultural resource survey and an environmental analysis must be prepared. County and city sponsored projects would be subject to local ordinance requirements, including general plan provisions that protect cultural resources. Nevertheless, impacts to archaeological resources would be significant because there would be substantial adverse changes to the significance of archaeological resources, i.e., archaeological resources that meet the definition of "historical resources" or "unique archaeological resources."

Mitigation Measures

To minimize impacts to cultural resources for transportation projects under AMBAG jurisdiction, working with TAMC, SBtCOG, and SCCRTC shall, and transportation project sponsor agencies can

and should, implement the following mitigation developed for the 2050 MTP/SCS program where applicable for transportation projects that result in impacts to archaeological resources, and where feasible and necessary based on project- and site-specific considerations. Cities and counties in the AMBAG region can and should implement these measures, where relevant to land use projects implementing the 2050 MTP/SCS. Project specific environmental documents may adjust these mitigation measures as necessary to respond to site specific conditions.

CR-2(a) Archaeological Resources Impact Minimization

Before construction activities, implementing agencies shall, or can and should, retain a qualified archaeologist to conduct a record search at the Northwest Information Center to determine whether the project area has been previously surveyed and whether resources were identified. When recommended by the Information Center, implementing agencies shall, or can and should, retain a qualified archaeologist to conduct archaeological surveys before construction activities. Implementing agencies shall, or can and should, follow recommendations identified in the survey, which may include, but would not be limited to: subsurface testing, designing and implementing a Worker Environmental Awareness Program (WEAP), construction monitoring by a qualified archaeologist, or avoidance of sites and preservation in place. Recommended mitigation measures will be consistent with CEQA Guidelines Section 15126.4(b)(3) recommendations and may include but not be limited to preservation in place and/or data recovery. All cultural resources work shall follow accepted professional standards in recording any find including submittal of standard DPR Primary Record forms (Form DPR 523) and location information to the appropriate California Historical Resources Information System office for the project area.

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for transportation projects are RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects are cities and counties. This mitigation measure shall, or can and should, be applied during permitting and environmental review and implemented during construction, as applicable.

CR-2(b) Unanticipated Discoveries During Construction

If evidence of any prehistoric or historic-era subsurface archaeological features or deposits are discovered during construction-related earthmoving activities (e.g., ceramic shard, trash scatters, lithic scatters), implementing agencies shall, or can and should, halt all ground-disturbing activity proximate to the discovery until a qualified archaeologist (36 CFR Section 61) can assess the significance of the find. If the find is a prehistoric archaeological site, the culturally affiliated California Native American tribe shall be notified. If the archaeologist determines that the find does not meet the CRHR standards of significance for cultural resources, construction may proceed. If the archaeologist determines that further information is needed to evaluate significance, a testing plan shall be prepared and implemented. If the find is determined to be significant by the qualified archaeologist (i.e., because the find is determined to constitute either an historical resource or a unique archaeological resource), the archaeologist shall work with the implementing agency to avoid disturbance to the resources, and if complete avoidance is not

feasible in light of project design, economics, logistics and other factors, shall recommend additional measures such as the preparation and implementation of a data recovery plan. Recommended mitigation measures will be consistent with State CEQA Guidelines Section 15126.4(b)(3) recommendations and may include but not be limited to preservation in place and/or data recovery. All cultural resources work shall follow accepted professional standards in recording any find including submittal of standard DPR Primary Record forms (Form DPR 523) and location information to the appropriate California Historical Resources Information System office for the project area. If the find is a prehistoric archaeological site, the culturally affiliated California Native American tribe shall be notified and afforded the opportunity to monitor mitigative treatment. During evaluation or mitigative treatment, ground disturbance and construction work may continue in other parts of the project area that are distant enough from the find not to impact it, as determined by the qualified archaeologist.

Implementing Agencies and Timing

Implementing agencies for transportation projects are RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects are cities and counties. This mitigation measure shall, or can and should, be applied during permitting and environmental review and implemented during construction, as applicable.

Significance After Mitigation

Implementation of the above measures would reduce impacts to archaeological resources by requiring cultural resource searches and surveys of project areas and providing a procedure for discovered cultural archaeological resources. While implementation of Mitigation Measures CR-2(a) and CR-2(b) would reduce impacts to the extent feasible, some project specific impacts may be unavoidable. Therefore, this impact remains significant and unavoidable. No additional mitigation measures to reduce this impact to less than significant levels are feasible.

Threshold 3: Would the project disturb any human remains, including those interred outside of formal cemeteries?

Impact CUL-3 IMPLEMENTATION OF PROPOSED TRANSPORTATION IMPROVEMENTS AND THE LAND USE SCENARIO ENVISIONED BY THE 2050 MTP/SCS COULD DISTURB HUMAN REMAINS. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Human burials outside of formal cemeteries are often associated with prehistoric archaeological contexts. Therefore, it is possible to encounter unknown human burials because of implementation of transportation improvement projects under the 2050 MTP/SCS. Excavation during construction activities in the AMBAG region would have the potential to disturb these resources, including Native American burials.

In addition to being potential archaeological resources, human burials have specific provisions for treatment in PRC Section 5097, as listed under Section 4.5.2, *Regulatory Setting*. The California Health and Safety Code (Sections 7050.5, 7051 and 7054) has specific provisions for

the protection of human burial remains. Existing regulations address the illegality of interfering with human burial remains, and protects them from disturbance, vandalism, or destruction, and established procedures to be implemented if Native American skeletal remains are discovered. PRC Section 5097.98 also addresses the disposition of Native American burials, protects such remains, and established the NAHC to resolve any related disputes. Implementation of these regulations would ensure that 2050 MTP/SCS impacts to disturbance of human remains, including those interred outside of formal cemeteries would be less than significant.

Mitigation Measures

None required.

c. Specific MTP/SCS Projects That May Result in Impacts

Table 4.5-4 identifies transportation projects with the potential to cause or contribute to direct or indirect impacts to cultural resources such as those discussed above. Program-level impact determinations were provided for the overall 2050 MTP/SCS Project above. This section is not intended to provide project-specific impact determinations under CEQA. Rather, the transportation projects identified in Table 4.5-4 are representative of those that may result in project-level impacts with or without mitigation and were selected based on their potential scope and likelihood to result in the cultural resources impacts identified above. The intent of this summary is to support potential future streamlining efforts as a screening tool to facilitate early identification of projects likely to result in the impacts identified above. Streamlining opportunities are discussed in Section 1.5, *Implementation Issues and Future Environmental Review*, in Chapter 1, *Introduction*.

Table 4.5-4 2050 MTP/SCS Projects that May Result in Cultural Resources Impacts

AMBAG ID	Project	Location	Impact
MON-GRN005-GR-2026	Thorne Road Bridge over US 101	Monterey County	CR-1, CR-2
MON-GRN008-GR-2026	US 101 - Walnut Avenue Interchange	Monterey County	CR-2
MON-SOL002-SO-2026	US 101 - North Interchange	Monterey County	CR-2
MON-MAR077-MA-2026	Salinas Ave. Improvement Project	Monterey County	CR-1, CR-2
MON-MAR150-MA-2026	Del Monte Blvd Extension	Monterey County	CR-1, CR-2
MON-MAR165-MA-2026	Imjin Road Widening Project	Monterey County	CR-1, CR-2
MON-MYC307-UM-2026	Davis Road Bridge Replacement and Road Widening	Monterey County	CR-1, CR-2
MON-SNS044-SL-2026	Natividad Road Widening	Monterey County	CR-1, CR-2
MON-SNS090-SL-2026	Russell Road Extension	Monterey County	CR-1, CR-2
MON-SNS097-SL-2026	Williams Russell Collector	Monterey County	CR-1, CR-2
MON-SNS098-SL-2026	Sconberg Parkway Extension	Monterey County	CR-1, CR-2
MON-CAR036-CM-2026	Junipero and Ocean Roundabout	Monterey County	CR-2
MON-KCY044-CK-2026	Lonoak RR Crossing Improvements	Monterey County	CR-1, CR-2
MON-MYC202-UM-2026	Johnson Road Bridge	Monterey County	CR-1, CR-2

AMBAG ID	Project	Location	Impact
MON-MYC315-UM-2026	Las Lomas Drainage Project	Monterey County	CR-2
MON-MYC341-UM-2026	Chualar Canyon Road Bridge	Monterey County	CR-1, CR-2
MON-SOL042-SO-2026	Gabilan Dr/Sn Vincente Rd Intersection Improvements	Monterey County	CR-2
MON-SOL052-SO-2026	Front St and San Vicente Rd Intersection Improvements	Monterey County	CR-2
MON-MPA061-MRA-2026	Terminal Complex - Construction (Terminal Building)	Monterey County	CR-2
MON-KCY053-CK-2026	King City Multimodal Transit Station	Monterey County	CR-2
MON-TAMC014-TAMC-2026	Pajaro Station	Monterey County	CR-2
SB-SBC-A22-2026	Airline Highway Bike Path	San Benito County	CR-2
SB-SBC-A65-2026	San Benito River Recreational Trail	San Benito County	CR-2
SB-CT-A44-2026	State Route 25 Corridor Improvement Project	San Benito County	CR-1, CR-2
SB-COH-A18-2026	Westside Boulevard Extension	San Benito County	CR-1, CR-2
SB-COH-A55-2026	Memorial Drive North Extension: Santa Ana Road to Flynn Road/Shelton Intersection	San Benito County	CR-1, CR-2
SB-SBC-A05-2026	Union Road Widening (West) San Benito Street to Highway 156	San Benito County	CR-1, CR-2
SB-SBC-A09-2026	Fairview Road Widening: McCloskey to SR 25	San Benito County	CR-1, CR-2
SB-COH-A78-2026	Rancho Drive & East Nash (Tres Pinos Road) Intersection	San Benito County	CR-2
SB-SBC-A54-2026	Panoche Road Bridge (Bridge No. 43C0027)	San Benito County	CR-1, CR-2
SC-CAP-P12-CAP-2026	Monterey Avenue Multimodal Improvements	Santa Cruz County	CR-1, CR-2
SC-CO-P50-USC-2026	East Cliff Dr Pedestrian Pathway (7th-12th Ave)	Santa Cruz County	CR-2
SC-TRL-13-20-RTC-2026	MBSST Segments 13 to 20 (Rio Del Mar to Pajaro Junction)	Santa Cruz County	CR-2
SC-WAT-01A-WAT-2026	Hwy 1 Harkins Slough Bike-Ped Overcrossing (Safer Access to PVHS & Beyond) (EA 05-1G490)	Santa Cruz County	CR-1, CR-2
SC-WAT-P36-WAT-2026	Alley Improvements	Santa Cruz County	CR-1, CR-2
SC-RTC-24e-RTC-2026	3 - Hwy 1 Auxiliary Lanes & Bus on Shoulders (State Park to Bay/Porter) & Mar Vista Bike/Ped Xing	Santa Cruz County	CR-1, CR-2
SC-CO-P106-USC-2026	Pajaro River Flood Risk Management Project	Santa Cruz County	CR-2
SC-CT-P59-CT-2026	Hwy 9 San Lorenzo River Bridge & Kings Creek Bridge Replacement (EA 05-1H470)	Santa Cruz County	CR-1, CR-2
SC-CT-P84-CT-2026	Waddell Creek Bridge Replacement (EA 05-1R420)	Santa Cruz County	CR-1, CR-2
SC-CO-P102-USC-2026	Glen Arbor Road Bridge Replacement	Santa Cruz County	CR-1, CR-2

AMBAG ID	Project	Location	Impact
SC-CO-P104-USC-2026	Soquel Dr to 41st Ave Dedicated Right Turn Lane	Santa Cruz County	CR-2
SC-CO-P90-USC-2026	Fern Dr at San Lorenzo River Bridge Replacement Project	Santa Cruz County	CR-1, CR-2
SC-42SC-2026	Soquel Ave at Frederick St Intersection Modifications	Santa Cruz County	CR-2
SC-SC-P91-SCR-2026	Shaffer Road Widening and Railroad Crossing	Santa Cruz County	CR-1, CR-2
SC-WAT-P80-WAT-2026	Lake Avenue Underground Utilities	Santa Cruz County	CR-2

4.5.4 Cumulative Impacts

a. Methodology

The cumulative analysis presented below primarily relies on a projections-based approach, using regional land use and growth forecasts for the AMBAG region and adjoining counties to evaluate cumulative conditions. The project is assessed within the existing and foreseeable future environmental setting, and a determination is made as to whether its incremental contribution would be cumulatively considerable when considered alongside both the overall envisioned land use scenario and specific large-scale planned projects. Refer to Section 6.4, *Cumulative Impacts*, in Chapter 6, *Other CEQA Required Discussions*, for a description of the cumulative impact methodology.

b. Impact Analysis

The cumulative impact analysis area for cultural resources consists of the AMBAG region and the adjoining counties, based on the historic, ethnographic, and prehistoric period use patterns of the region. This is appropriate because cultural resources identified in this larger region will be similar in type and style to those that are or may be present in the AMBAG region. As discussed above, the changes envisioned in the 2050 MTP/SCS could include projects that would require substantial ground disturbance in undisturbed areas or in infill areas, could impact historic built environment resources.

Impact CR-C-1 IMPLEMENTATION OF THE PROPOSED TRANSPORTATION IMPROVEMENTS AND THE LAND USE SCENARIO ENVISIONED UNDER THE 2050 MTP/SCS WOULD CAUSE SUBSTANTIAL IMPACTS TO KNOWN AND UNKNOWN CULTURAL, HISTORICAL, OR ARCHAEOLOGICAL RESOURCES. CUMULATIVE IMPACTS WOULD BE SIGNIFICANT AND THE CONTRIBUTION OF THE 2050 MTP/SCS WOULD BE CUMULATIVELY CONSIDERABLE.

The increase in growth in previously undisturbed areas contributes to regional impacts on existing and previously undisturbed and undiscovered historic and archaeological resources, including CEQA-defined “historical resources.” While most cultural resources are site specific, with impacts that are project specific, others may have regional significance; for example, a historic structure that represents the last known example of its kind would constitute a regional impact if it were affected by future 2050 MTP/SCS project implementation. In addition, there are historic districts or areas that can be affected by multiple or successive projects over time,

resulting in a cumulative impact to the historic resource. For such a resource, cumulative impacts would be significant, and the 2050 MTP/SCS contribution to them would be cumulatively considerable. Mitigation Measures CR-1, CR-2(a), and CR-2(b) would reduce impacts associated with 2050 MTP/SCS projects through impact minimization for historical and archaeological resources. However, it cannot be guaranteed that all future project level impacts can be mitigated to a less than significant level. As such, the 2050 MTP/SCS contribution would remain cumulatively considerable after mitigation.

4.6 Energy

This section discusses the energy impacts of implementing transportation projects in the 2050 MTP/SCS, as well as the energy-related consequences of land use projects that are consistent with the 2050 MTP/SCS.

4.6.1 Setting

Energy relates directly to environmental quality. Energy use can adversely affect air quality and other natural resources. Most of California's air pollution is caused by burning fossil fuels. Consumption of fossil fuels is linked to changes in global climate and depletion of stratospheric ozone. Transportation energy use is related to the fuel efficiency of cars, trucks, and public transportation; choice of different travel modes (auto, carpool and public transit); vehicle speeds; and miles traveled by these modes. Construction and routine operation and maintenance of transportation infrastructure also consume energy. In addition, residential, commercial, and industrial land uses consume energy, typically through the usage of natural gas and electricity.

a. Energy Supply

According to the U.S. Energy Information Administration (EIA), California's primary sources of fuel production in 2022 included approximately 44.6 percent crude oil, 11.5 percent nuclear energy, 11.5 percent natural gas, and 7.7 percent wood and waste, with the remainder derived from other renewable sources such as biofuels (U.S. EIA 2025a). In terms of electricity generation, California's 2022 energy mix consisted of approximately 47.3 percent non-hydroelectric renewable energy, 35.2 percent natural gas, 11.5 percent hydroelectric power, 5.9 percent nuclear energy, and 0.1 percent coal-fired generation (U.S. EIA 2025a).

California continues to depend upon out-of-state imports for nearly 90 percent of its natural gas supply (U.S. EIA 2025a). Natural gas production in 2022 was approximately 766,419 thousand cubic feet (Mcf) in Monterey County (California Geologic Energy Management Division [CalGEM] 2022) and 16,931 Mcf in San Benito County (CalGEM 2022). There is no natural gas production in Santa Cruz County. The year 2022 is used to cross examine energy production and consumption across the AMBAG region, as it is the most recent year for available information.

Monterey County's active oil wells produced 5,112,258 barrels (bbl) of oil in 2022 (CalGEM 2022), while San Benito County's active oil wells produced 12,031 bbl of oil in 2022 (CalGEM 2022). Santa Cruz County contains no active oil wells. Table 4.6-1 illustrates the oil and natural gas produced in the AMBAG region in 2022 compared to statewide statistics.

Table 4.6-1 2022 Oil and Natural Gas Production by County

Natural Resource	California	Monterey County	San Benito County	Santa Cruz County	AMBAG Total	AMBAG Proportion of Statewide Production
Crude Oil (bbl)	123,709,701	5,112,258	12,031	0	5,124,289	4.1%
Natural Gas (Mcf)	133,309,472	766,419	16,931	0	783,350	0.6%

Bbl = barrels; Mcf = thousand cubic feet;

Source: CalGEM 2022

b. Energy Consumption and Sources

In 2022, total primary energy consumption in the United States was approximately 9,500 trillion British thermal units (Btu), according to the EIA. The national energy mix included petroleum (37.7 percent), natural gas (35.2 percent), coal (10.3 percent), nuclear electric power (8.4 percent), and renewable energy sources (13.9 percent). Combined, non-fossil fuel sources (renewables and nuclear) accounted for approximately 22.3 percent of total energy consumption.

California ranked third-lowest in the nation for per capita energy consumption in 2022, with an estimated 196 million Btu per person, compared to the national average of 279 million Btu per person. This lower consumption rate is attributed to the state's mild climate, energy efficiency standards, and policies promoting renewable energy development.

Electricity and Natural Gas

In 2023, California used 281,140 gigawatt hours (GWh) of electricity; approximately 58 percent of California's electricity supply came from renewable energy sources, such as wind, solar photovoltaic, geothermal, and biomass (California Energy Commission [CEC] 2025a). In 2023, California also consumed approximately 11,964 million U.S. therms of natural gas (CEC 2025b). Table 4.6-2 illustrates the electricity and natural gas consumption by county and that county's respective proportion of statewide consumption in 2023. In addition, many rural areas within the AMBAG region rely on wood, propane or other liquefied petroleum gases as heating fuels. In 2023, roughly 2,509 households in Monterey County, 585 households in San Benito County, and 2,900 households in Santa Cruz County used wood as their primary heating fuel (U.S. Census Bureau 2025). Meanwhile, roughly 6,132 households in Monterey County, 1,058 households in San Benito County, and 10,399 households in Santa Cruz County used propane or other LGPs as their primary heating fuel (U.S. Census Bureau 2025).

Table 4.6-2 2023 Electricity and Natural Gas Consumption by County

County	Electricity Consumption 2023 Consumption (GWh)[1]	Electricity Consumption Per Capita Consumption (kWh)	Electricity Consumption Statewide Proportion	Natural Gas Consumption 2023 Consumption (MMthm)[2]	Natural Gas Consumption Per Capita Consumption (thm)	Natural Gas Consumption Statewide Proportion
Monterey	2,398	5,462	0.87%	53.2	121.2	0.44%
Santa Cruz	1,135	4,190	0.41%	33.4	123.3	0.28%
San Benito	385	5,996	0.14%	7.8	121.5	0.07%
AMBAG total	**3,918**	**5,216**	**1.42%**	**94.4**	**122.0**	**0.79%**

[1] Electricity consumption is quantified in Millions of Kilowatt-Hours (GWh), while per capita electricity is quantified in Kilowatt-Hours (kWh).

[2] Natural Gas consumption is quantified in Millions of Therms (MMthm), while per capita natural gas consumption is quantified in Therms (thm).

Note: The per capita consumption for natural gas and electricity are determined by using 2023 data from the CEC for overall county-wide consumption and divided by the 2023 county population retrieved from the United States Census Bureau database (774,105 persons). Individual entries may not add up to exact total amounts as a result of rounding to a single decimal point.

Sources: CEC 2025b; CEC 2025c; U.S. Census Bureau 2025

As shown in Table 4.6-2, the AMBAG region consumed 3,918 GWh of electricity and 94.4 Millions of Therms of natural gas in 2023, which accounted for approximately 1.42 percent of the State's electricity consumption and 0.79 percent of the State's natural gas consumption in 2023, respectively. The three counties within AMBAG are served by Pacific Gas and Electric, King City Community Power, and Central Coast Community Energy (formerly Monterey Bay Community Power).

Petroleum

Energy consumed by the transportation sector accounts for roughly 44.5 percent of California's energy demand, amounting to approximately 3,036 trillion Btu in 2023 (U.S. EIA 2025b). California's transportation sector, including on-road and rail transportation, consumed roughly 555,413,000 bbl of petroleum fuels in 2023 (U.S. EIA 2025c). Furthermore, petroleum-based fuels are used for approximately 98 percent of the State's transportation activity (U.S. EIA 2025c). Most gasoline and diesel fuel sold in California for motor vehicles is refined in California to meet state-specific formulations required by the California Air Resources Board (CARB). Major petroleum refineries in California are concentrated in three counties: Contra Costa, Kern, and Los Angeles (CEC 2025d).

The estimated gasoline sales and diesel sales in the region for 2023 were approximately 88,272 million Btu as shown in Table 4.6-3.

Table 4.6-3 2023 Fuel Consumption by County

Fuel	Annual Fuel Use (million gallons)	Annual Fuel Use (million Btu)	Daily Energy Use (million Btu)	Daily Per Capita Energy Use (thousand Btu)[1]
Monterey County Gasoline	157	17,236,402	47,223	0.11
Monterey County Diesel	25	3,186,500	8,730	0.02
San Benito County Gasoline	15	1,646,790	4,512	0.07
San Benito County Diesel[2]	2	254,920	698	0.01
Santa Cruz County Gasoline	82	9,002,452	24,664	0.09
Santa Cruz County Diesel	7	892,220	2,444	0.01
AMBAG Total	**288**	**32,219,284**	**88,272**	**0.05**

[1] The per capita consumption for fuel was determined by using 2023 data divided by the 2023 county population retrieved from the United States Census Bureau.

[2] Retail Fuel Sales data aggregates sales for the counties of Alpine, Modoc, San Benito, Sierra, and Trinity. Diesel use in San Benito County was estimated based on the relative population of San Benito County to the total population of these counties.

Note: Totals may not add up due to rounding.

Sources: CEC 2025e; U.S. Census Bureau 2025

Table 4.6-4 illustrates the daily vehicle miles traveled (VMT) for the AMBAG region in 2022. As shown, the AMBAG region had a VMT of approximately 16 million, with Monterey County having the largest share of 9.8 million VMT, followed by Santa Cruz County (4.6 million VMT) and San Benito (1.6 million VMT).

Table 4.6-4 2022 Daily VMT for the AMBAG Region

County/Area	Daily VMT (2022 Baseline)
Monterey County	9,785,596
San Benito County	1,603,527
Santa Cruz County	4,622,302
AMBAG Total	**16,011,425**

Note: individual numbers may not add up to totals due to rounding.

Source: EMFAC Summary Outputs (2050 MTP/SCS Appendix G)

Alternative Fuels

A variety of alternative fuels are used to reduce petroleum-based fuel demand. The use of these fuels is encouraged through various statewide regulations and plans (e.g., Low Carbon Fuel Standard). Conventional gasoline and diesel may be replaced, depending on the capability of the vehicle, with many transportation fuels including the following:

- **Hydrogen** is being explored for use in combustion engines and fuel cell electric vehicles. There is interest in hydrogen as an alternative transportation fuel stems from its clean-burning qualities, its potential for domestic production, and the fuel cell vehicle's potential for high efficiency (two to three times more efficient than gasoline vehicles). Currently, there are 55 hydrogen refueling stations in California, eight of which are temporarily out of operation; however, none are located in the AMBAG region (U.S. Department of Energy [DOE] 2025).
- **Biodiesel** is a renewable alternative fuel that can be manufactured from vegetable oils, animal fats, or recycled restaurant greases. Biodiesel is biodegradable and cleaner-burning than petroleum-based diesel fuel. Biodiesel can run in any diesel engine generally without alterations, but fueling stations have been slow to make it available. There are currently 47 biodiesel refueling stations in California, one of which is located in Santa Cruz County (U.S. DOE 2025).
- **Electricity** can be used to power electric and plug-in hybrid electric vehicles directly from the power grid. Electricity used to power vehicles is generally provided by the electricity grid and stored in the vehicle's batteries. Fuel cells are being explored as a way to use electricity generated on board the vehicle to power electric motors. There are currently 178,549 public and shared private charging stations[1] in California, including charging stations throughout Monterey County, San Benito County, and Santa Cruz County (U.S. DOE 2025). 162,178 of these chargers are Level 2, with the remaining 16,371 being DC Fast Chargers.

4.6.2 Regulatory Setting

Programs and policies at the State and national levels have emerged to bolster the previous trend towards energy efficiency, as discussed below.

a. Federal Laws, Regulations, and Policies

Federal Fuel Economy and Emissions Standards

Corporate Average Fuel Economy Standards

The Energy Policy and Conservation Act in 1975 established the Corporate Average Fuel Economy Standards (CAFE) standards are Federal rules established by the National Highway Traffic Safety Administration (NHTSA) that set fuel economy standards for all new passenger cars and light trucks sold in the United States. The CAFE standards become more stringent each year, reaching an estimated 38.3 miles per gallon for the combined industry-wide fleet for model year 2020 (77 Federal Register 62624 et seq. [October 15, 2012 Table I-1). In August 2016, the U.S. Environmental Protection Agency and NHTSA announced the adoption of the phase two programs related to the fuel economy and greenhouse gas (GHG) standards for medium- and heavy-duty trucks. The phase two program will apply to vehicles with model year 2018 through 2027 for certain trailers, and model years 2021 through 2027 for semi- trucks, large pickup trucks,

[1] Public chargers are located at parking space(s) designated by a property owner or lessee to be available to and accessible by the public. Shared private chargers are located at parking space(s) designated by a property owner or lessee to be available to, and accessibly by, employees, tenants, visitors, and residents. Examples include workplaces and shared parking at a multifamily residence. Private household chargers are not included in this total.

vans, and all types and sizes of buses and work trucks. These standards are expected to lower carbon dioxide (CO_2) emissions by approximately 1.1 billion metric tons (MT) and reduce oil consumption by up to two billion barrels over the lifetime of the vehicles sold under the program.

On June 7, 2024, the NHTSA issued new vehicle fuel economy standards. In this final rule, fuel economy will increase 2 percent per year for model years 2027-2031 for passenger cars, while light trucks will increase 2 percent per year for model years 2029-2031. These increases will bring the average light-duty vehicle fuel economy up to approximately 50.4 miles per gallon by model year 2031.

Heavy-duty pickup truck and van fuel efficiency will increase 10 percent per year for model years 2030-2032 and 8 percent per year for model years 2033-2035. This will result in a fleetwide average of approximately 35 miles per gallon by model year 2035. These improved standards will save almost 70 billion gallons of gasoline through 2050, preventing more than 710 million metric tons of carbon dioxide emissions by 2050.

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.

On July 29, 2025, USEPA announced a proposal to rescind the Endangerment Finding and repeal all GHG emission standards for light-duty, medium-duty, and heavy-duty vehicles and engines pursuant to CAA Section 202(a). As of writing this EIR, USEPA has not adopted this proposal (USEPA 2025). The proposed rule would remove GHG-related provisions from 40 CFR part 600 without affecting provisions related to CAFE standards and fuel economy labeling.

Executive Order 14154

Issued on January 20, 2025, Executive Order 14154 establishes a national policy aimed at expanding domestic energy production, with a particular emphasis on fossil fuels and critical minerals. The order revokes several prior climate-focused executive orders and terminates the American Climate Corps. It eliminates federal support for electric vehicle mandates and energy efficiency standards for appliances. Additionally, it directs federal agencies to expedite permitting under the National Environmental Policy Act and revise National Environmental Policy Act regulations to prioritize permitting efficiency over environmental considerations. Funding under the Inflation Reduction Act and the Infrastructure Investment and Jobs Act is suspended pending review for consistency with the Administration's energy policy.

Executive Order 14156 (Energy Emergency Provisions)

Also issued on January 20, 2025, Executive Order 14156 declares a national emergency due to insufficient domestic energy supply and infrastructure. It invokes emergency authorities under the Defense Production Act and the Clean Water Act to accelerate energy infrastructure development. The order directs agencies to prioritize permitting and leasing for energy projects on federal lands and requires streamlined consultations under the Endangered Species Act, including convening the Endangered Species Act Committee to address regulatory barriers.

Energy security is emphasized as a national defense priority, particularly in regions with 'constrained supply' such as the Northeast and West Coast.

Executive Order 14260

Issued on April 8, 2025, Executive Order 14260 challenges state-level climate and energy regulations that are deemed to exceed constitutional authority. It directs the Attorney General to identify and pursue legal action against state laws that impose retroactive fines, carbon caps, or other climate-related claims. The order specifically targets policies in states such as California, New York, and Vermont that regulate emissions or energy infrastructure in ways that may affect interstate commerce. It asserts federal primacy over energy regulation and seeks to prevent states from influencing national energy policy through environmental justice or environmental, social, and governance frameworks.

Executive Order 14361

Also issued on April 8, 2025, Executive Order 14261 designates coal as a "critical mineral" and prioritizes its development and export. The order directs federal agencies to remove barriers to coal leasing and expedite environmental reviews. It terminates the Jewell Coal Leasing Moratorium and encourages reductions in royalty rates. The order promotes coal-powered infrastructure for artificial intelligence data centers and steel production, and calls for expanded use of categorical exclusions under National Environmental Policy Act for coal-related projects.

Executive Order 14262

Issued on April 8, 2025, Executive Order 14262 addresses rising electricity demand driven by artificial intelligence and manufacturing. It directs the Department of Energy to streamline emergency orders under the Federal Power Act to prevent grid failures. The order mandates the development of a national methodology to assess reserve margins and identify regions at risk of reliability issues. It also requires the retention of critical generation resources, including fossil-fueled power plants, to ensure grid reliability.

b. State Laws, Regulations, and Policies

Warren-Alquist Act

The 1975 Warren-Alquist Act established the California Energy Resources Conservation and Development Commission, now known as CEC. The Act established a State policy to reduce wasteful, uneconomical, and unnecessary uses of energy by employing a range of measures. The California Public Utilities Commission (CPUC) regulates privately-owned utilities in the energy, rail, telecommunications, and water fields.

Integrated Energy Policy Report

Senate Bill (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. The 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.

CEC prepares an Integrated Energy Policy Report (IEPR) every two years, with updates published in alternating years, pursuant to Senate Bill 1389 (Bowen, Chapter 568, Statutes of 2002). The 2024 IEPR Update provides a comprehensive assessment of California's energy system and outlines strategies to support the state's goals for reliable, affordable, and environmentally responsible energy. Topics addressed include electricity and natural gas demand forecasts, transportation energy trends, energy efficiency savings, distributed energy resources, strategic transmission planning, climate adaptation and resilience, and emerging technologies such as wave and tidal energy.

The report highlights California's progress toward decarbonization, including the retirement of over 16,000 megawatts (MW) of fossil fuel generation since 2010 and the addition of more than 22,000 MW of clean energy resources. Battery storage capacity has expanded from 770 MW in 2019 to over 13,000 MW in 2024. In the first nine months of 2024 alone, California added nearly 4,000 MW of new energy resources, primarily from solar and battery storage.

California Renewables Portfolio Standard Program

Senate Bill 1078 (Chapter 516, Statutes of 2002) established California's initial Renewables Portfolio Standard (RPS), requiring retail sellers of electricity—including investor-owned utilities and community choice aggregators—to procure 20 percent of their electricity from renewable sources by 2017. The legislation also mandated annual increases in renewable procurement of at least one percent.

This goal was later accelerated by Senate Bill 107 (2006), which moved the 20 percent target forward to 2010. California successfully met this revised target and has continued to expand its RPS program through subsequent legislation. The RPS has since evolved to require 33 percent renewable electricity by 2020 (SB 2 [1X]), 50 percent by 2030 (SB 350), and 60 percent by 2030 with a goal of 100 percent carbon-free electricity by 2045 (SB 100).

The RPS program is jointly implemented by the CPUC and CEC and has been instrumental in driving the development of solar, wind, geothermal, and other renewable energy resources statewide.

2022 Scoping Plan

The 2022 Scoping Plan outlines California's strategy to achieve carbon neutrality by 2045 through a comprehensive transformation of the state's energy systems (CARB 2022). The Plan calls for a dramatic reduction in fossil fuel combustion—particularly petroleum—by deploying clean technologies, expanding renewable energy generation, and electrifying end uses across sectors. It recommends building no new fossil gas-fired power plants and accelerating the retirement of existing ones, while increasing investments in zero-emission vehicles, building decarbonization, and clean fuels. The Plan emphasizes the need for unprecedented build-out of renewable and zero-carbon electricity generation and storage to meet rising demand from electrification in

transportation and buildings. It also supports a multi-agency process to ensure an equitable transition away from oil extraction and refining, especially in communities disproportionately burdened by pollution. These energy recommendations are designed to help reduce greenhouse gas emissions by 85 percent below 1990 levels, cut air pollution by 71 percent, and improve public health and economic resilience statewide.

Senate Bill X1-2

Senate Bill X1-2, signed into law by Governor Brown in 2011, expanded California's RPS program by requiring retail sellers of electricity—including investor-owned utilities, publicly owned utilities, and community choice aggregators—to procure at least 20 percent of electricity retail sales from eligible renewable energy resources by 2010, and 33 percent by 2020. This legislation built upon earlier RPS mandates and established a more aggressive timeline for renewable energy integration.

CPUC and CEC jointly implement the statewide RPS program through rulemaking, compliance monitoring, and oversight of procurement activities. The program has been instrumental in accelerating the deployment of solar, wind, geothermal, and other renewable energy technologies across the state.

California successfully met the 33 percent RPS target by 2020 and continues to advance toward more ambitious goals established under subsequent legislation, including Senate Bill 100, which mandates 60 percent renewable electricity by 2030, and 100 percent zero-carbon electricity by 2045.

Senate Bill 350

In 2015, Governor Brown signed SB 350, which established new renewable portfolio standard targets, requiring retail sellers of electricity to provide at least 50 percent of electricity retail sales from renewable sources by 2030. SB 350 also set a goal of doubling energy efficiency savings in electricity and natural gas by 2030.

Senate Bill 100

Adopted on September 10, 2018, SB 100 supports the reduction of GHG emissions from the electricity sector by accelerating the state's Renewables Portfolio Standard Program. SB 100 requires electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 50 percent by 2026, 60 percent by 2030, and 100 percent by 2045.

Assembly Bill 1493

Assembly Bill (AB) 1493 (Chapter 200, Statutes of 2002), known as the "Pavley bill," amended Health and Safety Code Sections 42823 and 43018.5 requiring CARB to develop and adopt regulations that achieve maximum feasible and cost-effective reduction of GHG emissions from passenger vehicles, light-duty trucks and other vehicles used for noncommercial personal transportation in California.

Implementation of new regulations prescribed by AB 1493 required that the State of California apply for a waiver under the federal Clean Air Act. Although USEPA initially denied the waiver in 2008, USEPA approved a waiver in June 2009, and in September 2009, CARB approved amendments to its initially adopted regulations to apply the Pavley standards that reduce GHG emissions to new passenger vehicles in model years 2009 through 2016. In 2012, CARB approved the Low-Emission Vehicle III GHG regulation, which requires further reductions in passenger GHG for 2017 and subsequent vehicle model years. According to CARB, implementation of the Pavley regulations is expected to reduce fuel consumption while also reducing GHG emissions (CARB 2025).

In 2022, CARB approved the Advanced Clean Cars II rule regulating model years from 2026 to 2035. The rule establishes a year-by-year roadmap so that by 2035¸ 100 percent of new cars and light trucks sold in California would be zero-emission vehicles, including plug-in hybrid electric vehicles. The regulation realizes and codifies the light-duty vehicle goals set out in Governor Newsom's Executive Order N-79-20. By 2040, CARB anticipates that the rule would reduce GHG emissions from light-duty vehicles by 50 percent for a cumulative total of 395 MMT CO_2e from 2026 through 2040. The EPA granted CARB its California's Clean Air Act waiver request on December 18, 2024. However, Public Law 119-16 enacted on June 12, 2025, disapproves of this regulation under the Congressional Review Act, retroactively revoking the state's waiver issued by USEPA under the Clean Air Act to implement the Advanced Clean Cars II rule.

Advanced Clean Trucks and Low-NOx Regulation

The Advanced Clean Trucks rule is a CARB regulation that requires medium and heavy-duty truck manufacturers to gradually increase the percentage of zero-emission vehicles they sell in the state. Effective in March 2021, the rule mandates that by 2035, 55 percent of Class 2b-3 truck sales, 75 percent of Class 4-8 straight truck sales, and 40 percent of truck tractor sales must be zero-emissions vehicles. The goal is to accelerate the transition to zero-emission trucks. USEPA granted the waiver request under the CAA to enact the more stringent fuel economy components of the ACT regulation on April 6, 2023. However, Public Law 119-15 enacted on June 12, 2025, disapproves of this regulation under the Congressional Review Act, retroactively revoking the state's waiver issued by USEPA under the Clean Air Act to implement the Advanced Clean Trucks regulation.

The Heavy-Duty Low-NOX Omnibus Regulation was adopted by CARB in 2021 (effective December 22, 2021; amended in May 2024), and mandates steep reductions in NOX and PM emissions from new medium- and heavy-duty diesel and Otto-cycle engines starting with model year 2024. By full rollout, the regulation is projected to eliminate approximately 17–23 tons/day of NOX by 2031.However, Public Law 119-17 enacted on June 12, 2025, disapproves of this regulation under the Congressional Review Act, retroactively revoking the state's waiver issued by USEPA under the Clean Air Act to implement the low-NOx regulation.

Assembly Bill 1007

AB 1007 (Chapter 371, Statutes of 2005) required CEC to prepare a State plan to increase the use of alternative fuels in California. CEC prepared the State Alternative Fuels Plan in partnership with the CARB and in consultation with other State, federal and local agencies. The plan presents strategies and actions California must take to increase the use of alternative non- petroleum fuels in a manner that minimizes costs to California and maximizes the economic benefits of in-state production. The plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuels use, reduce GHG emissions, and increase in-state production of biofuels without causing a significant degradation of public health and environmental quality.

Executive Order S-01-07

Executive Order S-01-07, issued in 2007, directed CARB to develop and implement a Low Carbon Fuel Standard (LCFS) aimed at reducing the carbon intensity of transportation fuels used in California. Codified in 17 California Code of Regulations Section 95480 et seq., the LCFS originally required a 10 percent reduction in average fuel carbon intensity by 2020 and was designated as an early action measure under Assembly Bill 32 (Global Warming Solutions Act of 2006).

CARB has amended the LCFS multiple times to align with California's evolving climate and energy goals. In 2018, amendments extended carbon intensity reduction targets through 2030 and introduced crediting mechanisms for zero-emission vehicles, alternative jet fuels, carbon capture and sequestration, and other advanced technologies. In 2025, CARB adopted further amendments that took effect on July 1, 2025, establishing new targets to reduce fuel carbon intensity by 30 percent by 2030 and 90 percent by 2045.

The LCFS remains in effect and continues to be a cornerstone of California's strategy to decarbonize the transportation sector. Since its inception, the program has displaced over 30 billion gallons of petroleum fuel, reduced fuel carbon intensity by nearly 13 percent, and generated approximately $4 billion annually in private sector investment. It is projected to reduce greenhouse gas emissions by 558 million metric tons, NO_x by 25,500 tons, and $PM_{2.5}$ by 4,200 tons between 2025 and 2045.

Executive Order N-79-20

Executive Order N-79-20 established a Statewide goal that 100 percent of in-state sales of new passenger cars and trucks will be zero-emission by 2035. A further goal of the State is that 100 percent of medium- and heavy-duty vehicles in the State be zero-emission by 2045 for all operations where feasible and by 2035 for drayage trucks.

California Building Energy Efficiency Standards

The California Code of Regulations Title 24 is referred to as the Building Energy Efficiency Standards or California Energy Code. This code, originally enacted in 1978, establishes energy-efficiency standards for residential and non-residential buildings to reduce California's energy demand. New construction and major renovations must demonstrate their compliance with the

current Energy Code through submittal and approval of a Title 24 Compliance Report to the local building permit review authority and the CEC.

Future land use projects would be subject to the 2025 California Building Energy Efficiency Standards, codified in Title 24, Part 6 of the California Code of Regulations, which take effect on January 1, 2026. These standards are designed to reduce energy consumption in residential and non-residential buildings, support California's climate goals, and improve indoor environmental quality.

Key updates to the 2025 standards include expanded requirements for heat pump technologies, electric readiness for future electrification, enhanced ventilation and indoor air quality measures, and battery storage system readiness for homes with larger electrical service capacities. These measures are expected to reduce building energy demand, lower greenhouse gas emissions, and support integration of distributed energy resources.

AB 130 of 2025 imposes a moratorium on changes to California building codes affecting residential units, including both state and local amendments, through 2031, with limited exemptions. Essentially, AB 306 would prohibit CEC or any other adopting agency from considering, approving, or adopting any proposed building standards affecting residential units, unless a certain condition is met, including that the CEC deems those changes necessary as emergency standards to protect health and safety. The 2025 Energy Code will proceed as planned with an effective date of January 1, 2026, and the 2031 Energy Code cycle is anticipated to be unaffected.

California Green Building Standards Code

The 2026 California Green Building Standards Code (CALGreen), codified in Title 24, Part 11 of the California Code of Regulations, and effective in 2025, establishes mandatory minimum environmental performance standards for newly constructed residential and non-residential buildings statewide. These standards are enforced by local jurisdictions and address key sustainability areas including energy efficiency, water conservation, material resource efficiency, and indoor environmental quality.

CALGreen also includes voluntary tiers (Appendices A4 and A5) that provide enhanced environmental performance options. These voluntary measures are intended as model provisions for jurisdictions considering above-code ordinances (also known as "reach codes") or for builders seeking additional compliance flexibility under the California Energy Code.

c. Regional Laws, Regulations, and Policies

Electric Vehicle Infrastructure for the Monterey Bay Area Plan

In 2013, AMBAG published the Electric Vehicle Infrastructure for the Monterey Bay Area Plan. The Electric Vehicle Infrastructure for the Monterey Bay Area Plan includes a siting plan to identify potential charging locations and presents a framework for establishing an electric vehicle

charging network in the Monterey Bay Area (AMBAG 2013a). The three major goals of the siting plan are to:

- Provide charging opportunities for plug-in electric vehicle owners that lack access to home charging;
- Extend the range of plug-in electric vehicle for intra- and interregional travel along various corridors; and
- Maximize all electric miles by providing ample opportunities for charging while minimizing the risk of stranded plug-in electric vehicles.

AMBAG holds a seat on the Monterey Bay Electric Vehicle Alliance and supports goals to make the AMBAG region ready for electric vehicles. In collaboration with other local agencies, AMBAG is currently evaluating low-emissions shared mobility options to meet regional transportation needs.

Monterey Bay Plug-In Electric Vehicle Readiness Plan

The Electric Vehicle Infrastructure plan was the precursor to the Monterey Bay Plug-In Electric Vehicle Readiness Plan, a comprehensive regional plan to promote plug-in electric vehicle adoption throughout the region completed in July 2013. The goal of the Readiness Plan is to encourage the mass adoption of plug-in electric vehicles in the region and reduce greenhouse gas emissions by providing a toolbox of recommended approaches for public, private, and non-profit organizations.

Updated in 2022, the Plug-in Electric Vehicle Readiness Plan, and the ongoing work of the Plug-in Electric Vehicle Council, provides recommendations and practical tools to develop the region's Electric Vehicle ecosystem, and thus helps meet the state's goal of reducing greenhouse emissions by 80 percent below 1990 levels. Given that nearly half of the state's emissions come from the transportation sector, electric vehicles are a core part of the local and global climate solution. To achieve these critical climate benchmarks, Governor Brown and the state of California set a goal of getting 1 million Electric Vehicles on the road by 2020, 1.5 million by 2025, and achieving 80 percent electric drive penetration of the vehicle fleet by 2050 (CEC 2022).

Central Coast Zero Electric Vehicle Strategy

The Santa Barbara County Association of Governments, San Luis Obispo Council of Governments, and AMBAG have partnered to develop the Central Coast Zero-Emission Vehicle Strategy. The Central Coast Zero-Emission Vehicle Strategy identifies zero emissions vehicle charging infrastructure needs, challenges, and opportunities on California's Central Coast, including the Counties of Santa Barbara, San Luis Obispo, Monterey, Santa Cruz, San Benito, and Ventura (AMBAG 2023). The objectives of the Central Coast Zero Emissions Vehicle Strategy are to:

- Assess existing EV infrastructure environment in the Central Coast – with a specific focus on unincorporated rural areas between cities that experience significant interregional travel.

- Identify key challenges, gaps, and barriers to EV travel for interregional travelers including long distance commuters, regional transit providers, freight and other users as determined through input solicited from key stakeholders.
- Identify where equity issues currently exist with access to EV charging and ensure infrastructure improvements and investments are equitable and accessible to all users including traditionally underserved populations.
- Recommend infrastructure improvements and related investments, policies and implementation strategies to promote zero-emission vehicle adoption through charging infrastructure investments based on analysis, and stakeholder input. This strategy will be meant as a guide to the Central Coast region and does not make any commitments to further financing and is not legally binding.

AMBAG Sustainability Program

The AMBAG Sustainability Program works collaboratively with local stakeholders and regional partners to provide energy efficiency, renewable energy, electric vehicle, and sustainability related resources to the region. AMBAG staff is creating a Monterey Bay Electric Vehicle Climate Adaptation and Resiliency Framework. AMBAG staff is also working with partners throughout Central California to implement six new energy efficiency programs that bring resources to rural communities, residents, small businesses, and non profits reduce their energy usage and electrify, through infrastructure upgrades. As part of these programs, AMBAG staff also works with local agencies to identify energy efficiency opportunities, discuss potential funding opportunities, and provide technical assistance for energy auditing and obtain funding to complete energy efficiency projects.

d. Local Laws, Regulations, and Policies

The general plans and zoning ordinances of the cities within the Monterey Bay area regulate design and the built environment within those communities, while the general plans for each county perform the same function within unincorporated areas. In all cases, the general plans and zoning ordinances, as well as local Climate Action Plans, contain initiatives to reduce overall energy consumption and improve energy efficiency. County-level plans within the AMBAG region are discussed below. Many of the cities' general plans also contain goals that guide their intent to reduce energy consumption. For example, the Conservation Element of the City of Monterey General Plan (City of Monterey 2005) contains Goal e to encourage the effective use of energy in all its critical forms by public and private users alike. Goal e is then actualized through programs such as Program e.1.1, consider aesthetically compatible independent energy sources in new public and private buildings, and Program e.1.2, encourage energy retrofitting in existing residential and commercial structures. Building and transportation energy conservation has been improved significantly over time through statewide policies; however, the Circulation, Conservation and Land Use elements of local jurisdiction General Plans help facilitate the implementation of state and local energy efficiency initiatives.

Monterey County

The Monterey County General Plan (Monterey County 2010) addresses energy efficiency in the Conservation and Open Space Element. The goals and policies of their Conservation and Open Space Element promote energy efficiency by encouraging all energy sectors (i.e., agricultural, residential, commercial, industrial, and public building applications) to employ renewable energy sources to the maximum extent feasible. The City of Monterey purchases 100 percent of its electricity from renewable sources through 3CE and has upgraded municipal lighting systems to reduce energy consumption by 35 percent. The city also participates in the Beacon Program, recognizing local governments for sustainability leadership.

Similarly, Monterey County's Municipal Climate Action Plan, released in 2013, serves as a GHG reduction strategy for municipal operations, aligning with California's AB 32 Scoping Plan and CEQA Guidelines. The Plan establishes a baseline GHG emissions inventory for 2005 and forecasts emissions through 2020, identifying key sectors such as buildings and facilities, vehicle fleet, employee commute, solid waste, water use, and public lighting. It outlines reduction measures across three implementation scenarios, emphasizing energy efficiency upgrades, fleet electrification, and participation in regional programs like AMBAG's Energy Watch. The Plan recommends phasing out high-emission practices and integrating renewable energy sources into County operations. While the Municipal Climate Action Plan has not been updated since its release in 2013, Monterey County itself has reinitiated its Sustainability Program and is developing a 2030 Climate Action Plan to reduce emissions by 40 percent through building electrification, fleet conversion, and expanded telecommuting.

San Benito County

The San Benito County 2035 General Plan (San Benito County 2015) addresses energy efficiency in the Land Use, Public Facilities and Services, and Natural and Cultural Resources Elements. The goals and policies of the Land Use Element encourage the County to use energy conservation and efficiency techniques in new building design, orientation, and construction (San Benito County 2015b), while policies found in the Natural and Cultural Resources and Public Facilities and Services Elements encourage greater utilization and accessibility to renewable energy sources (San Benito County 2015a).

The City of Hollister has taken significant steps to advance local energy efficiency and sustainability through its Climate Action Plan, developed in alignment with California's statewide climate goals. The Plan outlines strategies to reduce greenhouse gas emissions across transportation, building energy use, and waste sectors. Hollister participates in 3CE, which supplies residents and businesses with renewable electricity options. The city is also promoting building electrification, including incentives for all-electric new construction and retrofits, and has identified municipal retrofit projects such as upgrading HVAC systems at City Hall and other public facilities. These efforts are part of a broader strategy to meet California's 2045 carbon neutrality target and enhance community resilience to climate change.

Santa Cruz County

The Santa Cruz County General Plan and Local Coastal Program (Santa Cruz County 2024) addresses energy efficiency in their Built Environment and Agriculture, Natural Resources, and Conservation Elements. Objective BE-4.2.7, Energy Conservation, states that development should enable passive solar heating and lighting through building location, orientation, and massing wherever practicable. Passive solar should be a priority for energy conservation in building design. Further energy conservation should be achieved with energy-efficient building envelopes, lighting, heating, cooling, and ventilation systems, and renewable energy design components.

Additionally, in 2013, Santa Cruz County adopted a Climate Action Strategy, which functions similarly to a CAP in that it focuses on reducing GHG emissions from County operations and community-wide sources through energy efficiency and reduction measures. The Strategy outlines goals and measures across sectors such as transportation, energy use, land use, and waste management. It aligns with California's AB 32 and CEQA guidelines and includes implementation tracking and reporting mechanisms.

While the Strategy has not been formally updated into a new CAP document, Santa Cruz County continues to implement climate-related initiatives through its Sustainability Program, including participation in regional efforts and updates to General Plan policies that support climate resilience and energy efficiency. For example, in July 2020, the City of Santa Cruz enacted an ordinance which prohibits the installation of natural gas hookups in most new buildings. The ordinance applies to all residential and commercial buildings, except in cases where developers can prove electric systems are not feasible, or where the exception is for the public good, such as for hospitals or water treatment plants (City of Santa Cruz 2020).

4.6.3 Impact Analysis

a. Methodology and Significance Thresholds

Direct and Indirect Energy Consumption

As this analysis is programmatic and specific details related to construction and timing for transportation and land use development projects implementing the 2050 MTP/SCS are not known at this time, energy consumption from construction activities and future land use operations is assessed qualitatively. Construction energy use, such as fuel consumption from equipment, worker commutes, and material delivery, is typically short-term and would vary depending on the nature and timing of individual projects. Similarly, operational energy use from buildings (e.g., electricity and natural gas) is also speculative due to the absence of detailed project-specific information. In accordance with CEQA Guidelines Appendix F, this section provides a qualitative discussion of potential energy impacts from construction of and operation land use projects.

The calculation of total energy consumption from transportation during operation for this analysis follows the Input-Output methodology suggested by Caltrans (Caltrans 1983). Caltrans

methodology provides the calculation of the cumulative transportation energy consumption, including energy consumption that would be due to the construction of 2050 MTP/SCS projects, and energy consumption that is not due to the 2050 MTP/SCS, but rather is due to changes in VMT caused by socioeconomic growth (e.g., population and employment), land use policies, and the existing transportation infrastructure.

Energy consumption from transportation projects is categorized in terms of direct and indirect energy, defined below.

Direct Energy Consumption

Direct energy is that energy used in the daily operation of the transportation system, including the propulsion of passenger vehicles (automobiles, vans, and trucks) and transit vehicles, including buses and trains. The direct energy analysis for the project is based on comparing baseline (2022) and 2050 VMT with the 2050 MTP/SCS, and for informational purposes without the 2050 MTP/SCS (as analyzed in Section 4.15, *Transportation*).

The baseline gasoline and diesel fuel consumption data for Monterey, San Benito, and Santa Cruz counties was converted to Btu. Future gasoline and diesel fuel consumption with and without adoption of the 2050 MTP/SCS was forecasted using CARB's Emission Factor (EMFAC) Model Summary Outputs (2050 MTP/SCS Appendix G).

It should be noted that the British thermal units per vehicle-mile (Btu/VMT) factor is forecast to continue to decrease into the future due to improved fuel economy. Applying the 2022-based factor to future year (2050) VMT therefore provides a conservative evaluation of energy consumption as the energy efficiency of vehicles in 2050 is likely to be higher than current fuel efficiency of vehicles.

Indirect Energy Consumption

Indirect energy is the energy required to construct, operate, and maintain the transportation network, as well as to manufacture and maintain on-road vehicles and transit vehicles. Therefore, construction-related impacts associated with the 2050 MTP/SCS transportation projects are included in the indirect energy analysis. The indirect energy analysis was conducted using the Input-Output methodology developed by Caltrans (Caltrans 1983). This method converts VMT, lanes miles, or construction dollars into energy consumption based on data from other transportation projects in the United States. Table 4.6-5 shows the indirect energy consumption factors used in this analysis.

Table 4.6-5 Indirect Energy Consumption Factors

Mode	Factor
Manufacturing	
Passenger Vehicles	1,410 Btu/VMT
Transit Buses	3,470 Btu/VMT
Roadway (Construction)	27,300 Btu/1977 dollars
Rail (Construction)	2,108 Btu/VMT
Maintenance	
Passenger Vehicles	1,400 Btu/VMT
Transit Buses	13,142 Btu/VMT
Rail	7,060 Btu/VMT

Source: Caltrans 1983

Appendix G of the *CEQA Guidelines* identifies the following criteria for determining whether a project's impacts would have a significant impact to energy resources. As the 2050 MTP/SCS is a regional plan, AMBAG has chosen to expand on threshold 1, below, such that energy consumption can be evaluated at a regional level rather than project level. For the purposes of this EIR, implementation of the 2050 MTP/SCS and RTPs would have a significant impact if it would:

1. Result in significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation (including transportation), based on whether the project would:
   a. Result in an increase in overall per capita energy consumption relative to baseline conditions;
   b. Result in an increased reliance on fossil fuels and decreased reliance on renewable energy sources; or
2. Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

b. Project Impacts and Mitigation Measures

The following section describes energy impacts associated with the transportation improvements and future land use scenario in the 2050 MTP/SCS. In general, implementation of proposed transportation improvements and the reasonably foreseeable future development facilitated under the land use scenario envisioned by the 2050 MTP/SCS would result in energy impacts as described in the following sections.

Threshold 1: Would the project result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation, based on whether the project would:

a) Result in an increase in overall per capita energy consumption relative to baseline conditions; or

b) Result in an increased reliance on fossil fuels and decreased reliance on renewable energy sources?

Impact E-1 FUTURE TRANSPORTATION IMPROVEMENT PROJECTS AND IMPLEMENTATION OF THE LAND USE SCENARIO ENVISIONED BY THE 2050 MTP/SCS WOULD NOT RESULT IN A SIGNIFICANT ENVIRONMENTAL IMPACT DUE TO WASTEFUL, INEFFICIENT, OR UNNECESSARY CONSUMPTION OF ENERGY RESOURCES. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Construction and maintenance of the transportation and land use projects implementing the 2050 MTP/SCS would result in short-term consumption of energy resulting from the use of construction equipment and processes. In addition, roadway and transit construction materials, such as asphalt, concrete, surface treatments, steel, rail ballast, as well as building materials, require energy to be produced, and would likely be used in projects that involve new construction or replacement of older materials, as well as construction of future infill and transit oriented development projects/developments envisioned by the 2050 MTP/SCS. All construction conducted pursuant to the 2050 MTP/SCS, or as a result of improvements made by the 2050 MTP/SCS, would be required to comply with relevant provisions of CALGreen.

Daily operation of the regional transportation system uses energy in the form of fuel consumed by propulsion of passenger vehicles (automobiles, vans, and trucks) and transit vehicles (buses and trains). Some highway and roadway improvements included in the 2050 MTP/SCS would increase vehicle capacity, allowing a greater number of vehicles to use facilities in the region. Increases in motor vehicle trips are primarily a combined function of population and employment growth. As discussed in Section 4.15, *Transportation*, the expansion of highway capacity in the AMBAG region, such as adding auxiliary lanes and bus shoulders from State Park to Bay/Porter and Mar Vista in Santa Cruz County, are examples of projects that may induce travel demand. It should be noted that population growth and growth in VMT would occur within the region regardless of whether the 2050 MTP/SCS is implemented. However, many 2050 MTP/SCS projects (e.g., bikeway and pedestrian projects, rail projects, transit projects, Transportation System Management, and Transportation Demand Management projects) would improve the availability of alternative transportation modes and help reduce congestion and resultant air pollutants in the AMBAG region. Further, many 2050 MTP/SCS projects would facilitate a decrease in the reliance on fossil fuels by making active transportation or zero emission transit services more widely available.

Table 4.6-6 shows daily VMT and estimated fuel consumption translated into energy use (Btu) in the AMBAG region under 2022 baseline conditions, 2050 No Project conditions, and 2050 conditions with implementation of the MTP/SCS.

Table 4.6-6 Direct and Indirect Transportation Energy Use

Year	Daily VMT	Direct Energy Use (Daily Billion Btu)	Indirect Energy Use (Daily Billion Btu)	Total Energy Use (Daily Billion Btu)	Per Capita Energy Use (Daily Thousand Btu)
2022 Baseline	16,011,425	97.8	38.3	136.1	177.7
2050 No Project	18,216,739	73.4	44.4	117.8	144.8
2050 MTP/SCS	18,203,962	73.3	52.0	125.3	154.0
Change % (Baseline vs. 2050 MTP/SCS)[1]	**14%**	**-25%**	**36%**	**-8%**	**-13%**

[1]A negative percentage represents a decrease

Notes: Daily VMT, drawn from Table 4.6-4, was used on information from Table 4.6-5 to identify direct and indirect daily Btu consumption.

Sources: Caltrans 1983; EMFAC Summary Outputs (2050 MTP/SCS Appendix G)

As shown in Table 4.6-6, regionwide daily VMT and total daily indirect energy use would increase over time as the result of regional socioeconomic (population and employment) growth. The 2050 MTP/SCS would result in an approximately 25 percent reduction in direct energy usage from vehicle fuels when compared to 2022 baseline conditions; when compared to the No Project scenario the 2050 MTP/SCS would result in a negligible difference in direct energy use. Indirect energy use would increase by 36 percent. This increase is due to anticipated shifts in vehicle technology and energy sources. As the regional vehicle fleet transitions toward electrification, direct energy use from gasoline and diesel is expected to decrease; however, indirect energy use—primarily electricity generation—may rise depending on the energy mix and grid efficiency. The 2050 MTP/SCS would result in an approximately 13 percent decrease in total per capita energy usage when compared to 2022 baseline conditions; however, this would be a smaller reduction in per-capita energy use than the No Project scenario. This is due to the reduced number of transportation improvement and maintenance projects under the No Project scenario, resulting in higher indirect energy use overall.

Per capita energy use in the 2022 Baseline scenario is 178 thousand Btu per day. Under the 2050 MTP/SCS scenario, per capita energy use would be 154 thousand Btu/day, which is a 13 percent reduction compared to the 2022 Baseline. This suggests that the MTP/SCS scenario results in a substantial reduction in per capita energy use than the 2022 Baseline scenario, thus achieving a meaningful reduction in energy consumption relative to current conditions.

Transportation Improvement Projects

The transportation improvements proposed under the 2050 MTP/SCS would result in a more efficient transit system. The 2050 MTP/SCS would result in greater availability of public transit and other alternative modes of transportation, such as Complete Streets and active transportation. In addition, Santa Cruz County proposes other transportation projects that promote the use of alternatively fueled vehicles. For example, the County's Electric Bicycle Commuter Incentive Program would provide financial incentives to encourage the use of electric

bicycles over gasoline powered vehicles, and the Transportation System Electrification Program would invest in more charging stations for electric vehicles, plug-in hybrids, e-bikes, and e-scooters throughout the county. Transportation projects, such as the aforementioned, would change the transportation system in the AMBAG region to be less reliant on petroleum products and would promote fuel efficiency. In addition, improvements to State fuel efficiency standards for vehicles and State-mandated increases in the supply and use of alternative transportation fuels would further reduce fuel consumption, such as continued implementation of the Electric Vehicle Infrastructure Plan for the AMBAG region.

Land Use Changes

The 2050 MTP/SCS emphasizes a regional land use scenario that promotes mixed use and infill development in existing commercial corridors in combination with high quality transit service (e.g., bus service that has headways of 15 minutes or less during the peak period, Bus Rapid Transit, express bus or rail) and improved bicycle and pedestrian infrastructure. Although some outlying development in more rural areas would still occur under the 2050 MTP/SCS, the emphasis on mixed use and infill projects would help reduce per-capita VMT and energy use as it would locate people closer to existing goods and services, thereby resulting in shorter vehicle trips and/or promoting walking or biking. It would also locate people closer to existing transportation hubs, thereby encouraging the use of alternative modes of transit (e.g., buses) and resulting in fewer vehicle trips. Operation of future land use projects would increase overall demand for energy beyond existing demand; however, such development would not require unusual, unnecessary, or wasteful amounts of energy. Future land use projects would be constructed using standard building practices. These projects would also be subject to CALGreen and California Building Energy Efficiency Standards, which set forth specific energy efficiency requirements related to design, construction methods, and materials.

In summary, the 2050 MTP/SCS would not increase overall per capita energy transportation consumption relative to baseline conditions, increase reliance on fossil fuels, or otherwise result in use of energy in an inefficient, wasteful, or unnecessary manner. Impacts would be less than significant.

Mitigation Measures

None required.

Threshold 2: Would the project conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

Impact E-2 THE 2050 MTP/SCS WOULD NOT CONFLICT WITH OR OBSTRUCT A STATE OR LOCAL PLAN FOR RENEWABLE ENERGY OR ENERGY EFFICIENCY. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

As discussed above, the 2050 MTP/SCS would result in an approximately 13 percent decrease in total per capita transportation energy use in the region compared to 2022 baseline conditions and would not result in energy used in an unnecessary or wasteful manner. Implementation of the 2050 MTP/SCS would result in lesser net energy consumption than 2022 baseline conditions

and the 2050 MTP/SCS would not result in the inefficient, wasteful, or unnecessary consumption of energy because it would be consistent with existing relevant energy conservation policies. Accordingly, inconsistencies between the 2050 MTP/SCS and adopted plans and policies related to energy conservation or renewable energy have not been identified. The discussion below further examines consistency with adopted plans and policies related to energy conservation or renewable energy.

AMBAG monitors regulations implementing State policies related to fuel efficiency standards and alternative fuel vehicles. The 2050 MTP/SCS would not conflict with such regulations (e.g., Energy Policy and Conservation Act and CAFE Standards, EPACT92, Energy Independence and Security Act of 2007, AB 1493: Reduction of Greenhouse Gas Emissions, AB 1007: State Alternative Fuels Plan).

The 1975 Warren-Alquist Act established the California Energy Resource Conservation and Development Commission, now known as the California Energy Commission (CEC), and established a State policy to reduce wasteful, uneconomical, and unnecessary uses of energy. Based on the data above, and explained in the conclusion below, the 2050 MTP/SCS would not result in wasteful, inefficient, or unnecessary use of energy. Therefore, the 2050 MTP/SCS is consistent with the Warren-Alquist Act policies.

SB 1078, as accelerated by SB 350 and SB 100, establishes a renewable portfolio standard for electricity supply, and requires that retail sellers of electricity, including investor-owned utilities and community choice aggregators, provide 60 percent of electricity retail sales from renewable sources by 2030. In addition, the 2023 IEPR includes a set of strategies to address California's future energy needs. Key topics covered in the report include electricity resource and supply plans; electricity and natural gas demand forecasts; natural gas outlooks; transportation energy demand forecasts; energy efficiency savings; integrated resource planning; a barriers study; climate adaptation and resilience; renewable gas; distributed energy resources; strategic transmission investment plans; and existing power plan reliability issues. The proposed 2050 MTP/SCS would not conflict with these policies.

Locally, eight of AMBAG's member jurisdictions have adopted climate action plans that set goals and outline policies to achieve GHG reduction targets for their communities. The completed climate action planning documents in the AMBAG region address similar issues related to emissions produced by transportation, energy usage, and other operational emissions such as water supply and conveyance, wastewater treatment, and solid waste disposal. To reduce energy usage, jurisdictions have established policies that will facilitate and encourage energy efficiency for both residential and commercial land uses. Cities and counties include programs to improve energy efficiencies in old and new buildings and decrease the use of fossil fuels by providing incentives for use of renewable energy.

The proposed 2050 MTP/SCS would be consistent with these climate action plans in addition to City and county general plans within the AMBAG region.. These plans encourage the use of renewable energy, energy conservation, and energy efficiency techniques in all new building design, orientation, and construction and support of alternative transportation and fuels. As

described above, the 2050 MTP/SCS includes Transportation Demand Management and Transportation System Management intended to improve the efficiency and effectiveness of the transportation system, reducing fuel consumption, increasing transit, and other alternative modes of transportation, such as new pedestrian and bicycle facilities and promotes mixed use and infill development.

In summary, the 2050 MTP/SCS is consistent with applicable plans and policies regarding energy conservation and renewable energy. Impacts would be less than significant.

Mitigation Measures

None required.

c. Specific 2050 MTP/SCS Project That May Result in Impacts

The analysis within this section discusses the energy related impacts associated with the 2050 MTP/SCS. The transportation projects within the 2050 MTP/SCS are evaluated herein in their entirety and are intended to improve circulation rather than cause adverse impacts. However, as described above, the 2050 MTP/SCS would increase energy usage indirectly as a result of project construction and operation. These effects have been found to be less than significant, as described above. Any number of the 2050 MTP/SCS projects would presumably increase energy usage. For example, any transportation project that requires construction equipment or lighting improvements would increase energy usage. Thus, no specific projects are listed in this section related to the adverse impacts on energy in the AMBAG region.

4.6.4 Cumulative Impacts

a. Methodology

The cumulative analysis presented below primarily relies on a projections-based approach, using regional land use and growth forecasts for the AMBAG region and adjoining counties to evaluate cumulative conditions. The project is assessed within the existing and foreseeable future environmental setting, and a determination is made as to whether its incremental contribution would be cumulatively considerable when considered alongside both the overall envisioned land use scenario and specific large-scale planned projects. Refer to Section 6.4, *Cumulative Impacts*, in Chapter 6, *Other CEQA Required Discussions*, for a description of the cumulative impact methodology.

b. Impact Analysis

The increase in energy demand that is anticipated to occur as population increases associated with implementation of the 2050 MTP/SCS would contribute cumulatively to state increases in energy consumption. Therefore, the cumulative impact analysis area for energy consists of the AMBAG region, adjoining counties, and the entire State of California.

Impact E-C-1 DEVELOPMENT IN THE CUMULATIVE IMPACT ANALYSIS AREA WOULD INCREASE DEMAND FOR ENERGY BEYOND EXISTING CONDITIONS, BUT WOULD COMPLY WITH ENERGY EFFICIENCY REGULATIONS AND POLICIES.

CUMULATIVE IMPACTS WOULD BE LESS THAN SIGNIFICANT, AND THE 2050 MTP/SCS CONTRIBUTION WOULD NOT BE CUMULATIVELY CONSIDERABLE.

Future construction of development and infrastructure projects in the cumulative impact analysis area would result in short term consumption of energy resulting from construction equipment and use of fuel for vehicles, but would be subject to energy efficiency laws and regulations. Operation of future development and infrastructure projects would also require energy consumption but would be subject to CalGreen and California Building Energy Efficiency Standards, and other energy efficiency laws and regulations. As such, growth in the cumulative impact analysis area and increased energy demand would be compliant with energy efficiency regulations and policies, and would not result in the inefficient, unnecessary, or wasteful use of energy. Thus, the cumulative energy impact would not be significant, and the proposed 2050 MTP/SCS's contribution to the cumulative energy impact would not be cumulatively considerable.

4.7 Geology, Soils, and Mineral Resources

This section describes seismic ground shaking, erosion, geologic stability, and paleontological and mineral resource impacts of development facilitated by the 2050 MTP/SCS.

4.7.1 Setting

All three counties in the AMBAG region are part of the Coast Ranges geomorphic province, a region dominated by active tectonics at the margin of the Pacific and North American tectonic plates. Existing geologic, soils, and flooding conditions for each county are briefly summarized below. Figure 4.7-1, Figure 4.7-2, and Figure 4.7-3 show known active faults in each county. Figure 4.7-4, Figure 4.7-5, Figure 4.7-6, and Figure 4.7-7 show the envisioned 2050 MTP/SCS projects near fault areas.

a. Monterey County

At the southwestern portion of AMBAG's planning area, Monterey County has approximately 100 miles of coastline, two coastal ranges (the Santa Lucia and Gabilan Mountain Ranges) and two valleys (the Salinas and Carmel Valleys).

Geologic Formations

The interaction between Pacific and North American tectonic plates has created the primary geologic formations in Monterey County, as uplift along faults is largely responsible for the formation of the Coast Ranges, including the Santa Lucia and Gabilan Ranges. These granitic and metamorphic mountain ranges trend in a northwest-southeast direction, with the Santa Lucia Range along the coast and the Gabilan Range along Monterey County's eastern border (Greater Monterey County Regional Water Management Group [GMCRWMG] 2018). Located between the Santa Lucia and Gabilan mountain ranges, the Salinas Valley is a broad basin filled with several thousand feet of sediment. This valley is 130 miles long and generally 10 to 20 miles wide. The northern part of Monterey County, between the Salinas River mouth and the Pajaro Valley, has a more undulating topography and wide sandy beaches at the coastline.

Figure 4.7-1 Monterey County Alquist-Priolo Fault Zones



Figure 4.7-2 San Benito County Alquist-Priolo Fault Zones

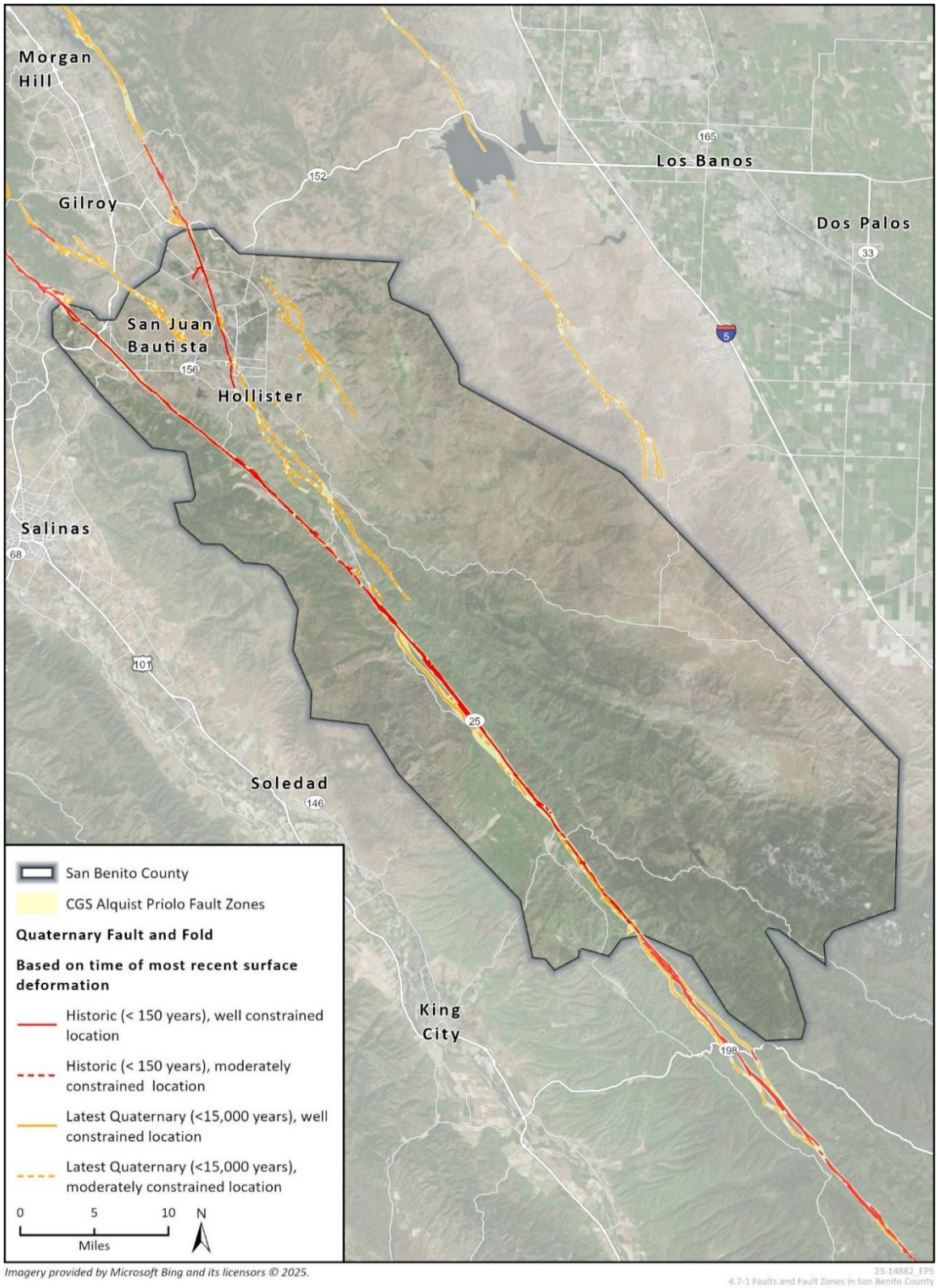


Figure 4.7-3 Santa Cruz County Alquist-Priolo Fault Zones

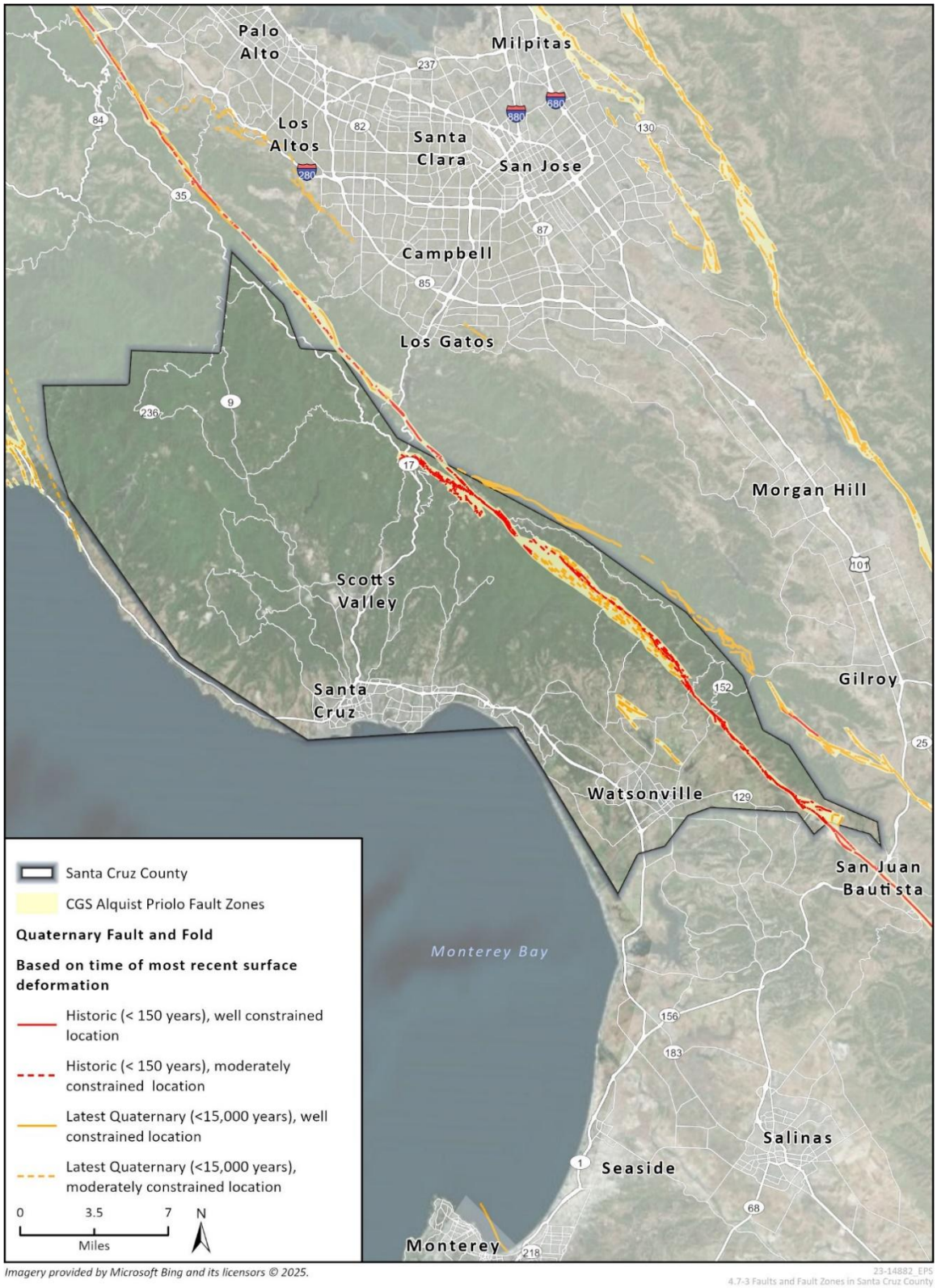


Figure 4.7-4 2050 MTP/SCS Transportation Projects within Alquist-Priolo Zones – North Monterey County

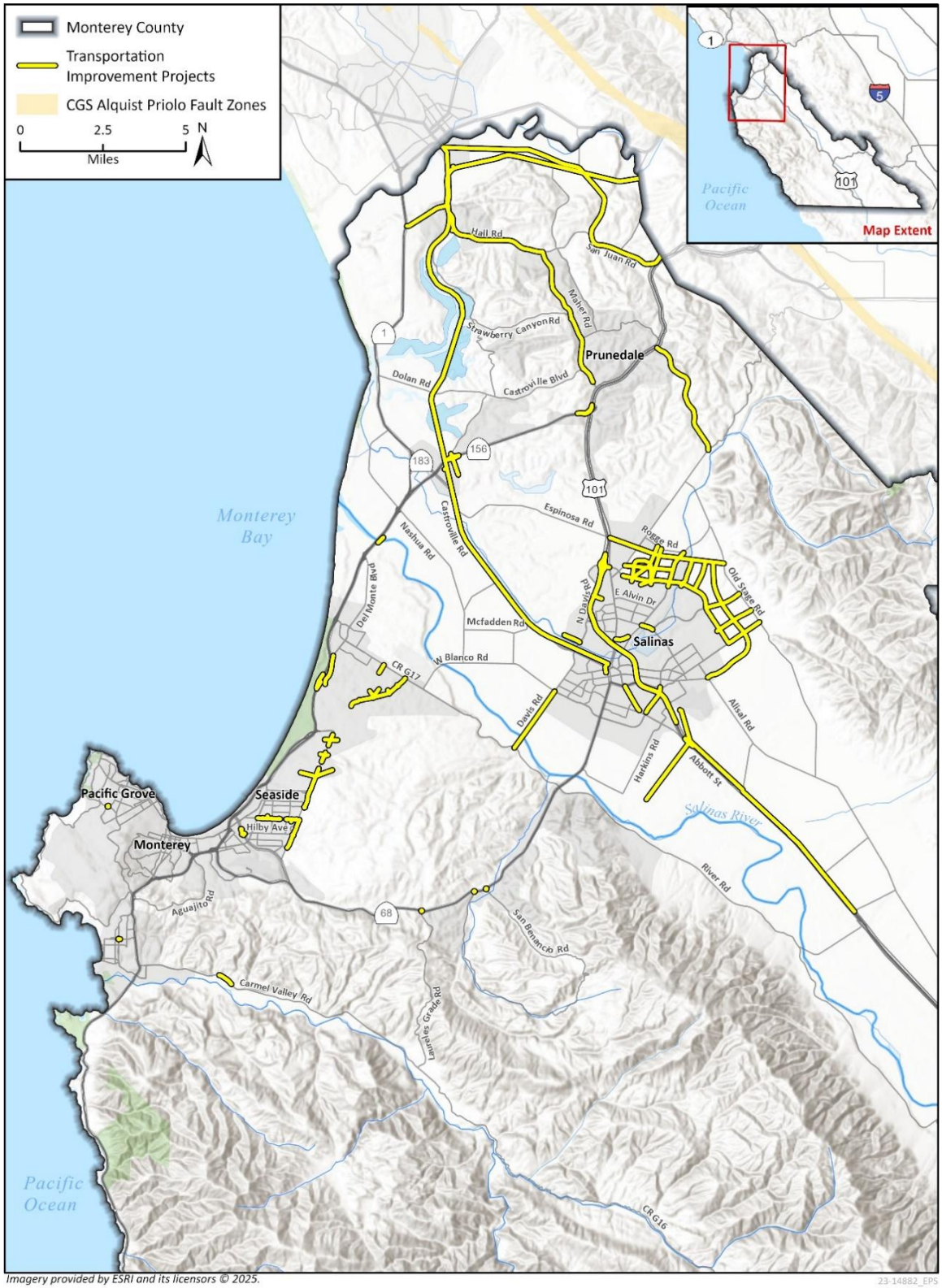


Figure 4.7-5 2050 MTP/SCS Transportation Projects within Alquist-Priolo Zones – South Monterey County

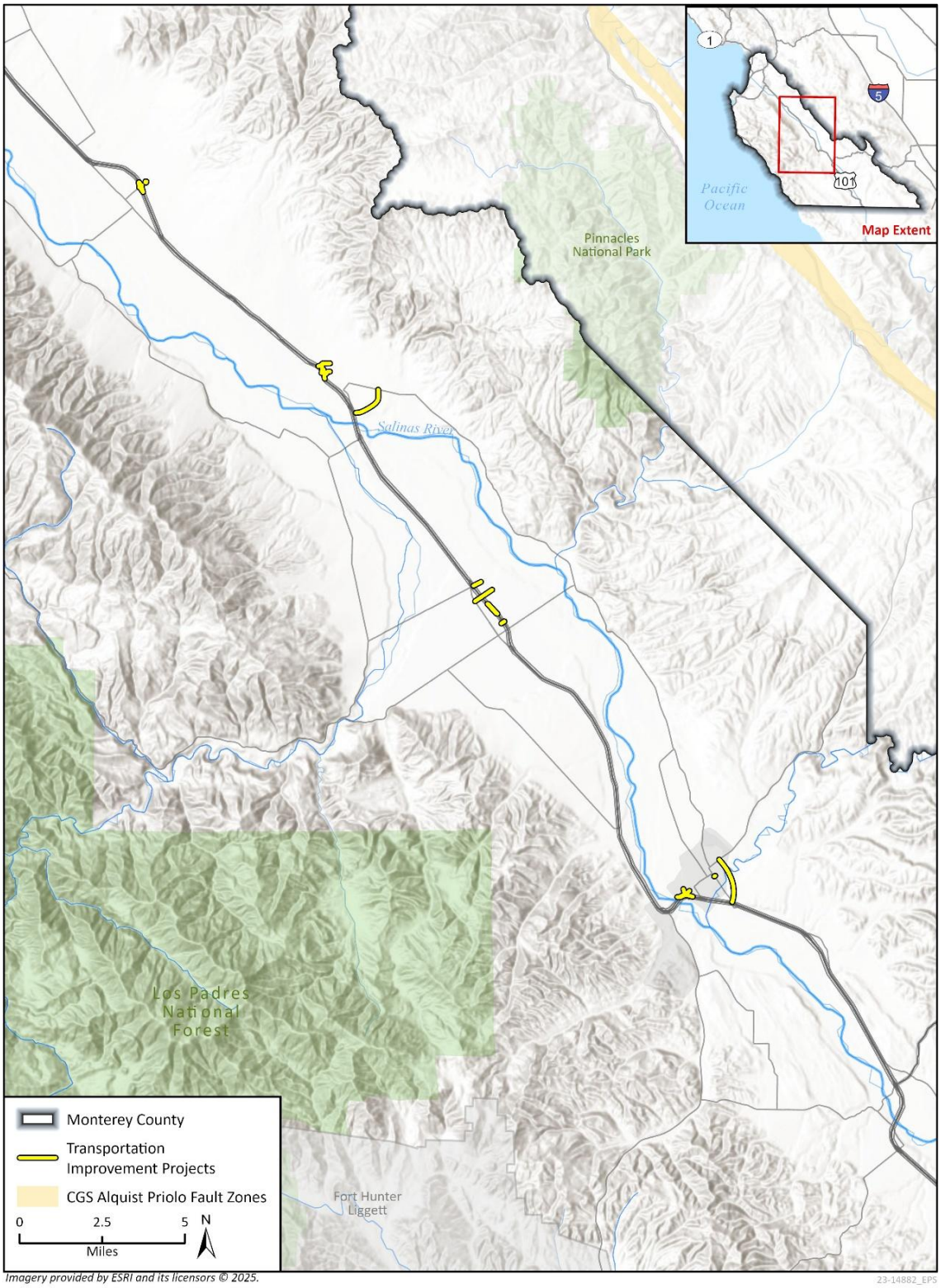


Figure 4.7-6 2050 MTP/SCS Transportation Projects within Alquist-Priolo Zones – San Benito County

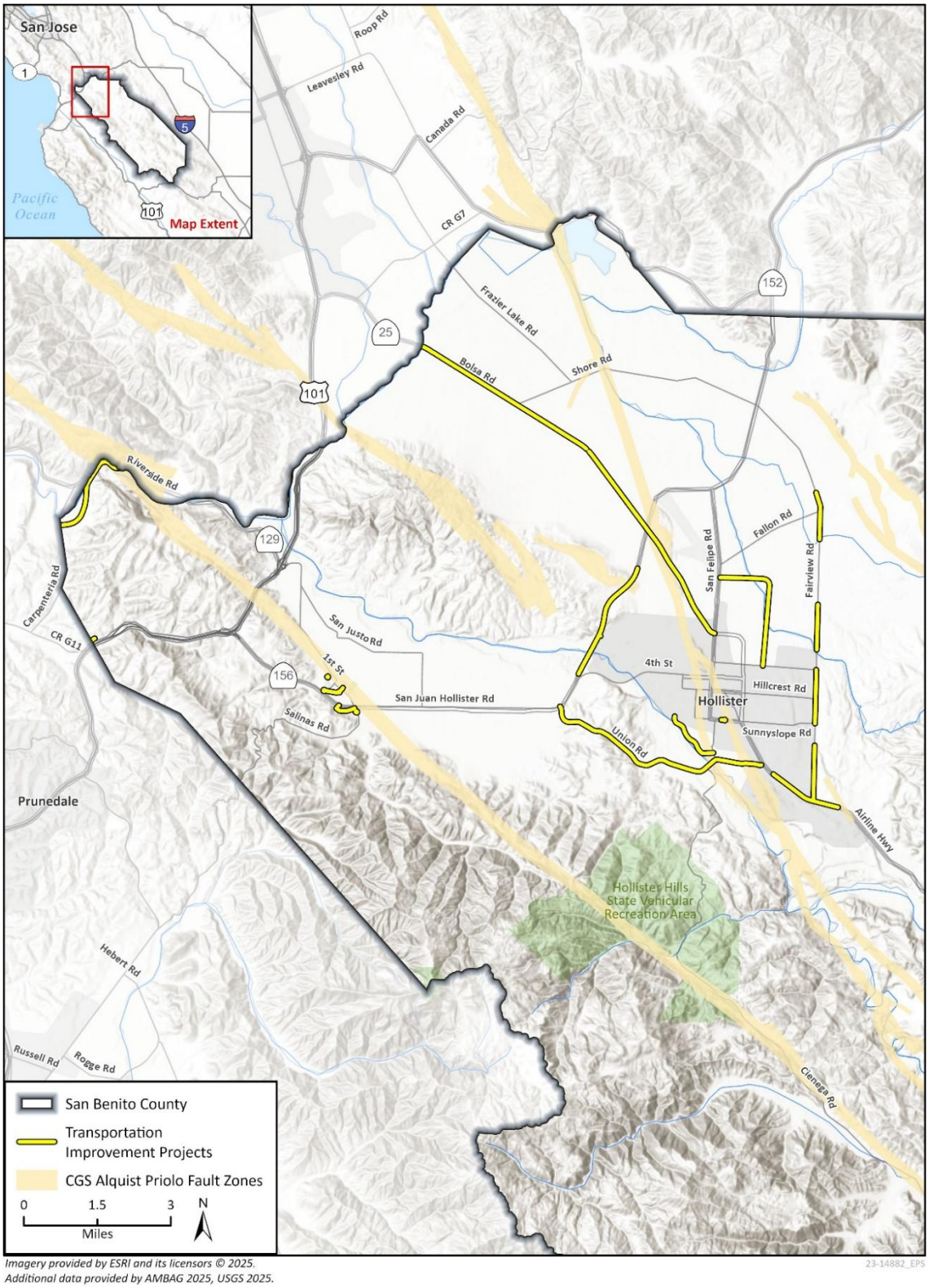


Figure 4.7-7 2050 MTP/SCS Transportation Projects within Alquist-Priolo Zones – Santa Cruz County



Earthquake Ground Shaking and Fault Rupture

Alquist-Priolo earthquake fault zones are regulatory zones surrounding the surface traces of active faults in California. A trace is a line on the earth's surface defining a fault. Wherever an active fault exists, if it has the potential for surface rupture, a structure for human occupancy cannot be placed over the fault and must be a minimum distance from the fault. An active fault, for the purposes of the Alquist-Priolo Act, is one that has ruptured in the last 11,000 years. The Alquist-Priolo Act requires the State Geologist to establish earthquake fault zones around the surface traces of active faults (California Geologic Survey [CGS] 2025).

According to the Monterey County Multi-Jurisdictional Hazard Mitigation Plan, several active faults run through the County (County of Monterey 2022). These faults include three major active faults, the San Andreas Fault, the Palo Colorado-San Gregorio Fault, and the Monterey Bay-Tularcitos Fault, as well as a number of “potentially active” and “inactive” faults (see Figure 4.7-1). Of these, the San Andreas Fault is designated as an Alquist-Priolo Fault Zone by the CGS (CGS 2024). Historically, most of the earthquakes that have occurred in Monterey County originated from movement along the San Andreas Fault system, which runs through the southeastern portion of the county for approximately 30 miles. This fault system is the most active in California and, in its entirety, runs 800 miles along the California coastline. Fault rupture can occur during severe earthquakes and produce ground surface displacements (vertical or horizontal offsets) ranging in severity. Where these faults cross structures (roads, bridges, buildings), substantial damage can occur which can cause injury to occupants or users. The highest potential for fault rupture is directly on the active faults. Monterey County also is susceptible to high levels of ground shaking due to the numerous active faults which pass through or border the county. The portions of Monterey County with the highest susceptibility to ground shaking are the lower Salinas Valley (northward from the City of Gonzales), the peninsular area from Carmel to the Santa Cruz County line and in the southeast around Parkfield.

Liquefaction and Lateral Spreading

Liquefaction involves loose sandy soil with a high-water content that undermines the ground’s ability to solidly support building structures during an earthquake. Liquefaction occurs when ground shaking causes the mechanical properties of some fine grained, saturated soils to liquefy and act as a fluid (liquefaction). It is the result of a sudden loss of soil strength due to a rapid increase in soil pore water pressures caused by ground shaking. Liquefaction that produces surface effects generally occurs in the upper 40 to 50 feet of the soil column, although the phenomenon can occur deeper than 100 feet. Soil liquefaction maps are also useful tools to assess potential damage from earthquakes. Liquefaction commonly, but not always, leads to ground failure. When the ground liquefies, sandy or silty materials saturated with water behave like a liquid, causing pipes to leak, roads and airport runways to buckle, and building foundations to be damaged. On slopes liquefaction may result in slope failure. Liquefaction potential varies substantially, and site-specific analysis is needed to accurately determine liquefaction potential in earthquake prone areas. Areas in Monterey County most susceptible to liquefaction include the Salinas River and floodplain, the Moss Landing and Elkhorn Slough areas, the Carmel River and floodplain, the San Antonio and Lockwood Valleys, and the Peachtree and Cholame Valleys. (County of Monterey 2022).

Liquefaction in a subsurface layer can cause lateral spreading of the ground surface, which usually occurs along weak shear zones that have formed within the liquefiable soil layer. Lateral spreading has generally been observed to take place in the direction of a free face (e.g., a retaining wall or slope). In Monterey County, this condition occurs mainly along the Salinas River and floodplain, the Moss Landing and Elkhorn Slough areas, the Carmel River and floodplain, the San Antonio and Lockwood Valleys and the Peachtree and Cholame Valleys (County of Monterey 2010). The severity of ground deformation due to liquefaction is dependent on the density and depth of the liquefied material. Shallower materials experience the most severe effects.

Slope Stability

Landslides and surficial slope failures are most likely to occur in areas of greater than 25 percent slope (hillside areas) and along steep bluffs. Landslides also occur due to specific events, such as loss of vegetation after fires or earthquakes adding loads to barely stable slopes. Monterey County is vulnerable to slope instability in the Santa Lucia Mountain Range and fault zones, especially after prolonged rainfall. In general, mountainous areas and steeply sloped streambanks are most susceptible to landslides or mudflows when soils are wet, particularly adjacent to areas of unstabilized cut or fill. High susceptibility to earthquake-induced landslides does not generally occur in the urbanized areas of Monterey County, including cities in the Salinas Valley or along the Monterey Peninsula (County of Monterey 2010).

Expansive Soils

Soils with relatively high clay content are expansive because the clay absorbs water and swells (expands). The hazard that expansive soils create can be substantial. Many of the expansive soils do not create large areas of destruction; however, they can disrupt supply lines (i.e. roads, power lines, railways, and bridges) and damage structures. Because the bedrock and soils contain relatively high amounts of clay, the potential for soil expansion occurs throughout the County. However, the Monterey County Multi-Jurisdictional Hazard Mitigation Plan does not identify substantial risks from expansive soils and states that no historic events related to this hazard have occurred in the County (County of Monterey 2022).

Subsidence

Subsidence is a gradual settling or sudden sinking of the Earth's surface due to removal or displacement of subsurface earth materials. Principal causes include aquifer-system compaction associated with groundwater withdrawals; drainage of organic soils; underground mining; or natural compaction or collapse, such as with sinkholes or thawing permafrost (United States Geological Survey [USGS] 2019, USGS 2000). Monterey County includes areas with oil mining and groundwater extraction that can be at risk from subsidence. However, there is little evidence of widespread land subsidence from drainage or organic soils, underground mining, or hydrocompaction in Monterey County. The Carmel Valley includes soils that are comprised of Holocene deposits, which could be susceptible to subsidence resulting from groundwater extraction in the underlying aquifer (County of Monterey 2022).

Mineral Resources

The primary mineral commodities currently mined in Monterey County are sand, gravel, and petroleum (County of Monterey 2010). Historic mineral production in Monterey County included sand and gravel mining for construction materials, mining for industrial materials (diatomite, clay, quartz, and dimension stone), and metallic minerals (chromite, placer gold, manganese, mercury, platinum, and silver). The predominant non-metallic minerals found in the county include sand and gravel, limestone, and dolomite, gemstones (mainly jade and jasper), asbestos, barite, clay, diatomite, feldspar, phosphate, sodium compounds, and stone. Of the non-metallic minerals, construction-grade aggregate (sand, gravel, and crushed stone) is the most abundant and commonly used mineral resource in the county (County of Monterey 2008). The only area designated as Mineral Resource Zone (MRZ)-2, an area of identified mineral resource significance, in Monterey County is in the vicinity of Marina, Sand City, and Seaside (County of Monterey 2008).

According to the Department of Conservation, Division of Mines and Geology Special Report 251, there are eleven Mineral Resources Zones Sectors in Monterey County. Eight of these sectors were based on recommendations initially identified in Special Report 146 of 1987. These sectors are Sector G (Sur Series Marble and Dolomite – Natividad Deposit) located on the west flank of the Gabilan Range at the northeastern end of the Salinas Valley, about 1 mile south of Sugarloaf Peak; Sector H (Quaternary Beach and Dune Sand – Monterey Bay) located along the southeastern edge of Monterey Bay and is adjacent to Marina State Beach; Sector I (Quaternary Dune Sand – Monterey Bay Deposit) located along the southeastern shore of Monterey Bay; Sector J (Cretaceous Quartz Diorite – Huckleberry Hill Deposit) located south of Monterey and Pacific Grove and east of Pebble Beach on the Monterey Peninsula; Sector K (Holocene Stream Channel and Terrace Deposits – Carmel River) located in the Carmel River which flows due west across the southern half of the quadrangle to Carmel Bay; Sector N (Quaternary Alluvium – King City Transit Mix, Inc.) located in the stream channel and flood plain of Chalone Creek, near its confluence with the Salinas River at Metz Station on the Southern Pacific Railroad, 8 miles south of Soledad and 13 miles of King City; Sector O (Quaternary Alluvium – South County Sand and Gravel) located at the mouth of Chalone Creek west of the Metz Road, 8 miles south of Soledad and 13 miles north of King City; and Sector P (Quaternary Alluvium – Topo Aggregates) located along San Lorenzo Creek low on the west slope of the Gabilan Range. The western part of the property is adjacent to King City – Bitterwater Road and is situated approximately 6 miles northeast of King City; Sector V (Stonewall Canyon) as added in OFR 99-01, Sector W (Handley Ranch Quarry) and Sector X (Hidden Canyon Quarry) as added in Special Report 251 (California Department of Conservation [DOC] 2021, DOC 1987).

b. San Benito County

Located in the eastern portion of AMBAG's planning area, San Benito County topography is dominated by the Diablo and Gabilan Mountain ranges and the valleys between these ranges.

Geologic Formations

In the north-central portion of San Benito County lie the relatively flat San Juan, Hollister and Santa Ana valleys, which are composed of alluvium. The Diablo and Gabilan Ranges are located to the east and west of these valleys, respectively. According to the San Benito County General Plan Environmental Impact Report (County of San Benito 2015), the Diablo and Gabilan Ranges consist of highly deformed and metamorphosed sedimentary and igneous rocks. These rock formations have been intensely deformed during the collision of the North American Plate and the Pacific Plate and have undergone low grades of metamorphism. The low-grade metamorphism has resulted in the alteration of ultramafic rocks to asbestos-containing formations.

Earthquake Ground Shaking and Fault Rupture

Several well-known geologic features traverse San Benito County. The most substantial is the San Andreas Fault, which runs the length of the county stretching 60 miles from the Santa Cruz County line in the north, to the Monterey County line in the south (County of San Benito 2015). Other notable faults in San Benito County include the Calaveras (principal active fault), Sargent, Paicines, Bear Valley, Zayante-Vergeles and Quien-Sabe Faults. The San Andreas Fault Zone, Calaveras Fault Zone, Quien Sabe Fault Zone, and Sargent Fault Zone are designated Alquist-Priolo Fault Zones within the County (CGS 2024). In San Benito County, the highest ground shaking potential occurs in the north-central valley region, including the Cities of Hollister and San Juan Bautista (see Figure 4.7-2).

Liquefaction and Lateral Spreading

A major earthquake within San Benito County, or even in the San Francisco Bay Area to the north of San Benito County, could have substantial direct impacts in the county including seismic shaking, liquefaction, and ground rupture (County of San Benito 2015b). The potential for liquefaction and thus lateral spreading is recognized throughout the Santa Clara Valley in San Benito County and in most areas where unconsolidated sediments and a high water table coincide. Liquefaction has been reported from historical earthquakes near San Juan Bautista and Hollister.

Slope Stability

Slope instability occurs in areas with steep topography, as well as near Hollister, Tres Pinos, and Paicines, and along faults (see Figure 4.7-2). Landslides can occur due to specific events, such as loss of vegetation after fires or earthquakes adding loads to barely stable slopes.

Expansive Soils

Shink and swell potentials related to expansive soils found within the County were identified in the 1969 United States Department of Agriculture (USDA) Soil Survey (County of San Benito 2015a). The presence of unstable expansive soils could exacerbate this risk and adversely impact building structures such as foundations and roads.

Subsidence

Areas susceptible to subsidence in San Benito County are typically composed to open textured soils that become saturated or extensive withdraw of groundwater or oil. Subsidence as a result of ground water mining has been well documented in the Santa Clara Valley to the north. Cases of subsidence within the County have not been well documented. Subsidence in the Santa Clara Valley is mainly due to hydrocompaction from groundwater withdrawal. The valley deposits within the County are also at risk for subsidence if groundwater overdraft conditions exist (County of San Benito, 2015a).

Mineral Resources

According to the Department of Conservation, Division of Mines and Geology Special Report 146, Part IV, there are two MRZ Sectors in San Benito County. These sectors are identified as Sector E (Holocene Stream Channel and Terrace Deposits, San Benito River and Tres Pinos Creek), located along the channel of the San Benito River from Tres Pinos to the County line in the northwest and Sector F (Cretaceous Honblende Gabbro-Aromas Deposit), located five miles from Chittenden Pass to Pajaro Gap and are classified as MRZ-2 (DOC 1987, County of San Benito 2015a).

c. Santa Cruz County

Santa Cruz County is bounded to the north by San Mateo County, to the east by the crest of the Santa Cruz Mountains, to the south by the Pajaro River and to the west by the Pacific Ocean. The County is characterized by steep coastal bluffs and deep mountain canyons.

Geologic Formations

The Santa Cruz Mountains consist of predominantly marine sedimentary rocks of Paleocene to Pliocene age and non-marine sediments of Pleistocene and Holocene age, which overlay a granitic and metamorphic basement from the Cretaceous period or older (Santa Cruz County Regional Transportation Commission [SCCRTC] 2013).

Earthquake Ground Shaking and Fault Rupture

The major faults in Santa Cruz County are the San Andreas Fault, the Zayante-Vergeles Fault, San Gregorio Fault, and the Monterey Bay-Tularcitos Fault Zone. These faults are associated with Holocene activity (movement in the last 11,000 years) and are considered to be active (SCCRTC 2013) (Figure 4.7-3). Designated Alquist-Priolo Fault Zones within the County include the San Andreas Fault Zone, Zayante-Vergeles Fault Zone, and Butano Fault Zone (CGS 2024). Southwest of the San Andreas Fault, the older sedimentary rocks in the Coast Ranges are moderately to strongly deformed, with steep-limbed folds and several generations of faults associated with uplift of the Santa Cruz Mountains. Along the coast, the ongoing tectonic activity is most evident in the gradual uplift of the coastline, as indicated by the series of uplifted marine terraces that sculpt the coastline.

Although a map of ground shaking hazards is not available for Santa Cruz County, the County of Santa Cruz Local Hazard Mitigation Plan 2021-2026 states that historical evidence has shown the entire county is vulnerable to earthquake hazards (County of Santa Cruz 2021). The epicenter of

the Loma Prieta earthquake of October 1989, the most intense to strike California since 1906, was about 10 miles east-northeast of the city of Santa Cruz in the Aptos planning area on the San Andreas Fault.

Liquefaction and Lateral Spreading

Most of the valley bottoms in the southern regions of the County are underlain by alluvium and are considered at very high, high, or moderate risk for liquefaction potential. Development within the floodplains of the many creeks and rivers in the county is subject to risk of liquefaction in the event of seismic activity. Liquefaction could occur along alluvial areas such as Pajaro Valley, parts of Capitola and Santa Cruz, and along streams such as Corralitos Creek, the San Lorenzo River, and other streams throughout Santa Cruz County following a great earthquake on the San Andreas Fault or other regional major faults. The land surrounding the many rivers and streams throughout the County is subject to risk of lateral spreading or other forms of shallow landsliding. Intense winter storms and earthquake activity can contribute to risk of lateral spreading (County of Santa Cruz 2021).

Slope Stability

Santa Cruz County's unique geologic conditions make large portions of the County particularly susceptible to many forms of landsliding. Factors that contribute to landsliding in Santa Cruz County include storms, earthquakes, fire, freezing and thawing, erosion, wildfire burn scars along steep terrain, vegetation removal, grading and other human activities. Areas subject to landslide hazards are widely dispersed across inland portions of Santa Cruz County. Many mountainous areas of the County are subject to landslide hazards or are on slopes of greater than 50 percent (County of Santa Cruz 2021).

Expansive Soils

Due to its unique geologic makeup, expansive soils are located mainly in the coastal areas and in agricultural areas in the southern portion of the County, especially in and around the cities of Santa Cruz and in Capitola. Expansive soils are also generally found in the coastal terraces in Live Oak, Seacliff, and Rio Del Mar and in South County near Watsonville. Smaller pockets of expansive soils may exist throughout the County (County of Santa Cruz 2021).

Subsidence

Santa Cruz County does not have any areas that have a high susceptibility to subsidence. Overall, the risk, probability, and consequences of a potential subsidence event within the County were all assessed to be low during the County's community risk assessment. Land subsidence occurs in Santa Cruz only in conjunction with severe coastal storms and earthquake (County of Santa Cruz 2021). Estimated potential for areas within the county that are at a low susceptibility to subsidence include the coastal areas of the County as well as inland toward the middle of the County.

Mineral Resources

According to the Department of Conservation, Division of Mines and Geology Special Report 251, there are seven designated Mineral Resource Zones Sectors in Santa Cruz County, all initially identified in Special Report 146 of 1987. These sectors are identified as Sector A (Cretaceous Quartz Diorite and Metasedimentary Rocks – Felton Quarry) located on the east side of Ben Lomond Mountain; Sector B-1 (Santa Margarita Formation Sandstone – Quail Hollow), Sector B-2 (Santa Margarita Formation Sandstone – Olympia, and Sector B-3 (Santa Margarita Formation Sandstone – Felton Plant), all located north and east of Felton; Sector C (Santa Margarita Formation Sandstone – Wilder Sand Plant), located at Davenport, west of Santa Cruz; Sector L (Cretaceous Quartz Diorite – Olive Springs Quarry) located on the east side of Sugar Loaf Mountain, between Soquel Creek and Hester Creek, at the north of Olive Springs Road; and Sector M (Pleistocene semi-consolidated fluvial and aeolian sands and gravels – Cabrillo Sand and Gravel) located in the southern portion of the Santa Cruz Mountains, approximately 1,000 feet south of Freedom Boulevard, 6.5 miles northwest of Watsonville and 2.5 miles northeast of Rob Roy Junction (DOC 1987; 2021).

Santa Cruz County has lands classified MRZ-2, located within designated sectors. All sectors listed above are designated. Active mines exist in each of these sectors (DOC 2021).

d. Paleontological Resources

Paleontological resources, also known as fossils, are the remains, traces or imprints of once-living organisms preserved in rocks or sediment. Paleontological resources are commonly found in sedimentary rock units. Paleontological sites are normally discovered in cliffs, ledges, steep gullies, or along wave-cut terraces where vertical rock sections are exposed. Fossil material may be exposed by a trench, ditch, or channel caused by construction.

Paleontological sensitivity refers to the potential for a geologic unit to produce scientifically significant fossils. Direct impacts to paleontological resources occur when earthwork activities, such as grading or trenching, cut into the geologic deposits (formations) within which fossils are buried and physically destroy the fossils. Since fossils are the remains of prehistoric animal and plant life, they are considered to be nonrenewable. Paleontological sensitivity is derived from the known fossil data collected from the entire geologic unit, not just from a specific survey.

Invertebrate fossils in microscopic form such as diatoms, foraminifera and radiolarians can be so prolific as to constitute major rock material in some areas. Invertebrate fossils normally are marine in origin, widespread, abundant, fairly well preserved, and predictable as to fossil sites. Therefore, the same or similar fossils can be located at any number of sites throughout central California. Vertebrate fossil sites are usually found in non-marine or continental deposits. Vertebrate fossils of continental material are usually rare, sporadic and localized. According to the University of California Museum of Paleontology (UCMP) several vertebrate localities containing terrestrial mammals (mammoth, mastodon, horse, ground sloth, camel and rodents) have been identified from the Pleistocene non-marine continental deposits throughout the AMBAG region (UCMP 2025). Therefore, the AMBAG region contains areas of high paleontological sensitivity.

4.7.2 Regulatory Setting

a. Federal Laws, Regulations, and Policies

Earthquake Hazards Reduction Act

The Earthquake Hazards Reduction Act was enacted in 1977 to "reduce the risks to life and property from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards and reduction program." To accomplish this, the act established the National Earthquake Hazard Reduction Program (NEHRP). NEHRP's mission includes improved understanding and characterization of hazards and vulnerabilities, improvement of building codes and land use practices, risk reduction through post-earthquake investigations and education, development and improvement of design and construction techniques, improvement of mitigation capacity, development of alternative performance objectives to advance functional recovery, and accelerated application of research results. The NEHRP designates the National Institute of Standards and Technology as the lead agency of the program and assigns it several planning, coordinating, and reporting responsibilities. Programs under the NEHRP help inform and guide planning and building code requirements, such as emergency preparedness responsibilities and seismic code standards.

Disaster Recovery Reform Act

The Disaster Recovery Reform Act was signed into law in 2018. The reforms acknowledge the shared responsibility for disaster response and recovery, are intended to reduce the complexity of the Federal Emergency Management Agency (FEMA), and build the nation's capacity for the next catastrophic event. The law, which amends the Robert T. Stafford Disaster Relief and Emergency Assistance Act, contains 56 distinct provisions that require FEMA policy or regulation changes for full implementation. Examples of the provisions include expanding eligible hazard mitigation activities including the replacement of electric utility poles resilient to extreme winds (Section 1204) and earthquake early warning technology (Section 1233).

b. State Laws, Regulations, and Policies

Alquist-Priolo Earthquake Fault Zoning Act

The purpose of the Alquist-Priolo Earthquake Fault Zoning Act (PRC 2621 et seq.) is to regulate development near active faults so as to mitigate the hazard of surface fault rupture. The Alquist-Priolo Act prohibits the location of most types of structures intended for human occupancy across the traces of active faults and strictly regulates construction in the corridors along active faults (Earthquake Fault Zones). It also defines criteria for identifying active faults, giving legal weight to terms such as "active," and establishes a process for reviewing building proposals in and adjacent to Earthquake Fault Zones. Under the Alquist-Priolo Act, faults are zoned, and construction along or across them is strictly regulated if they are "sufficiently active" and "well-defined." A fault is considered sufficiently active if one or more of its segments or strands shows

evidence of surface displacement during Holocene time (defined 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 (CGS 2018).

Additionally, the Alquist-Priolo Act requires lead agencies to prepare site specific fault identification investigations conducted by licensed geotechnical professionals, or to otherwise comply with any existing local policies that exceed or reasonably replace any of the Alquist-Priolo Act's requirements. Fault identification studies required by the Alquist-Priolo Act involve on-site trenching and excavation for site specific identification and location of fault rupture planes where any future rupture would be anticipated. Structures intended for human occupancy (defined in the Act as a structure that might be occupied more than 2,000 hours per year) must be located at a minimum distance of 50 feet from any identified active fault traces.

Seismic Hazards Mapping Act

Like the Alquist-Priolo Act, the Seismic Hazards Mapping Act of 1990 (PRC 2690–2699.6) is intended to reduce damage resulting from earthquakes. While the Alquist-Priolo Act addresses surface fault rupture, the Seismic Hazards Mapping Act addresses other earthquake-related hazards, including liquefaction, earthquake-induced landslides, and amplified ground shaking. Its provisions are similar in concept to those of the Alquist-Priolo Act: the State is charged with identifying and mapping areas at risk of strong ground shaking, liquefaction, landslides and other corollary hazards, and cities and counties are required to regulate development within mapped Seismic Hazard Zones (CGS 2025a).

California Building Code

The California Building Code (CBC) has been codified in the California Code of Regulations as Title 24, Part 2. Title 24 is administered by the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. The purpose of the CBC is to establish minimum standards to safeguard the public health, safety, and general welfare through structural strength, means of egress facilities, and general stability by regulating and controlling the design, construction, quality of materials, use and occupancy, location, and maintenance of all building and structures within its jurisdiction. The 2022 CBC is based on the 2021 International Building Code (IBC) published by the International Code Council, though will be superseded by the 2025 CBC which is expected to become effective in January 2026. In addition, the CBC contains necessary California amendments, which are based on reference standards obtained from various technical committees and organizations, such as the American Society of Civil Engineers (ASCE), the American Institute of Steel Construction, and the American Concrete Institute. ASCE Minimum Design Standard 7-05 (ASCE 7-05) provides requirements for general structural design and includes means for determining earthquake loads, as well as other loads (e.g., flood, snow, wind), for inclusion into building codes. The provisions of the CBC apply to the construction, alteration, movement, replacement, and demolition of every building or structure, or any appurtenances connected or attached to such buildings or structures throughout California.

The earthquake design requirements consider the occupancy category of the structure, site class, soil classifications, and various seismic coefficients that are used to determine a Seismic Design Category (SDC) for a project as described in Chapter 16 of the CBC. The SDC is a classification system that combines the occupancy categories with the level of expected ground motions at the site and ranges from SDC A (very small seismic vulnerability) to SDC E (very high seismic vulnerability and near a major fault) and SDC F (hospitals, police stations, emergency control centers in areas near major active faults). Design specifications are then determined according to the SDC in accordance with Chapter 16 of the CBC. Chapter 16, Section 1613 provides earthquake loading specifications for design and construction to resist the effects of earthquake motions in accordance with ASCE 7-05.

Chapter 18 of the CBC covers the requirements of geotechnical investigations (Section 1803); excavation, grading, and fills (Section 1804); load-bearing of soils (1806); foundations (Section 1808); shallow foundations (Section 1809); and deep foundations (Section 1810). Chapter 18 also describes analysis of expansive soils and the determination of the depth to groundwater table. For SDC D, E, and F, Chapter 18 requires analysis of slope instability, liquefaction, and surface rupture attributable to faulting or lateral spreading, plus an evaluation of lateral pressures on basement and retaining walls, liquefaction and soil strength loss, and lateral movement or reduction in foundation soil-bearing capacity. It also addresses mitigation measures to be considered in structural design, which may include ground stabilization, selection of appropriate foundation type and depths, selection of appropriate structural systems to accommodate anticipated displacements, or any combination of these measures. The potential for liquefaction and soil strength loss must be evaluated for site specific peak ground acceleration magnitudes and source characteristics consistent with the design earthquake ground motions.

Specifically, Section 1803.7 of the CBC requires geologic and earthquake engineering reports for all proposed construction. The purpose of the engineering report is to identify geologic and seismic conditions that may require mitigation. The reports, which are prepared by a California certified engineering geologist in consultation with a California-registered geotechnical engineer, assess the nature of the site and potential for earthquake damage based on appropriate investigations of the regional and site geology, project foundation conditions, and potential seismic shaking at the site. These reports must consider the most recent CGS Note 48 (Checklist for the Review of Engineering Geology and Seismology Reports for California Public Schools, Hospitals, and Essential Services Buildings), CGS Special Publication 42: Fault Rupture Hazard Zones in California (for project sites proposed within an Alquist-Priolo Zone), and the most recent version of CGS Special Publication 117: Guidelines for Evaluating and Mitigating Seismic Hazard in California (for project sites proposed within a Seismic Hazard Zone). All conclusions must be fully supported by satisfactory data and analysis.

The geotechnical report required by Section 1803 provides completed evaluations of the foundation conditions of the site and the potential geologic and seismic hazards. It includes site specific evaluations of design criteria related to the nature and extent of foundation materials, groundwater conditions, liquefaction potential, and settlement potential and slope stability, as well as the results of the analysis of problem areas identified in the engineering geologic report.

The geotechnical report incorporates estimates of the characteristics of site ground motion provided in the engineering geologic report. The geotechnical report must be prepared by a geotechnical engineer registered in the State of California with the advice of the certified engineering geologist and other technical experts, as necessary. The approved engineering geologic report is submitted with, or as part of, the geotechnical report. Local jurisdictions in the AMBAG region typically regulate construction activities through a process that requires the preparation of and compliance with a site specific geotechnical investigation, consistent with Title 24, Part 2, Chapter 18 of the CBC.

Moreover, construction within seismic zones as identified by the Alquist-Priolo Act and the Seismic Hazards Mapping Act of 1990 (PRC 2690 -2699.6) are required by the CBC to follow more stringent regulations to withstand fault ruptures and ground shaking effects from seismic activities. The CBC provides standards for various aspects of construction, including but not limited to: excavation, grading and earthwork construction; fills and embankments; expansive soils; foundation investigations; liquefaction potential; and soil strength loss. In accordance with California law, proponents of specific projects are required to comply with all provisions of the CBC for certain aspects of design and construction.

California Department of Transportation Regulations and Seismic Design Criteria

The California Department of Transportation (Caltrans) has Seismic Design Criteria (SDC) which contain 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. Memo 20-1 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 comprise Caltrans' seismic design methodology (Caltrans 2010).

Clean Water Act Section 402

Section 402 of the Clean Water Act authorizes the California State Water Resources Control Board (SWRCB) to issue National Pollutant Discharge Elimination System (NPDES) General Construction Storm Water Permit (Order Number 2022-0057-DWQ, as amended), referred to as the "General Construction Permit." Construction activities can comply with and be covered under the General Construction Permit provided that the permittee:

- Develops and implements a Storm Water Pollution Prevention Plan (SWPPP) which specifies Best Management Practices (BMPs) that will reduce the risk of construction pollutants from contacting stormwater and with the intent of minimizing sediment from moving off-site into receiving waters.
- Eliminates or reduces non-stormwater discharges to storm sewer systems and other waters of the nation.
- Performs inspections of all BMPs

California Surface Mining and Reclamation Act

The California Surface Mining and Reclamation Act (SMARA) mandated the initiation by the State geologist of mineral land classification to help identify and protect mineral resources in areas within the State subject to urban expansion or other irreversible land uses that would preclude mineral extraction. Areas are classified into MRZs based on the presence of deposits and how much evaluation of the resource has occurred.

SMARA also allowed the State Mining and Geology Board (SMGB), after receiving classification information from the State geologist, to designate lands containing mineral deposits of regional or Statewide significance. Areas designated by SMGB are incorporated by regulation into Title 14, Division 2 of the California Code of Regulations. Such designations require that a lead agency's land use decisions involving designated areas be made in accordance with its mineral resource management policies and that the lead agency consider the importance of the mineral resource to the region or the State as a whole and not just the lead agency's jurisdiction. In 1979, SMGB adopted guidelines for the management of mineral resources and preparation of local plans. The guidelines require local general plans to reference the State-identified mineral deposits and sites that are identified by the State geologist for conservation and/or future mineral extraction. Subsequently, SMGB identified urbanized areas where irreversible land uses precluded mineral extraction.

Assembly Bill 885 – On -Site Wastewater Treatment Systems

Assembly Bill (AB) 885 (Chapter 781, Statutes of 2000) required SWRCB to draft and implement regulations for siting, installation, operation, and maintenance of on-site wastewater treatment systems. Proposed regulations were issued in 2009 and adopted in June 2012.

California Public Resources Code

Section 5097.5 of the Public Resources 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.

Here "public lands" means those owned by, or under the jurisdiction of, the state or any city, county, district, authority, or public corporation, or any agency thereof. Consequently, public agencies are required to comply with Public Resources Code Section 5097.5 for their own activities, including construction and maintenance, and for permit actions (e.g., encroachment permits) undertaken by others.

c. Local Laws, Regulations, and Policies

Monterey County

The Safety Element of the Monterey County General Plan contains goals and policies related to seismic hazards. Goal S-1 of the General Plan is to "Minimize the potential for loss of life and property resulting from geologic and seismic hazards." The policies listed under Goal S-1 would ensure that land uses contain measures to reduce loss from earthquakes (Policy S-1.1), site specific geologic studies for new development (Policy S-1.3) and require development review (Policy S-1.7) (County of Monterey 2010). The Conservation and Open Space Element of the Monterey County General Plan contains policies under Goal OS-2 intended to provide for the conservation, utilization, and development of the County's mineral resources. Specific policies direct the County to protect mineral deposits from incompatible land uses, to ensure mineral extraction operations are consistent with the SMARA and other applicable standards, and to inventory available mineral resources in the County. Similarly, policies contained under Goal OS-7 are intended to encourage the conservation and identification of the County's paleontological resources. Specific policies require developers to complete Phase I paleontological reviews in any formation known to yield important elements of the fossil record, direct to compile information regarding the County's paleontological resources to use in the environmental and development review process and encourage development to avoid impacts to sensitive paleontological sites (County of Monterey 2010).

Monterey County Code Chapter 16.12 is designed to eliminate and prevent conditions of accelerated erosion. The chapter requires control of all existing and potential conditions of accelerated erosion and sets forth required provisions for project planning, preparation of erosion control plans, runoff control and land clearing. Monterey County Code Chapter 18.02 adopts the 2022 California Building Code by right. Monterey County Code Section 15.20.060 requires a permit be obtained for septic tanks within the county and sets forth requirements for septic tank construction (County of Monterey 2025).

The general plans and municipal codes of the cities within Monterey County contain similar goals, policies, and regulations governing geology, soils, and seismic hazard to those set forth by the County. Compliance with county, state, and federal requirements, along with adherence to the guidance outlined in the CBC, would facilitate compliance with local regulations at the city level. For example, cities in Monterey County such as City of Monterey and City of Carmel-by-the-Sea include similar geology and soils and seismic hazard goals and policies in their respective general plans to those discussed above. Goal a of the City of Monterey's General Plan, Safety Element is to "Protect life and property from natural and humanmade hazards." The policies listed under Goal a are intended to require responsible siting and design of new development in order to minimize risk to life and property due to geologic and seismic hazards, flooding hazards, and humanmade hazards (hazardous materials) (City of Monterey 2024). The City of Carmel-by-the-Sea's General Plan, Environmental Safety Element provides goals and policies related to seismic hazards. Goal O8-5 is to "Prevent or reduce loss of life, injury, and property damage from geologic and seismic disasters." The policies listed under Goal O8-5 would ensure that development consider potential seismic hazards (Policy P8-22), require analysis and geotechnical investigations of structures and sites (Policy P8-23 and P8-24), and avoid placement of critical facilities and high

occupancy structures in areas subject to ground failure (Policy P8-25) (City of Carmel-by-the-Sea 2009).

San Benito County

The Health and Safety Element of the San Benito County 2035 General Plan (County of San Benito 2015a) contains goals and policies related to seismic and geological hazards. Goal HS-3 is to "protect lives and property from seismic and geologic hazards." Policies listed under this goal include earthquake resistant design (Policy HS-3.1), abatement of unsafe structures (Policy HS-3.4), liquefaction studies (Policy HS-3.8) and seismic safety evaluations (Policy HS-3.9) (County of San Benito 2015b). Policy NCR-7.10 of the Natural and Cultural Resources Element of the San Benito County 2035 General Plan directs the County to County educate the public regarding laws, codes, and ordinances that forbid collecting items associated with tribal, archeological, historical, and paleontological sites, and unique geological formations. Policy NCR-7.11 prohibits unauthorized grading, collection, or degradation of Native American, tribal, archaeological, or paleontological resources, or unique geological formations. Policies related to Goal NCR-5 of the General Plan seek to protect and support economically viable mineral resource extraction. Specific policies preserve for future use areas with potentially-important mineral resources by limiting incompatible uses, recognize areas classified MRZ-2 or Scientific Zone (SZ) pursuant to the Guidelines for Classification and Designation of Mineral Lands as mineral resources of statewide and regional significance, and require a notice explaining the location of important mineral resources to be recorded on any parcel within one-half mile of an MRZ 2 or SZ designation (County of San Benito 2015a).

Chapter 19.17 of the San Benito County Code of Ordinances requires erosion control as part of project plans that include the proposed methods for control of runoff, erosion and sediment control. San Benito County Code Chapter 21.01 adopts the 2022 California Building Code by right. San Benito County Code Section 15.07 requires a permit be obtained for septic tanks within the county and sets forth requirements for septic tank construction (County of San Benito 2024).

The general plans and municipal codes of the cities within San Benito County contain similar goals, policies, and regulations governing geology, soils, and seismic hazard to those set forth by the County. Compliance with county, state, and federal requirements, along with adherence to the guidance outlined in the CBC, would facilitate compliance with local regulations at the city level. For example, Goal HS1 of the City of Hollister's General Plan, Health and Safety Element is to "Protect community health and safety from natural and manmade hazards." Policies listed under this goal include location of future development (HS1.1), safety considerations in development review (HS1.2), seismic hazard design (Policy HS1.4), geotechnical and geologic review requirements (Policy HS1.5), and engineering tests for geologic conditions (Policy HS1.6) (City of Hollister 2005).

Santa Cruz County

Chapter 6, *Public Safety*, of the Santa Cruz County General Plan and Local Coastal Program contains objectives and policies related to seismic hazards. Objective 6.1 is to "reduce the potential for loss of life, injury and property damage resulting from earthquakes by regulating the siting and design of development in seismic hazard areas; encouraging open space; agricultural or low density land use in the fault zones; and increasing public information and awareness of seismic hazards" (County of Santa Cruz, 2024a). Policies in the General Plan to implement this objective include geological review for development in designated fault zones (Policy 6.1.1), site investigation regarding liquefaction hazard (Policy 6.1.4) and location of new development away from potentially hazardous areas (Policy 6.1.5). The Agriculture, Natural Resources, and Conservation Element of the Santa Cruz County General Plan contains policies related to paleontological resources. Policy ARC-5.1.1 requires palaeontologic features to be included when mapping visual resources. Policy ARC-6.1.1 directs to protect paleontological features through the environmental review process. Policy ARC-6.1.2 encourages the provision of Open Space Easements or other forms of land dedication to conserve as open space those areas containing hydrological, geological, or paleontological features of significant scenic or scientific value. Policy ARC-6.1a and ARC-6.1b direct to continue to identify hydrological, geological, and paleontological features in the County, and to develop a program to protect unique hydrological, geological, and paleontological resources. Similarly, policies under Goal ARC-7 of the General Plan seek to provide for the conservation of mineral resources through measures such as conformance with the Mining Regulations Ordinance, identification of mineral resources, and minimizing conflicts between new development and mineral resource areas. Specific actions include the provision of density requirements and review of incompatible uses on mineral resource land, environmental review for new quarries, and control the impacts of mineral extraction or processing operations adjacent to riparian corridors (County of Santa Cruz 2024b).

Similar to the Monterey County Code, the Santa Cruz County Code Chapter 16.22 is designed to prevent accelerated erosion. Under Section 16.22.040 of the Santa Cruz County Code no person shall allow for the continued existence of accelerated erosion. Chapter 16.22 requires projects to have an erosion control plan, runoff control and land clearing approval. Santa Cruz County Code Chapter 12.10.215 adopts the 2022 California Building Code by right. Santa Cruz County Code Section 7.38 and 7.42 requires a permit be obtained for septic tanks within the county and sets forth requirements for septic tank construction (County of Santa Cruz 2025).

The general plans and municipal codes of the cities within Santa Cruz County contain similar goals, policies, and regulations governing geology, soils, and seismic hazard to those set forth by the County. Compliance with county, state, and federal requirements, along with adherence to the guidance outlined in the CBC, would facilitate compliance with local regulations at the city level. For example, cities in Santa Cruz County such as City of Santa Cruz and City of Capitola include similar geology and soils and seismic hazard goals and policies in their respective general plans. Goal HZ6 of the City of Santa Cruz's General Plan, Hazards, Safety, and Noise Element is to provide residents with "Protection from natural hazards." Policies listed under this goal include reducing erosion hazards (Policy HZ6.1), discouraging development on unstable slopes (Policy

HZ6.2), and reducing risk related to seismic hazards (Policy HZ6.3) (City of Santa Cruz 2019). Similarly, the City of Capitola's General Plan, Safety and Noise Element provides goals and policies related to seismic hazards. Goal SN-2 is to "Minimize the loss of life, injury, and property damage due to seismic and geologic hazards." Policies listed under this goal include development restrictions (Policy SN-2.1), geological and seismic mitigation (Policy SN-2.2), seismic analysis (Policy SN2.3), hazard reduction from bluff erosion (Policy SN-2.4), retrofitting (Policy SN-2.5), geotechnical hazard considerations (Policy SN-2.6), and enforcing state standards (Policy SN-2.9) (City of Capitola 2019).

4.7.3 Impact Analysis

a. Methodology and Significance Thresholds

To evaluate the impacts of the transportation projects and land use scenario included in the 2050 MTP/SCS related to geologic and seismic hazards as well as soil erosion, analysis is conducted in relation to known geologic hazards and features, including earthquake faults, ground failure, underlying geology, and soils. In determining the level of significance, the analysis assumes the proposed buildout would comply with relevant laws, regulations, and guidelines. The analysis is based on review of available documentation, including applicable general plans, local hazard mitigation plans, the CGS website, and USGS data and publications. The evaluations of the paleontological impacts of the proposed buildout is based on review of available documentation, including primary literature and online fossil databases available from the Paleobiology Database, Society of Vertebrate Paleontology and the University of California Museum of Paleontology. The evaluations of the impacts to mineral resources related to the proposed buildout is based on applicable county general plans and DOC mineral land classifications and special reports.

Appendix G of the *CEQA Guidelines* identifies criteria for determining whether a project would have a significant impact related to geology and soils. Potential significance is evaluated based on relative geologic risks of the project area and if existing geotechnical regulations would be able to minimize such risks. The project would have a significant impact related to geology and soils if it would:

1. Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, including liquefaction, or landslides;
2. Result in substantial soil erosion or the loss of topsoil;
3. 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, subsidence, liquefaction, or collapse;
4. Be located on expansive soil, creating substantial direct or indirect risks to life or property;
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;

6. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.
7. 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
8. 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.

b. Project Impacts and Mitigation Measures

The following section describes geology, soils, and mineral resources impacts associated with the transportation projects and land use scenario included in the 2050 MTP/SCS. Table 4.7-1 included in Section 4.7.3(c), below, summarizes the specific transportation projects that would likely result in geology, soils, and mineral resources impacts. In general, implementation of proposed transportation improvements and the reasonably foreseeable future development facilitated under the land use scenario envisioned by the 2050 MTP/SCS would result in geology, soils, and mineral resources impacts as described in the following sections.

Threshold 1: Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, including liquefaction, or landslides?

Impact GEO-1 IMPLEMENTATION OF PROPOSED TRANSPORTATION IMPROVEMENTS AND FUTURE PROJECTS INCLUDED IN LAND USE SCENARIO ENVISIONED IN THE 2050 MTP/SCS WOULD RESULT IN SUBSTANTIAL DEVELOPMENT IN THE REGION, WHICH IS SUBJECT TO SEISMIC ACTIVITY AND HAZARDS IN SOME AREAS. THOUGH RISK OF LOSS, INJURY, OR DEATH RELATED TO LIQUEFACTION OR LANDSLIDES EXISTS IN THESE AREAS, COMPLIANCE WITH APPLICABLE REGULATIONS WOULD REDUCE THE POTENTIAL FOR SEISMIC DAMAGE TO OCCUR. WITH COMPLIANCE WITH APPLICABLE REGULATIONS, THESE PROPOSED TRANSPORTATION PROJECTS AND LAND USE CHANGES WOULD NOT DIRECTLY OR INDIRECTLY CAUSE SUBSTANTIAL ADVERSE EFFECTS INVOLVING RUPTURE OF A KNOWN EARTHQUAKE FAULT, STRONG SEISMIC GROUND SHAKING, SEISMIC-RELATED GROUND FAILURE, INCLUDING LIQUEFACTION, OR LANDSLIDES. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Fault Rupture

Fault rupture can occur along or immediately adjacent to faults during an earthquake. Fault rupture is characterized by ground cracks and displacement which could endanger life and property. Damage is typically limited to areas close to the moving fault.

As indicated by Figure 4.7-4 through Figure 4.7-7, transportation projects across the AMBAG region would occur in areas vulnerable to fault rupture. Roadway projects near faults in Monterey County include improvements and interchange widening along U.S. 101. In San Benito County, the proposed State Route 25 corridor improvement projects would be near faults.

Regional trail projects planned under the 2050 MTP/SCS, due to their length, would also occur in the proximity of regional faults. Specifically, the proposed San Benito River Recreational Trail would cross the Calaveras fault zone. In addition, the Monterey Bay Sanctuary Scenic Trail

Network maintenance projects, which would traverse coastal Santa Cruz County, would be constructed within proximity of the San Gregorio Fault in its northern reach.

In compliance with the Alquist-Priolo Act, as well as with any existing local policies that exceed or reasonably replace any of the Alquist-Priolo Act's requirements, a site-specific fault identification investigation would be conducted by licensed geotechnical professionals as required for specific planned transportation projects as well as for any reasonably foreseeable future development facilitated under the land use scenario envisioned by the 2050 MTP/SCS. Fault identification studies required by the Alquist-Priolo Act involve on-site trenching and excavation for site specific identification and location of fault rupture planes where any future rupture would be anticipated. Regulatory compliance would ensure structures intended for human occupancy be located at a minimum distance of 50 feet from any identified active fault traces and would minimize potential risk related to fault rupture.

Ground Shaking

Ground shaking effects are also the result of an earthquake, but the impacts can be widespread. Although it is a function of earthquake intensity, ground shaking effects can be magnified by the underlying soils and geology at great distances. It is difficult to predict the magnitude of ground shaking following an earthquake, as shaking can vary widely within a relatively small area.

Whereas vulnerability to fault rupture is site specific, the entire AMBAG region – and thus, all projects under the 2050 MTP/SCS – would be vulnerable to ground shaking. Transportation projects in the urbanized areas of northern Monterey County and southern Santa Cruz County (near the epicenter of the Loma Prieta earthquake) would be particularly susceptible to ground shaking (County of Monterey 2022). Structures or roadways constructed in or around active fault areas would pose an increased risk of loss, injury, or death related to strong seismic ground shaking. Bridge structures are most susceptible to earthquake ground shaking and fault rupture, although residential and commercial structures, as well as roadways constructed in proximity to active faults pose risks. As identified in Figure 4.7-4, Figure 4.7-5, Figure 4.7-6, and Figure 4.7-7, a number of proposed transportation improvement projects would occur within or within the vicinity of identified fault zones and therefore could pose risks related to ground shaking.

Because there are active faults within the AMBAG region, land use changes envisioned under the 2050 MTP/SCS could facilitate new development within proximity of regional faults that would potentially be exposed to hazards as a result of surface fault rupture, including intense ground shaking which could result in structural damage. However, the land use footprint envisioned under the 2050 MTP/SCS neither fully nor partially intersects Alquist-Priolo Zones, as shown in Figure 4.7-5, reducing the risk of loss, injury, or death related to strong seismic ground shaking or surface rupture.

Structural damage and the exposure of people to the risk of injury or death from structural failure would be minimized by compliance with California Building Code engineering design and construction measures. Foundations and other structural support features would be designed to resist or absorb damaging forces from strong ground shaking, seismic related ground failure, and liquefaction. To further reduce impacts related to fault rupture, implementing agencies require

project sponsors to comply with provisions of the Alquist-Priolo Act for project sites located within or across an Alquist-Priolo Zone.

Ground Failure

Seismic related ground failure such as liquefaction or landslides can result from an earthquake in the AMBAG region. Projects in the Salinas River valley in Monterey County; greater Hollister area in San Benito County; and the Soquel Valley and Pajaro River Valley in Santa Cruz County are particularly susceptible to liquefaction. A majority of these identified regions coincide with established population centers. A number of planned transportation improvement projects would occur in these areas, as seen in Figure 4.7-4, Figure 4.7-5, Figure 4.7-6, and Figure 4.7-7. Roadway projects in mountainous areas or along steeply sloped streambanks are most susceptible to landslide or mudflows which may be triggered during an earthquake. Therefore, due to the seismically active nature of the region, 2050 MTP/SCS projects would be subject to hazards related to seismic related ground failure.

All Projects

All projects are required to adhere to the design standards identified in the CBC and all standard geotechnical investigation, design, grading, and construction practices, including those required under the Alquist-Priolo Act, to avoid or reduce impacts from earthquakes, ground shaking, ground failure, and landslides. Compliance with these requirements, further described in Section 4.7.2, *Regulatory Setting*, would reduce potential seismic impacts by requiring appropriate siting, design, and construction practices given existing geologic conditions.

Seismic activity can cause significant ground motion, which exerts various forces on piles. These forces can lead to pile deformation, failure, or reduced load - bearing capacity, any of which could exacerbate potential risks to life or property following a seismic event. The type of transportation and land use projects proposed under 2050 MTP/SCS are unlikely to exacerbate seismic activity, fault rupture, or increases in ground shaking due to the nature of the project's effects, including construction, being near or on the ground surface. Footings and pilings that extend below the surface would be localized to the project site and require geological testing for specific impacts, in order to site project components in a way which would reduce impacts related to ground failure or liquefaction. Furthermore, in accordance with the CBC, any footings or pilings would be designed in consideration of existing geologic conditions to minimize potential risks such as structure failure or collapse.

Though sitting new development in a seismically active region, as seen under the 2050 MTP/SCS, would pose risks related to seismic hazards such as ground failure, liquefaction, and landsliding, the 2050 MTP/SCS would not directly exacerbate risks related to seismic activity. All specific planned transportation projects, as well as all reasonably foreseeable future development that would occur under the land use scenario envisioned in the 2050 MTP/SCS, would be required to comply with the regulations set forth by the CBC, the Alquist-Priolo Act, and other applicable local design standards. Compliance with the CBC and provisions of the Alquist-Priolo Act, including compliance with a site-specific geotechnical investigation, would reduce the potential

for seismic damage to occur as a result of implementation of 2050 MTP/SCS projects. Impacts would be less than significant.

Mitigation Measures

None required.

Threshold 2: Would the project result in substantial soil erosion or the loss of topsoil?

Impact GEO-2 CONSTRUCTION ACTIVITIES RELATED TO THE TRANSPORTATION IMPROVEMENTS AND FUTURE PROJECTS INCLUDED IN THE LAND USE SCENARIO ENVISIONED IN THE 2050 MTP/SCS WOULD INVOLVE SOME GRADING AND SOIL-MOVING ACTIVITIES. WITH COMPLIANCE WITH EXISTING REGULATIONS PERTAINING TO GRADING AND EROSION, BUILDOUT OF THE PROPOSED PROJECTS WOULD NOT CAUSE SUBSTANTIAL SOIL EROSION OR LOSS OF TOP SOIL. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Transportation projects and future land use development under the 2050 MTP/SCS would include earthwork activities that expose soils to the effects of erosion or loss of topsoil. Once disturbed, either through removal of vegetation, asphalt, or demolition of a structure, stockpiled soils would be exposed to the effects of wind and water. Construction of additional lanes on freeways and other transportation facilities would result in loss of topsoil if work includes grading, trenching, excavation, or soil removal of any kind in an area not previously used as a paved transportation facility. These areas would contain soils that would be less compacted than those found at a previously developed site, particularly if prior development involved grading or paving activities. Grading activities involve soil compaction, and paving introduces impervious surfaces which reduce water infiltration into soil. Both activities associated with prior development would reduce localized risk of soil erosion.

Buildout under the 2050 MTP/SCS would comply with applicable policies and regulations related to grading, erosion, and drainage controls, including but not limited to those contained within relevant general plans, county codes, and municipal codes, as discussed in Section 4.7.2, *Regulatory Setting*. Adherence to applicable policies and regulations would require measures to reduce erosion resulting from implementation of transportation and land use projects under the 2050 MTP/SCS, thus reducing erosion impacts.

In addition, the Construction General Permit would require a project specific SWPPP to be prepared for each project that disturbs an area one acre or larger (SWRCB 2022). The SWPPPs would include project specific BMPs designed to control erosion and sedimentation. Project BMPs to control erosion and sedimentation may include, but would not be limited to: silt fencing, fiber rolls, slope stabilization and sandbags. These BMPs would be required as part of each individual project and would minimize impacts related to soil erosion and loss of top soil caused by construction or grading. Projects that would disturb less than one 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. In addition, CalGreen regulations (Cal. Code Regs. Title 24, Part 11) include mandatory measures for

residential and nonresidential development. Section 5.106.1 requires newly constructed nonresidential projects and additions of less than one acre to reduce the pollution of storm water runoff through compliance with a local ordinance or implementing BMPs that address soil loss. At a local level, the cities and counties within the AMBAG region have their own policies and regulations governing erosion contained within their general plans, county codes, and municipal codes, as discussed in Section 4.10.2, *Regulatory Setting.* Specific projects would be subject to future project-level environmental review and would be required to comply with all applicable policies and regulations, including those applied at a local level.

NPDES permits in California cover MS4 permittees statewide, including a majority of the AMBAG region. For jurisdictional projects, the Phase I and Phase II MS4 Permits require permittees to develop a stormwater management program and individual dischargers to develop and implement Stormwater Management Plans. The state Phase II MS4 Permit, as adopted by the SWRCB and Region 3 RWQCB, would apply to all projects envisioned by the 2050 MTP/SCS that create or replace greater than 2,500 square feet of impervious surface. Within the Region 3 RWQCB jurisdiction, which applies to most of the AMBAG region, compliance would also entail adherence to the Post-Construction Stormwater Management Requirements for Development Projects in the Central Coast Region.

For Caltrans projects, the Caltrans specific Stormwater Permit, as discussed Section 4.10.2, *Regulatory Setting,* of Section 4.10, *Hydrology and Water Quality*, regulates stormwater and non-stormwater discharges from Caltrans properties and facilities associated with operation and maintenance of the State highway system. The Caltrans MS4 Permit incorporates the requirements of SWRCB Resolution 2015-0019. Additionally, Caltrans developed a Statewide Stormwater Management Plan which describes the Caltrans stormwater management program and the minimum procedures and practices used to reduce pollutants in stormwater and non-stormwater discharges. It outlines procedures and responsibilities for protecting water quality, including the selection and implementation of BMPs. Projects on Caltrans facilities are required to follow the guidelines and procedures outlined in the latest Statewide Stormwater Management Plan and include BMPs in the project design to address stormwater runoff and thus erosion.

Any projects involving industrial facilities in California including, but not limited to, manufacturing plants, mining facilities, oil and gas facilities, hazardous waste facilities, landfills, wastewater treatment facilities, recycling facilities, and vehicle maintenance shops that have the potential to discharge stormwater runoff into water bodies, are required to comply with the regulations contained within the Industrial General Permit. To comply with the Industrial General Permit, the operators of these regulated industrial facilities must implement an operational SWPPP that outlines the measures and stormwater BMPs the operator of an industrial facility must implement to reduce stormwater pollution, including sedimentation. Further, an individual NPDES permit regulates the discharge of stormwater from any project to occur within the City of Salinas. Specific guidance is administered through the Salinas Phase I Municipal Stormwater Permit, as presented in Order No. R3-2019-0073 which became effective on October 1, 2019. Applicable stormwater regulations, as discussed in this section, are further detailed in Section 4.10.2, *Regulatory Setting,* of Section 4.10, *Hydrology and Water Quality.*

Adherence to the applicable ordinance codes and other local, State, and local regulatory programs as well as implementation of BMPs, as discussed above, would ensure that erosion and topsoil loss would be minimized both during construction and operation of proposed projects. Because such effects would not be substantial, impacts related to erosion and loss of topsoil would be less than significant.

Mitigation Measures

None required.

Threshold 3:	Would the project 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, subsidence, liquefaction, or collapse?
Threshold 4:	Would the project be located on expansive soil, creating substantial direct or indirect risks to life or property?

Impact GEO-3 IMPLEMENTATION OF PROPOSED TRANSPORTATION IMPROVEMENTS AND FUTURE PROJECTS INCLUDED IN THE LAND USE SCENARIO ENVISIONED IN THE 2050 MTP/SCS WOULD BE LOCATED ON POTENTIALLY UNSTABLE SOILS, IN AREAS OF LATERAL SPREADING, SUBSIDENCE, OR HIGH LIQUEFACTION POTENTIAL, OR AREAS OF EXPANSIVE SOIL. ADHERENCE TO APPLICABLE POLICIES AND REGULATIONS, AS WELL AS TO THE CBC WOULD REDUCE RISK SUCH THAT IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Implementation of proposed transportation improvements and future projects under the land use scenario envisioned by the 2050 MTP/SCS would potentially site new development in areas prone to slope instability, liquefaction, and other soil-related hazards. As described in greater detail in Section 4.7.1, *Setting*, a number population centers throughout the AMBAG region occur within areas subject to soil-related geologic risks. New land uses associated with continued development and growth in these regions could potentially be subject to similar geologic risks. Transportation projects that would be at risk due to unstable soils, including expansive soils, are listed in Table 4.7-1. Notably, expansive soils have not been identified as a substantial risk in any of the various County General Plans or Hazard Mitigation Plans applicable to the AMBAG region.

As discussed above, Monterey County is vulnerable to slope instability in the Santa Lucia Mountain Range and fault zones; San Benito County is vulnerable to slope instability near Hollister, Tres Pinos, and Paicines; and Santa Cruz County is vulnerable to slope instability across inland portions of Santa Cruz. These areas contain existing population centers and urban development. Certain new land uses envisioned in the 2050 MTP/SCS would occur in these areas, particularly surrounding existing population centers such as the Hollister area, and would be subject to related geologic risks. Erosion problems are generally limited to restricted areas where grading has over-steepened slopes, has deposited fill in unstable areas, or where improper grading practices have not included provisions to seed or otherwise protect fresh slopes from eroding. Due to areas susceptible to slope instability in the AMBAG region, erosion will continue to reduce slopes to lower and lower elevations. Otherwise normal erosion functions become

noticeable when accelerated by events, predominantly human activities related to development and grading.

Roadway projects sited in mountainous areas or along steeply sloped streambanks would be susceptible to landslide or mudflows, especially following weather events in areas adjacent to unstabilized cut or fill. While a majority of the proposed transportation improvement projects identified in the 2050 MTP/SCS would occur in and around existing population centers in the valleys and relatively flat portions of the region, certain transportation projects would occur in mountainous regions, as seen in Figure 4.7-4, Figure 4.7-5, Figure 4.7-6, and Figure 4.7-7. Projects involving cut slopes of over 20 feet in height or projects located in areas of bedded or jointed bedrock would be more susceptible to risk related to landslide. Project specific design review would be conducted to ensure few transportation projects proposed under the 2050 MTP/SCS are located in such areas, minimizing risk to life or property due to a potential collapse. Infill development, as prioritized by the land use scenario envisioned in the 2050 MTP/SCS, would typically occur on stable, previously graded land. Still, all development projects related to the 2050 MTP/SCS would entail engineering review pursuant to the CBC and adherence to BMPs related to grading and cut and fill practices to ensure stable project siting as identified in the project specific SWPPP prepared in compliance with the Construction General Plan. As such, regulatory compliance would further reduce risk of landslide, lateral spreading, subsidence, liquefaction, or collapse.

New land use development and transportation projects constructed on expansive soils would pose risk to life or property in the event of shrinks or swells. Soils with high clay content have the highest potential for shrink-swell. Such soils are most common in coastal areas of southern Santa Cruz County and in the Pajaro River valley in the AMBAG region. As seen in Figure 4.7-7, coastal and southern regions of Santa Cruz County are largely developed and proposed transportation projects would occur in this vicinity. Affected transportation improvement projects in the 2050 MTP/SCS include the Pajaro River Bike Path System. As a part of project specific engineering and design review, expansive soils would be avoided in project siting in compliance with the CBC. Where avoiding areas with expansive soils present is infeasible, expansive soils would be remediated or structures and foundations would be engineered to withstand the forces of expansive soil, minimizing risks to life or property.

Ground failure, including liquefaction, lateral spreading, and subsidence, caused by an earthquake would occur in the AMBAG region depending on the underlying conditions including ground water level, relative size of soil particles, and density of subsurface materials within 50 feet of ground surface. Damage from earthquake-induced ground failure associated with liquefaction, lateral spreading, and subsidence would occur in buildings with foundations not properly constructed for such hazards. Areas that are exposed to liquefaction hazard would also have lateral spreading or differential settlement and subsidence concerns. Areas not at risk of liquefaction do not have lateral spreading potential. Proposed transportation projects and land use scenarios envisioned by the 2050 MTP/SCS would occur throughout the AMBAG region, though changes would occur primarily surrounding existing population centers. More potential for liquefaction or lateral spreading exists in the valleys and floodplains in the region, where unconsolidated sediments and a high-water table coincide. Certain existing population centers also occur in and around the relatively flat areas associated with the river valleys of the region,

where risk of liquefaction may exist. While the land use scenario envisioned in the 2050 MTP/SCS would not directly increase risk of seismic hazards in the AMBAG region, responsible project siting, thorough engineering and design review, and adherence to BMPs would reduce the risk of seismic hazards affecting motorists utilizing the proposed transportation projects. Compliance with the CBC would ensure responsible project siting, engineering and design review, and provision of appropriate structure and foundation design given existing geologic conditions, minimizing potential risks related to geologic hazards.

Certain areas within the AMBAG region would be vulnerable to subsidence in areas with saturation. These areas include the Carmel Valley and Salinas Valley in Monterey County and valley areas under conditions of overdraft in San Benito County. Santa Cruz County has low potential for subsidence. Where it can occur, subsidence could result in unstable soils. Buildout of the land use scenario envisioned in the 2050 MTP/SCS would not involve substantial groundwater extraction, as further detailed in Section 4.10*, Hydrology and Water Quality*, and would not otherwise increase risk of subsidence in the region. Responsible project siting at an individual project level, thorough engineering and design review, and adherence to BMPs would reduce risk from siting projects on unstable soils and the risk of subsidence affecting the proposed transportation projects.

Certain portions of the AMBAG region would be vulnerable to liquefaction and lateral spreading, particularly in areas with younger soils and with high groundwater tables. These areas include the Salinas River Valley in Monterey County; greater Hollister area in San Benito County; and the City of Santa Cruz, the Soquel Valley, and the Pajaro River Valley in Santa Cruz County. These areas coincide with certain existing population centers such as the City of Salinas, City of Hollister, and the Santa Cruz metropolitan region including the communities of Soquel and Capitola. Continued growth could occur in these regions under the land use scenario envisioned under the 2050 MTP/SCS. Liquefaction and resulting lateral spreading would result in the loss of the soils ability to support structures. Buildout of the land use scenario envisioned in the 2050 MTP/SCS would not substantially affect groundwater tables in the AMBAG region, as further detailed in Section 4.10, *Hydrology and Water Quality*. As such, envisioned land use changes would not increase the risk of liquefaction in the region. Responsible project siting, thorough engineering and design review, and adherence to BMPs would reduce the risk of siting projects on unstable soils and would reduce the risk of liquefaction or later spreading affecting the proposed transportation projects

Compliance with site specific geotechnical studies prepared in accordance with requirements as set forth by the CBC, the Seismic Hazards Mapping Act, and standard industry practices would reduce impacts related to slope instability, liquefaction, soil expansion, and ground failure. Future projects envisioned under the 2050 MTP/SCS would also be subject to project-level environmental review and would be required to comply with all applicable local general plans and local building code requirements that contain seismic safety policies to resist ground failure through construction techniques, including structural design. Structural damage and the exposure of people to the risk of injury or death from structural failure would be minimized by compliance with California Building Code engineering design and construction measures.

Foundations and other structural support features would be designed to resist or absorb damaging forces from expansive soils, liquefaction, or landslides. Land use and transportation projects included in the 2050 MTP/SCS would be required to comply with the CBC, and local building standards including the implementation of geotechnical practices such as ground treatments or replacing existing soils with engineered fill. Transportation projects that would involve the construction or improvements of bridge or overpass design would also be required to comply with Caltrans seismic design criteria which would reduce ground failure hazards (Caltrans 2025).

Therefore, impacts related to ground failure hazards, including liquefaction, lateral spreading, and subsidence would be less than significant with compliance with the CBC, local general plans and building standards, Caltrans design criteria for transportation projects, where applicable.

Mitigation Measures

None required.

Threshold 5: Would the project 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?

Impact GEO-4 IMPLEMENTATION OF PROPOSED TRANSPORTATION IMPROVEMENTS AND FUTURE PROJECTS INCLUDED IN THE LAND USE SCENARIO ENVISIONED IN THE 2050 MTP/SCS IN RURAL AREAS WOULD BE LOCATED ON SOILS INCAPABLE OF ADEQUATELY SUPPORTING SEPTIC TANKS OR ALTERNATIVE WASTEWATER DISPOSAL SYSTEMS. COMPLIANCE WITH EXISTING REGULATIONS WOULD MINIMIZE OR REDUCE IMPACTS. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

The 2050 MTP/SCS does not include transportation projects that would require the use of septic tanks or alternative wastewater disposal systems. The expansion and/or improvement of streets, highways, transit facilities, airports and related transportation infrastructure would not include elements that would require wastewater treatment or otherwise necessitate the development of septic systems.

Most future land use development projects implementing the 2050 MTP/SCS land use would connect to centralized wastewater infrastructure. New septic systems would be required primarily in rural areas of the AMBAG region, where centralized wastewater infrastructure is not currently available. Unstable slopes and risk of landslide may be present in some of these rural and less populated mountainous areas in the region. Liquefaction and lateral spreading can occur in areas where unconsolidated sediments and a high water table coincide, such as in and around the river valleys of the region where other rural communities and agricultural operations exist. While the majority of proposed transportation projects and future development envisioned under the 2050 MTP/SCS land use scenario would be centered around urbanized population centers where connection to centralized wastewater infrastructure is possible, the few development projects in rural areas requiring septic tanks or alternative wastewater disposal systems would be required to comply with local regulatory requirements that assure soils would adequately support these systems.

Septic and alternative wastewater disposal systems would be required to comply with AB 885 and applicable County or City regulations. Septic systems in Monterey County would be required to comply with code requirements as set forth by Title 15 of the County Municipal Code; in San Benito County would be required to comply with Municipal Code Section 15.07; and in Santa Cruz County would be required to comply with Municipal Code Chapters 7.38 and 7.42. Cities within each County would further require compliance with municipal code requirements as set forth by individual jurisdictions. Compliance with applicable regulations and design guidelines, as described above, would ensure appropriate siting and design of existing and potential future septic systems, minimizing the risk of siting septic systems where existing conditions, soil or otherwise, are inadequate to support system operation. Therefore, impacts related to having soils incapable of adequately supporting the use of septic tanks and alternative wastewater disposal systems would be less than significant.

Mitigation Measures

None required.

Threshold 6: Would the project directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Impact GEO-5 IMPLEMENTATION OF PROPOSED TRANSPORTATION IMPROVEMENTS AND THE LAND USE SCENARIO ENVISIONED BY THE 2050 MTP/SCS WOULD HAVE THE POTENTIAL TO DIRECTLY OR INDIRECTLY DESTROY A UNIQUE PALEONTOLOGICAL RESOURCE OR SITE OR UNIQUE GEOLOGICAL FEATURE. EVEN WITH IMPLEMENTATION OF MITIGATION MEASURE GEO-5, IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

Paleontological resources are present throughout the AMBAG region. Therefore, it is possible to encounter known and unknown paleontological resources during construction of transportation improvement projects pursuant to the 2050 MTP/SCS. Paleontological resources are by nature specific to their local context, and as such, impacts on these resources would occur at the local level. Projects involving excavation, grading, or soil removal in previously undisturbed areas have the greatest likelihood to encounter these resources.

The *CEQA Guidelines* provide no definition to the term "unique geologic feature." However, for the purpose of this analysis, a geologic unit would be considered unique if it is a stratotype, contributes to scientific research, or is exclusive to the region. Many of the transportation improvements envisioned under the 2050 MTP/SCS consist of minor expansions of existing facilities that would not involve construction in previously undisturbed areas. However, depending on the location and extent of the improvement and ground disturbance, paleontological resources or unique geologic features would be impacted. Representative projects that would impact previously undisturbed areas are listed in Section 4.5, *Cultural Resources,* Table 4.5-4. The projects listed were identified based on the likelihood that development of new infrastructure would impact previously undisturbed areas; it should be noted, however, that any project overlying a geologic unit with high paleontological sensitivity would result in impacts, regardless of previous development. It is also possible that construction

activities associated with some of the proposed roadway or bridge widening or extension projects in addition to those listed in Table 4.5-4 would adversely impact paleontological resources by exposing them to potential vandalism or causing displacement from the original context and integrity.

In addition, the 2050 MTP/SCS also contains a future land use scenario that emphasizes infill near transit and within existing urbanized areas. Therefore, new development would primarily occur on previously disturbed sites where the likelihood that a unique geologic feature might exist is low. However, it is possible that paleontological resources could be located on or near future site infill sites, as well as on undisturbed sites that may be developed under the future land use scenario. Project grading and excavation for development sites would likely disturb these undiscovered resources. Compliance with and implementation of assessment requirements set forth by the Paleontological Resources Preservation Act, the Federal Land Policy and Management Act, the Antiquities Act, Section 5097.5 of the PRC, adopted county and city general plans would reduce impacts to paleontological resources and unique geologic features. However, projects envisioned under the 2050 MTP/SCS would still have the potential to directly or indirectly destroy localized paleontological resources and unique geologic features that are of regional significance, and impacts would be significant.

Mitigation Measures

For transportation projects under their jurisdiction, TAMC, SBtCOG, and SCCRTC shall, and transportation project sponsor agencies, and cities and counties in the AMBAG region can and should, implement the following mitigation developed for the 2050 MTP/SCS program. For development occurring outside of the TAMC, SBtCOG, and SCCRTC jurisdiction, project specific environmental documents may adjust these mitigation measures as necessary to respond to site specific conditions.

GEO-5 Paleontological and Geologic Resources Impact Minimization

The designated lead agency implementing a specific a 2050 MTP/SCS project involving ground disturbing activities (including grading, trenching, foundation work and other excavations) shall, or can and should, retain a qualified paleontologist, defined as a paleontologist who meets the Society of Vertebrate Paleontology (SVP) standards for Qualified Professional Paleontologist (SVP 2010), to conduct a Paleontological Resources Assessment (PRA). The PRA shall determine the age and paleontological sensitivity of geologic formations underlying the proposed disturbance area, consistent with SVP Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources (SVP 2010) guidelines for categorizing paleontological sensitivity of geologic units within a project area. If underlying formations are found to have a high potential (sensitivity) for paleontological resources and/or would be considered a unique geologic feature, the following measures shall apply:

- **Avoidance.** Avoid routes and project designs that would permanently alter unique paleontological and geological features. If avoidance practices cannot feasibly be implemented, the following measures shall apply.

- **Paleontological Mitigation and Monitoring Program**. A qualified paleontologist shall prepare a Paleontological Mitigation and Monitoring Program to be implemented during ground disturbance activity. This program shall outline the procedures for construction staff training, paleontological monitoring extent and duration (i.e., in what locations and at what depths paleontological monitoring shall be required), salvage and preparation of fossils, the final mitigation and monitoring report and paleontological staff qualifications.
- **Paleontological Worker Environmental Awareness Program (WEAP).** Prior to the start of ground disturbance activity, construction personnel shall be informed on the appearance of fossils and the procedures for notifying paleontological staff should fossils be discovered by construction staff.
- **Paleontological Monitoring.** Ground disturbing activity with the potential to disturb geologic units with high paleontological sensitivity, as determined by initial paleontological surveying or records search as deemed appropriate, shall be monitored on a full-time basis by a qualified paleontological monitor. Should no fossils be observed during the first 50 percent of such excavations, paleontological monitoring could be reduced, under the discretion of the qualified paleontologist, to weekly spot-checking. Monitoring shall be conducted by a qualified paleontological monitor, who is defined as an individual who has experience with collection and salvage of paleontological resources.
- **Salvage of Fossils.** If fossils are discovered, the implementing agency shall be notified immediately, and the qualified paleontologist (or paleontological monitor) shall recover them. Typically, fossils can be safely salvaged quickly by a single paleontologist and not disrupt construction activity. In some cases, larger fossils (such as complete skeletons or large mammal fossils) require more extensive excavation and longer salvage periods. In this case, the paleontologist shall have the authority to temporarily direct, divert or halt construction activity to ensure that the fossil(s) can be removed in a safe and timely manner.
- **Preparation and Curation of Recovered Fossils.** Once salvaged, fossils shall be identified to the lowest possible taxonomic level, prepared to a curation-ready condition, as defined by the specific receiving institution or collection, and curated in a scientific institution with a permanent paleontological collection, along with all pertinent field notes, photos, data and maps.
- **Final Paleontological Mitigation and Monitoring Report.** Upon completion of ground disturbing activity (and curation of fossils if necessary) the qualified paleontologist shall prepare a final mitigation and monitoring report outlining the results of the mitigation and monitoring program. The report shall include discussion of the location, duration and methods of the monitoring, stratigraphic sections, any recovered fossils, and the scientific significance of those fossils, and where fossils were curated.

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for transportation projects are RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects are cities and counties. This mitigation measure shall, or can and should, be applied during project permitting and environmental review.

Significance After Mitigation

Implementation of the above mitigation measure would reduce impacts to paleontological resources and unique geologic features by requiring assessment, avoidance, monitoring, and collection measures. While implementation of Mitigation Measure GEO-1 would reduce impacts to the extent feasible, some project specific impacts would be unavoidable, particularly when activities such as pile driving, boring, or other forms of excavation utilizing heavy machinery are involved in project specific construction. Therefore, this impact is significant and unavoidable. No additional mitigation measures to reduce this impact to less than significant levels are feasible.

Threshold 7:	Would the project 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?
Threshold 8:	Would the project 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?

Impact GEO-6 IMPLEMENTATION OF PROPOSED TRANSPORTATION IMPROVEMENTS AND FUTURE PROJECTS INCLUDED IN THE LAND USE SCENARIO ENVISIONED IN THE 2050 MTP/SCS WOULD NOT RESULT IN THE LOSS OF AVAILABILITY OF KNOWN MINERAL RESOURCES OF VALUE OR LOCALLY-IMPORTANT MINERAL RESOURCE RECOVERY SITES. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

The 2050 MTP/SCS primarily involves modifications to existing roadways, including improvements related to intersections, safety and widening, as well as alternative transportation projects. In addition, the land use scenario envisioned under the 2050 MTP/SCS emphasizes infill near transit and within existing urbanized areas, including the prioritization of transit oriented development (TOD). Infill and TOD projects would likely not be located on sites with known mineral resources or locally important mineral resources, as these areas are typically built out with existing residential and commercial uses and are not utilized for mineral resource extraction operations. For projects not considered to be infill or TOD, local jurisdictions have policies to manage mineral resources through general plans and are required to protect mineral resource recovery areas that have been designated MRZ-2 locations under SMARA. The MRZ-2 designation is an area where significant mineral deposits are present, or where it is judged that a high likelihood for their presence exists. While the General Plans for the Counties of Santa Cruz, San Benito, and Monterey do not specifically designate mineral resource recovery sites, active mines and mineral resource recovery sites do exist in parts of the AMBAG region. Existing active recovery sites include but are not limited to sand and gravel mines and limited limestone mining operations (DOC 2016). Land use development would avoid known mineral resources and active extraction sites that would be of value to the region and residents of the State of California, to the extent feasible, in compliance with applicable General Plan policies and consistent with the SMARA. Any projects located within MRZ-2 areas would be identified and impacts would be required to be mitigated pursuant to CEQA.

The Monterey County General Plan Conservation and Open Space Policy OS-2.1 states that the County shall protect on-site and off-site land uses that would be incompatible with mineral extraction activities (Monterey County 2010). In San Benito County, Goal NCR-5 of the San Benito County 2035 General Plan (San Benito County 2015b) intends to protect and support mineral resource extraction while avoiding land use conflicts and environmental impacts from current and historical mining activities. Policies and programs in the Agriculture, Natural Resources, and Conservation Element of the Santa Cruz County General Plan and Local Coastal Program (County of Santa Cruz 2024b) would ensure that conflicts are minimized between new development and mineral resource areas (Policy ARC-7.2.4). The general plans and municipal codes of the cities within the AMBAG region contain similar goals, policies, and regulations governing geology, soils, and seismic hazard to those set forth by the Counties. Compliance with county, state, and federal requirements, along with adherence to the guidance outlined in the CBC, would facilitate compliance with local regulations at the city level. For example, in the City of Hollister, General Plan policy NRC 3.1 is intended to conserve mineral resources. In the City of Santa Cruz, policy NRC 3.4 is intended to preserve mineral resources in the area. The City of Watsonville General Plan Goal 9.9 provides for protection and conservation of mineral resources in the area.

There are no transportation projects included in the 2050 MTP/SCS that would include mineral extraction activities or otherwise directly result in the extraction, exploration, or digging for mineral resources. Proposed development facilitated by the 2050 MTP/SCS future land use scenario would be sited to avoid existing mineral resource extraction activities, in compliance with the applicable policies and regulations discussed above. Therefore, buildout of the land use scenario envisioned in the 2050 MTP/SCS would not result in the loss of availability of minerals. Impacts pertaining to mineral resources would be less than significant.

Mitigation Measures

None required.

c. Specific 2050 MTP/SCS Projects That May Result in Impacts

Table 4.7-1 identifies transportation projects that would likely result in geology, soils, and mineral-related impacts as discussed above. Program-level impact determinations were provided for the overall 2050 MTP/SCS project above. This section is not intended to provide project-specific impact determinations under CEQA. Rather, the transportation projects identified in Table 4.7-1 are representative of those that may result in project-level impacts with or without mitigation and were selected based on their potential scope and likelihood to result in the geology, soils, and mineral-related impacts identified above. The intent of this summary is to support potential future streamlining efforts as a screening tool to facilitate early identification of projects likely to result in the impacts identified above. Streamlining opportunities are discussed in Section 1.4, *Implementation Issues and Future Environmental Review,* in Chapter 1, *Introduction*. In general, planned and future projects would avoid geologic impacts through responsible engineering, siting, and design to the extent feasible.

Table 4.7-1 2050 MTP/SCS Projects that May Result in Geologic Impacts

AMBAG Project No.	Projects	County Location	Impact
MON-CT011-CT-2026	SR 68 Commuter Improvements	Monterey County	GEO-1
MON-CT030-SL-2026	U.S. 101 Salinas Corridor	Monterey County	GEO-1
MON-CT023-CT-2026	SR 156 and U.S. 101 Interchange	Monterey County	GEO-1
SB-CT-A44-2026	SR 25 Expressway Conversion Project, Phase 1	San Benito County	GEO-1
SB-CT-A45-2026	SR 25 Expressway Conversion Project, Phase 2	San Benito County	GEO-1
SC-CO-P38-USC-2026	Pajaro River Bike Path System	Santa Cruz County	GEO-3

4.7.4 Cumulative Impacts

a. Methodology

The cumulative analysis presented below primarily relies on a projections-based approach, using regional land use and growth forecasts for the AMBAG region and adjoining counties to evaluate cumulative conditions. The project is assessed within the existing and foreseeable future environmental setting, and a determination is made as to whether its incremental contribution would be cumulatively considerable when considered alongside both the overall envisioned land use scenario and specific large-scale planned projects. Refer to Section 6.4, *Cumulative Impacts*, in Chapter 6, *Other CEQA Required Discussions*, for a description of the cumulative impact methodology.

b. Impact Analysis

Future development in the AMBAG region and surrounding counties would be impacted by earthquakes or also be located in geologic units that would be subject to seismicity or contain unique paleontological or mineral resources. While some geologic resources, such as paleontological resources, are typically constrained or specific to a particular project site, the resource could extend onto adjoining property. Therefore, the cumulative impact analysis area for geology and soils consists of the AMBAG region and the adjoining counties.

IMPACT GEO-C-1 DEVELOPMENT IN THE CUMULATIVE IMPACTS ANALYSIS AREA, AND PROJECTS IMPLEMENTING THE 2050 MTP/SCS, WOULD BE SUBJECT TO SEISMIC HAZARDS, SUCH AS FAULT RUPTURE, EARTHQUAKES, AND LANDSLIDES. HOWEVER, COMPLIANCE WITH APPLICABLE REQUIREMENTS WOULD REDUCE CUMULATIVE IMPACTS TO LESS THAN SIGNIFICANT. CUMULATIVE IMPACTS TO MINERAL RESOURCES WOULD BE LESS THAN SIGNIFICANT.

Geology and soils impacts would be related to increased exposure to seismic hazards, increased erosion and/or loss of topsoil, the presence of unstable/expansive soils and inappropriately sited alternative waste disposal or septic systems. Individual projects and development in the cumulative impacts analysis area would be subject to geologic hazards based on site specific conditions and project design. These effects generally occur independently of one another and are caused by site specific and project specific characteristics and conditions. Cumulative groundwater extraction such that the regional water table is impacted would be one case where cumulative development could introduce new geologic hazards. In this scenario, groundwater depletion would be a cumulative effect of planned and reasonably foreseeable future regional

development both related to and unrelated to the 2050 MTP/SCS. Increased growth or development of water intensive uses in groundwater dependent areas could increase demand on regional water supply, altering the existing water table and thus existing geologic conditions. Assuming compliance with the regulations and measures enforced by existing regional groundwater management agencies, this scenario is unlikely. As mentioned above, cumulative impact methodology is described in greater detail in Section 6.4, *Cumulative Impacts*, in Chapter 6, *Other CEQA Required Discussions*. In addition, existing regulations, such as the California Building Code, specify mandatory actions that must occur during project development, which would minimize effects from construction and operation of projects related to geology, soils and seismicity as discussed above. Cumulative impacts related to geology, soils and seismicity would therefore be less than significant.

While projects envisioned under the 2050 MTP/SCS would be subject to seismic hazards, including fault rupture, ground-shaking, liquefaction, and landslides, compliance with applicable requirements would reduce impacts. Future development envisioned under the 2050 MTP/SCS would be required to comply with the California Building Code, Seismic Hazards Mapping Act, Alquist-Priolo Act, and local building codes, general plan goals and policies. Furthermore, geology and soils impacts are site specific by nature and would not result in cumulative impacts to the surrounding area. Cumulative impacts related to seismic hazards would therefore be less than significant.

Cumulative development would affect the availability of known mineral resources; cumulative development would be subject to state and local policies and ordinances pertaining to known mineral resources, and development located within mineral resource zones would be identified. However, continued growth likely would be centered in and around established population centers where ground has already been disturbed. Additionally, future regional development would avoid known mineral resources and active extraction sites that would be of value to the region and residents of the State of California, to the extent feasible, in compliance with applicable General Plan policies and consistent with the SMARA. Therefore, cumulative impacts related to mineral resources would be less than significant.

Overall, the cumulative impacts related to seismic hazards and mineral resources would not be potentially significant, and the proposed Plan's contribution to cumulative impacts related to seismic hazards and mineral resources would not be cumulatively considerable.

IMPACT GEO-C-2 EXCAVATION AND GROUND DISTURBANCE ASSOCIATED WITH DEVELOPMENT IN THE CUMULATIVE IMPACTS ANALYSIS AREA WOULD DAMAGE OR DESTROY SUBSURFACE PALEONTOLOGICAL RESOURCES. ALTHOUGH MITIGATION MEASURE GEO-5 WOULD REDUCE PALEONTOLOGICAL RESOURCE IMPACTS ASSOCIATED WITH 2050 MTP/SCS PROJECTS, THE 2050 MTP/SCS'S CONTRIBUTION WOULD REMAIN CUMULATIVELY CONSIDERABLE.

A majority of development and construction projects to occur in the cumulative impacts analysis area would require excavation and ground disturbance. In particular, new and improved highway and roadway projects in the AMBAG region, as proposed by the 2050 MTP/SCS would require ground disturbance during construction. Any excavation and ground disturbance to occur, would

create a high likelihood of encountering and damaging or destroying subsurface paleontological resources, depending on underlying geologic units and soils. While paleontological resources are typically site specific, with impacts that are project specific, others are unique or have regional significance. As identified above, a geologic unit would be considered unique if it is a stratotype, contributes to scientific research, or is exclusive to the region. For example, fossils may capture a particular type of organism that was endemic to a region and therefore have regional significance. Due to the potential for a fossil of regional significance to be uncovered during excavation and ground disturbing activities of projects in the cumulative impact analysis area, cumulative impacts would be significant.

The 2050 MTP/SCS would cause a substantial adverse change in or disturb known and unknown paleontological resources and would therefore result in a cumulatively considerable contribution to the significant impact. Mitigation Measure GEO-5 would reduce paleontological resource impacts associated with 2050 MTP/SCS projects. However, the 2050 MTP/SCS contribution would remain cumulatively considerable after mitigation because it cannot be guaranteed that all future project level impacts can be mitigated to a less than significant level. Thus, the 2050 MTP/SCS's contribution to cumulative impacts related to paleontological resources would be cumulatively considerable.

This page intentionally left blank.

4.8 Greenhouse Gas Emissions/Climate Change

This section discusses potential impacts related to greenhouse gas emissions and climate change. Air quality and health risk impacts are discussed in Section 4.3, *Air Quality and Health Impacts/Risks.*

4.8.1 Setting

a. Climate Change and Greenhouse Gases

Climate change is the observed increase in the average temperature of Earth's atmosphere and oceans along with other substantial changes in climate (such as wind patterns, precipitation, and storms) over an extended period. The term "climate change" is often used interchangeably with the term "global warming," but "climate change" is preferred to "global warming" because it helps convey other changes in addition to rising temperatures. The baseline against which these changes are measured originates in historical records identifying temperature changes that have occurred in the past, such as during previous ice ages. The global climate changes continuously, as evidenced by repeated episodes of substantial warming and cooling documented in the geologic record. The rate of change has typically been incremental, with warming or cooling trends occurring over the course of thousands of years. The past 10,000 years have been marked by a period of incremental warming, as glaciers have steadily retreated across the globe. However, scientists have observed substantial acceleration in the rate of warming during the past 150 years (Intergovernmental Panel on Climate Change [IPCC] 2021). The understanding of anthropogenic warming and cooling influences on climate has led to an unequivocal understanding that human activities have been the dominant cause of warming since the mid-nineteenth century (IPCC 2021).

Gases that absorb and re-emit infrared radiation in the atmosphere are called greenhouse gases (GHGs). The GHGs that are widely seen as the principal contributors to human-induced climate change include carbon dioxide (CO_2), methane (CH_4), nitrous oxides (N_2O), fluorinated gases such as hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). Water vapor is excluded from the list of GHGs because it is short-lived in the atmosphere and its atmospheric concentrations are primarily determined by natural processes, such as oceanic evaporation.

GHGs are emitted by both natural processes and human activities. Of these gases, CO_2, CH_4, and N_2O are emitted in the greatest quantities from human activities. Emissions of CO_2 are largely by-products of fossil fuel combustion, whereas CH_4 results from off-gassing associated with agricultural practices and landfills. N_2O is produced by microbial processes in soil and water, including those reactions that occur in fertilizers that contain nitrogen, fossil fuel combustion, and other chemical processes. Man-made GHGs, many of which have greater heat-absorption potential than CO_2, include fluorinated gases and SF_6.

Different types of GHGs have varying global warming potentials (GWPs). The GWP of a GHG is the potential of a gas or aerosol to trap heat in the atmosphere over a specified timescale (generally, 100 years). Because GHGs absorb different amounts of heat, a common reference gas

(CO_2) is used to relate the amount of heat absorbed to the amount of the gas emissions, referred to as "carbon dioxide equivalent" (CO_2e) and is the amount of a GHG emitted multiplied by its GWP. Carbon dioxide has a 100-year GWP of one. By contrast, methane has a GWP of 28, meaning its warming effect is 28 times greater than carbon dioxide on a molecule-per-molecule basis (IPCC 2014). N_2O has a GWP of 265 (IPCC 2014).

The accumulation of GHGs in the atmosphere regulates the earth's temperature. Without the natural heat-trapping effect of GHGs, the earth's surface would be about 33 degrees Celsius (°C) cooler (World Meteorological Organization 2021). However, since 1750, estimated concentrations of CO_2, CH_4, and N_2O in the atmosphere have increased by 47 percent, 156 percent, and 23 percent, respectively, primarily due to human activity (IPCC 2021). GHG emissions from human activities, particularly the consumption of fossil fuels for electricity production and transportation, are believed to have elevated the concentration of these gases in the atmosphere beyond the level of concentrations that occur naturally.

Greenhouse Gas Emissions Inventories

California Emissions Inventory

Based on the California Air Resources Board (CARB) California GHG Inventory for 2000-2022, California produced 371.1 million metric tons of CO_2e in 2022 (CARB 2024). The largest single source of GHG in California is transportation, contributing 37.7 percent of the State's total GHG emissions. In the transportation sector, passenger vehicles are the main contributor with 27.6 percent of emissions generated by these vehicles. Heavy-duty vehicles account for approximately 7.4 percent and the remaining three percent are from other sources of transportation (e.g., aviation, ships, and rail). Industrial sources are the second-largest source of the state's GHG emissions, contributing 19.6 percent of the State's GHG emissions (CARB 2024). Emissions from this sector are primarily produced from refineries, oil and gas extraction, cement plans, and general fuel use. The electric power sector contributed 16.1 percent of the total with emissions from in-state power generation and imported electricity being the primary sources. Residential and commercial fuel combustion (e.g., natural gas and other fuels for space heating, cooking, and hot water or steam generation) account for 10.6 percent of the total. The agriculture sector contributes 8.0 percent of the total with the major emissions sources being enteric fermentation and manure management from livestock, crop production, and fuel combustion for agriculture activities. The remaining 8 percent is due high GWP gases (5.7 percent) and waste (2.2 percent). High GWP gases include ozone depleting substance substitutes, SF_6 emissions from electricity transmission and distribution, and gases emitted by the semiconductor manufacturing process. Waste sources include landfills and commercial-scale composting.

AMBAG Region Emissions Inventory

GHG emissions from land uses were forecasted using a baseline year of 2019/2020 in the 2045 Metropolitan Transportation Plan/Sustainable Communities Strategy for Monterey, San Benito, and Santa Cruz Counties Greenhouse Gas Emissions Forecast prepared for AMBAG by Rincon Consultants (February 2022). As described further in Methodology under Section 4.8.3, *Impact*

Analysis, data from 2019/2020 GHG Emissions Inventory Summary was used to linearly interpolate the GHG emissions for year 2022 and 2050. The aggregated on-road mobile GHG emissions were calculated using emission factors from CARB's EMission FACtor (EMFAC) 2021 model and regional Vehicle Miles Traveled (VMT) from AMBAG's updated Regional Travel Demand Model (RTDM) (refer to Appendix E.2).

The 2019/2020 GHG Emissions Inventory Summary included the following GHG emission sources for the AMBAG region:

- On-road mobile emissions
- Off-road vehicle and equipment use
- Aviation
- Residential energy consumption
- Commercial/Industrial energy consumption
- Solid waste landfilling and generation
- Wastewater generation
- Agriculture

A detailed summary of the GHG emissions for the inventory 2019/2020 year (the most current GHG inventory available) is provided in Table 4.8-1.

Table 4.8-1 AMBAG Regional 2019/2020 GHG Emissions Detailed Summary (MT CO_2e)

GHG Emissions Sector/Source	CO_2 (MT)	CH_4 (MT)	N_2O (MT)	CO_2e (MT)	Activity Data	Activity Data Units
Transportation						
On-Road Transportation[1]	2,482,892	176	171	2,533,207	17,331,954	VMT
Aviation Gasoline Fuel Sales	2,670	<1	<1	2,679	321,231	Gallons
JET-A Fuel Sales	8,158	<1	<1	8,185	836,689	Gallons
Monterey Regional Airport	41,282	0	0	41,282	0	NA[2]
Off-road Natural Gas	8,301	1	<1	8,507	1,461,595	Gallons
Off-road Diesel	177,897	5	8	180,213	17,423,916	Gallons
Off-road Gasoline	105,264	101	2	108,559	11,989,114	Gallons
Residential						
Electricity - 3CE	5,982	20	13	10,042	1,320,068,190	kWh
Electricity - PG&E	63	<1	<1	110	51,410,638	kWh
Electricity - KCCP	2,733	<1	<1	2,744	12,135,267	kWh
Natural Gas	482,821	39 45	1	484,338	91,063,992	therms
Commercial/Industrial						
Electricity - 3CE	9,661	33	21	16,217	2,131,685,163	kWh
Electricity - PG&E	619	8	1	1,084	509,341,666	kWh
Electricity - KCCP	5,983	<1	<1	6,008	26,566,071	kWh
Natural Gas	491,158	46	1	492,701	92,636,407	therms

GHG Emissions Sector/Source	CO_2 (MT)	CH_4 (MT)	N_2O (MT)	CO_2e (MT)	Activity Data	Activity Data Units
Wastewater						
Fugitive Emissions from Septic Systems	0	336	0	9,420	77,531	Population
Process N_2O from Wastewater Treatment	0	0	3	740	697,787	Population
Process N_2O from Effluent Discharge	0	0	55	14,345	697,787	Population
Solid Waste						
Monterey Peninsula Landfill	0	3,508	0	98,232	390,189	Tons of waste
Johnson Canyon Sanitary Landfill	0	9	0	242	959	Tons of waste
John Smith Landfill	0	2,032	0	59,608	226,045	Tons of waste
Buena Vista Landfill	0	1	0	19	77	Tons of waste
Community Generated Solid Waste	0	7,813	0	218,737	868,851	Tons of waste
Agricultural						
Enteric Fermentation	0	5,514	77	174,671	NA[3]	Heads of Livestock
Manure Management	0	3,829	106	135,418	NA[3]	Heads of Livestock
Nitrogen Fertilizer Application	0	66	541	145,008	NA[3]	Acreage of Crops

Notes: Values in this table may not add up to totals due to rounding.

NA = not applicable; CO_2 = carbon dioxide; CH_4 = methane; N_2O = nitrous oxide; CO_2e = carbon dioxide equivalent; PG&E = Pacific Gas and Electric; 3CE = Central Coast Community Energy; KCCP = King City Community Power; kWh = kilowatt-hour

[1] The on-road transportation emissions account for all gasoline and diesel vehicle types (e.g., passenger vehicles, medium-duty trucks, heavy-duty trucks, buses, motorhomes, and motorcycles) traveling within the AMBAG region for the 2019/2020 inventory.

[2] Activity data for Monterey Regional Airport was not provided.

[3] Agricultural GHG emissions use a breakdown of livestock and crop types in the region, resulting in numerous activity data values.

Source: AMBAG 2022

See Appendix E.2 for the 2022 baseline on-road transportation CO_2 GHG emissions. Please refer to Appendix F of the 2050 MTP/SCS for the modeling methodology for VMT.

b. Potential Effects of Climate Change

Globally, climate change has the potential to affect numerous environmental resources through potential impacts related to future air temperatures and precipitation patterns. Scientific modeling predicts that continued GHG emissions at or above current rates would induce more extreme climate changes during the 21st century than were observed during the 20th century. Long-term trends have found that each of the past four decades has been warmer than all the previous decades in the instrumental record, and the decade from 2011 through 2020 has been the warmest. The observed global mean surface temperature for the decade from 2011 to 2020 was approximately 1.09°C (0.95°C to 1.20°C) higher than the average global mean surface temperature over the period from 1850 to 1900. Due to past and current activities, anthropogenic GHG emissions are increasing global mean surface temperature at a rate of 0.2°C per decade. In addition to these findings, the latest IPCC report states that, "Human-induced climate change is already affecting many weather and climate extremes in every region across the globe" (IPCC 2021). These climate change impacts include climate change sea level rise, increased weather extremes, and substantial ice loss in the Arctic over the past three decades.

According to *California's Fourth Climate Change Assessment*, statewide temperatures from 1986 to 2016 were approximately 1°F to 2°F higher than those recorded from 1901 to 1960. Potential impacts of climate change in California may include loss in water supply from snowpack, sea level rise, more extreme heat days per year, more large wildfires, and more drought years (State of California 2018). While there is growing scientific consensus about the possible effects of climate change at a global and statewide level, current scientific modeling tools are unable to predict what local impacts may occur with a similar degree of accuracy. In addition to statewide projections, California's Fourth Climate Change Assessment includes regional reports that summarize climate impacts and adaptation solutions for nine regions of the state as well as regionally-specific climate change case studies (State of California 2018). Below is a summary of some of the potential effects that could be experienced in California and the Central Coast region as a result of climate change.

Public Health

Climate change is expected to cause a number of impacts which could negatively affect public health in the AMBAG region. As temperatures increase, the Central Coast is set to experience an increased number of extreme heat days which may lead to increases in the number of heat-related deaths and illnesses (State of California 2018). An increase in the frequency and severity of wildfires may contribute to worsening air quality and cause additional illnesses such as asthma. Higher temperatures could also lead to increased air pollution formation and potentially accelerate the spread of certain diseases and pests. These adverse impacts may also disproportionately burden vulnerable populations.

Water Supply

Analysis of paleoclimatic data, such as tree-ring reconstructions of stream flow and precipitation, indicates a history of naturally and widely varying hydrologic conditions in California and the west, including a pattern of recurring and extended droughts. Uncertainty remains with respect

to the overall impact of climate change on future precipitation trends and water supplies in California. This uncertainty regarding future precipitation trends complicates the analysis of future water demand, especially where the relationship between climate change and its potential effect on water demand is not well understood. However, the average early spring snowpack in the Sierra Nevada decreased by about 10 percent during the last century, a loss of 1.5 million acre-feet of snowpack storage. During the same period, sea level rose over 5.9 inches along the central and southern California coast (State of California 2018). The Sierra Nevada snowpack provides the majority of California's water supply by accumulating snow during the state's wet winters and releasing it slowly during the state's dry springs and summers. A warmer climate is predicted to reduce the fraction of precipitation falling as snow and result in less snowfall at lower elevations, thereby reducing the total snowpack (DWR 2018; State of California 2018). The State of California projects that average spring snowpack in the Sierra Nevada and other mountain catchments in central and northern California will decline by approximately 66 percent from its historical average by 2050 (State of California 2018). As described in Section 4.10, *Hydrology and Water Quality*, the primary source of water for many users in the AMBAG region is groundwater. Climate change may reduce groundwater recharge, putting further strain on an already limited water supply in the region.

Hydrology and Sea Level Rise

Climate change could potentially affect the amount of snowfall, rainfall, and snow pack; the intensity and frequency of storms; flood hydrographs (flash floods, rain, or snow events, coincidental high tide and high runoff events); sea level rise and coastal flooding; coastal erosion; and the potential for saltwater intrusion. According to *Rising Seas in California: An Update on Sea Level Rise Science* (Griggs, et al. 2017), climate change has the potential to induce substantial sea level rise in the coming century. The rising sea level increases the likelihood and risk of flooding. The rate of increase of global mean sea levels from 2006 to 2018, as observed by satellites, ocean buoys, and land gauges, was approximately 3.7 mm per year, which is almost the observed 1971-2006 trend of 1.9 mm per year (IPCC 2021). Global mean sea levels have increased about eight inches from 1901 to 2018 (IPCC 2021). Sea levels are rising faster now than in the previous two millennia, and the rise is expected to accelerate. Even with robust GHG emission control measures the latest IPCC reports predict a mean sea level rise of 11 to 21.5 inches by 2100 under the lowest emissions scenario and a rise of 25 to 40 inches by 2100 under the very high emissions scenario (IPCC 2021).

A rise in sea levels could completely erode 31 to 67 percent of southern California beaches, result in flooding of approximately 370 miles of coastal highways during 100-year storm events, jeopardize California's water supply due to saltwater intrusion, and induce groundwater flooding and/or exposure of buried infrastructure (State of California 2018). In addition, increased CO_2 emissions can cause oceans to acidify due to the carbonic acid it forms. Increased storm intensity and frequency could affect the ability of flood-control facilities, including levees, to handle storm events.

Ocean Acidification

The ocean covers over 70 percent of the earth's surface and acts as a major carbon sink in the global carbon cycle. As the concentration of CO_2 in the atmosphere increases, so does the concentration of carbon in the ocean. The reaction of dissolved CO_2 with seawater results in the creation of carbonic acid (H_2CO_3), carbonate, bicarbonate, and hydrogen ions, which lowers pH causing higher seawater acidity. Higher acidity in seawater affects many aquatic animals' ability to fix calcium for body structure, which could have significant negative effects across the entire food chain. The effects of ocean acidification may impact the success of California's $318 million per year fishing industry and $17 billion per year tourism/recreation industry (National Ocean Economics Program 2014). Ocean acidification in the Monterey Bay National Marine Sanctuary would impact key species such as kelp, which provide important structural features and ecosystem function (NOAA 2025a).

Agriculture

California has a $50 billion annual agricultural industry that produces over a third of the country's vegetables and two-thirds of the country's fruits and nuts (California Department of Food and Agriculture 2020). If temperatures continue to rise and drier conditions prevail, certain regions of agricultural production could experience water shortages of up to 16 percent; water demand could increase as hotter conditions lead to the loss of soil moisture; crop-yield could be threatened by water-induced stress and extreme heat waves; and plants may be susceptible to new and changing pest and disease outbreaks (State of California 2018). In addition, temperature increases could change the time of year certain crops, such as wine grapes, bloom or ripen and thereby affect their quality (California Climate Change Center [CCCC] 2006). Finally, extreme heat days could impact the health of farmworkers and impact the abilities to harvest crops. As described in Section 4.2, *Agriculture and Forestry*, AMBAG's planning area includes expansive agricultural lands. Agriculture may face challenges due to extreme heat and water stress associated with climate change.

Ecosystems and Wildlife

Climate change and the resulting changes in weather patterns will have ecological effects on a global and local scale. Increasing concentrations of GHGs will accelerate the rate of climate change. Scientists project that by the end of this century, global temperature will be at least 5°F warmer than the 1901-1960 average, and possibly as much as 10.2°F warmer. If annual emissions increase more slowly and begin to decline significantly by 2050, models project global temperatures would still be at least 2.4°F warmer than the first half of the 20th century, and possibly up to 5.9°F warmer (NOAA 2025b).

Soil moisture is likely to decline in many regions, and intense rainstorms are likely to become more frequent. Rising temperatures could have four major impacts on plants and animals related to: (1) timing of ecological events; (2) geographic distribution and range; (3) species' composition and the incidence of nonnative species within communities; and (4) ecosystem processes, such as carbon cycling and storage (Parmesan 2006; State of California 2018). Many of the impacts identified above would impact ecosystems and wildlife in the Central Coast region. Increases in

wildfire would further remove sensitive habitat; increased severity in droughts would potentially starve plants and animals of water; and sea level rise will affect sensitive coastal ecosystems.

4.8.2 Regulatory Setting

a. Federal Laws, Regulations, and Policies

There is no overarching federal law specifically related to climate change or the reduction of GHG emissions. Additionally, in March 2025, the current administration announced that the U.S. Environmental Protection Agency (USEPA) will undertake 31 actions, focusing primarily on reconsidering actions adopted by previous administrations, including numerous actions and regulations related to climate change and the reduction of GHG emissions. These include, but are not limited to, reconsideration of regulations on power plants, the Mandatory Reporting Rule, the Endangerment Finding, and fuel economy standards, among others. As of the writing of this Draft EIR, none of these regulations have been repealed or replaced with newly adopted regulations. Therefore, these regulations are discussed below.

The U.S. Supreme Court in *Massachusetts et al. v. Environmental Protection Agency et al*. ([2007] 549 U.S. 05-1120) held that USEPA has the authority to regulate motor-vehicle GHG emissions under the federal Clean Air Act. USEPA began regulating GHGs under the Clean Air Act in 2011 following its Endangerment Finding. USEPA's GHG regulations include regulations governing transportation and mobile sources, renewable fuels, carbon pollution standards for existing power plants, the GHG tailoring rule governing new and existing industrial facilities, and GHG reporting requirements. Standards for mobile sources have been established pursuant to Section 202 of the Clean Air Act, and GHGs from stationary sources are currently controlled under the authority of Part C of Title I of the Act.

USEPA issued a Final Rule for mandatory reporting of GHG emissions in October 2009 (USEPA 2009). This Final Rule applies to fossil fuel suppliers, industrial gas suppliers, direct GHG emitters and manufacturers of heavy-duty and off-road vehicles and vehicle engines and requires annual reporting of emissions. In 2012, USEPA issued a Final Rule that establishes the GHG permitting thresholds that determine when Clean Air Act permits under the New Source Review Prevention of Significant Deterioration and Title V Operating Permit programs are required for new and existing industrial facilities.

Federal Fuel Economy and Emissions Standards

Corporate Average Fuel Economy Standards

The Energy Policy and Conservation Act in 1975 established the Corporate Average Fuel Economy Standards (CAFE) standards are Federal rules established by the National Highway Traffic Safety Administration that set fuel economy standards for all new passenger cars and light trucks sold in the United States. In 2024, CAFE standards were finalized for model years 2027 through 2031. The final rule establishes standards that require an industry-wide fleet average of approximately 49 miles per gallon for passenger cars and light trucks.

On July 29, 2025, USEPA announced a proposal to rescind the Clean Air Act Endangerment Finding for GHGs and repeal all GHG emission standards for light-duty, medium-duty, and heavy-duty vehicles and engines pursuant to CAA Section 202(a). As of writing this EIR, USEPA has not adopted this proposal (USEPA 2025). The proposed rule would remove GHG-related provisions from 40 CFR part 600 without affecting provisions related to CAFE standards and fuel economy labeling.

Federal Motor Vehicle GHG Emissions Standards

The federal motor vehicle GHG emissions standards were adopted by USEPA under Section 202(a) of the CAA following the 2009 Endangerment Finding, which determined that GHG emissions from motor vehicles contribute to air pollution that may endanger public health and welfare.

On July 29, 2025, USEPA proposed to rescind the 2009 Endangerment Finding and repeal all federal GHG emissions standards for light-, medium-, and heavy-duty vehicles. If finalized, the rule would eliminate USEPA's authority to regulate motor vehicle GHG emissions and remove all associated compliance obligations for manufacturers.

At the time of this EIR's preparation, the proposed rescission had not been adopted. The rule remains under public review, with comments accepted through September 22, 2025, and a final decision pending. Therefore, existing federal motor vehicle GHG emissions standards remain in effect and are considered applicable to motor vehicle emissions.

b. State Laws, Regulations, Policies, and Programs

CARB is responsible for the coordination and oversight of State and local air pollution control programs in California. California has numerous regulations aimed at reducing the state's GHG emissions. These initiatives are summarized below.

Executive Order S-3-05

Executive Order S-3-05, among other things, established the following GHG emission reduction goals for California: reduction to 2000 levels by 2010; to 1990 levels by 2020; and to 80 percent below 1990 levels by 2050.

Assembly Bill 1493

Assembly Bill (AB) 1493 (Chapter 200, Statutes of 2002), known as the "Pavley bill," amended Health and Safety Code Sections 42823 and 43018.5 requiring CARB to develop and adopt regulations that achieve maximum feasible and cost-effective reduction of GHG emissions from passenger vehicles, light-duty trucks and other vehicles used for noncommercial personal transportation in California.

Implementation of new regulations prescribed by AB 1493 required that the State of California apply for a waiver under the federal Clean Air Act. Although USEPA initially denied the waiver in 2008, USEPA approved a waiver in June 2009, and in September 2009, CARB approved amendments to its initially adopted regulations to apply the Pavley standards that reduce GHG emissions to new passenger vehicles in model years 2009 through 2016. In 2012, CARB approved the Low-Emission Vehicle III GHG regulation, which requires further reductions in passenger GHG for 2017 and subsequent vehicle model years. According to CARB, implementation of the Pavley regulations is expected to reduce fuel consumption while also reducing GHG emissions (CARB 2025).

In 2022, CARB approved the Advanced Clean Cars II rule regulating model years from 2026 to 2035. The rule establishes a year-by-year roadmap so that by 2035, 100 percent of new cars and light trucks sold in California would be zero-emission vehicles, including plug-in hybrid electric vehicles. The regulation realizes and codifies the light-duty vehicle goals set out in Governor Newsom's Executive Order N-79-20. By 2040, CARB anticipates that the rule would reduce GHG emissions from light-duty vehicles by 50 percent for a cumulative total of 395 MMT CO_2e from 2026 through 2040. USEPA granted CARB its California's Clean Air Act waiver request on December 18, 2024. However, Public Law 119-16 enacted on June 12, 2025, disapproves of this regulation under the Congressional Review Act, retroactively revoking the state's waiver issued by USEPA under the Clean Air Act to implement the Advanced Clean Cars II rule.

Advanced Clean Trucks and Low-NOx Regulation

The Advanced Clean Trucks rule is a CARB regulation that requires medium and heavy-duty truck manufacturers to gradually increase the percentage of zero-emission vehicles (ZEVs) they sell in the state. Effective in March 2021, the rule mandates that by 2035, 55 percent of Class 2b-3 truck sales, 75 percent of Class 4-8 straight truck sales, and 40 percent of truck tractor sales must be ZEVs. The goal is to accelerate the transition to zero-emission trucks. USEPA granted the waiver request under the CAA to enact the more stringent fuel economy components of the ACT regulation on April 6, 2023. However, Public Law 119-15 enacted on June 12, 2025, disapproves of this regulation under the Congressional Review Act, retroactively revoking the state's waiver issued by USEPA under the Clean Air Act to implement the Advanced Clean Trucks regulation.

The Heavy-Duty Low-NOX Omnibus Regulation was adopted by CARB in 2021 (effective December 22, 2021; amended in May 2024), and mandates steep reductions in NOX and PM emissions from new medium- and heavy-duty diesel and Otto-cycle engines starting with model year 2024. By full rollout, the regulation is projected to eliminate approximately 17–23 tons/day of NOX by 2031.However, Public Law 119-17 enacted on June 12, 2025, disapproves of this regulation under the Congressional Review Act, retroactively revoking the state's waiver issued by USEPA under the Clean Air Act to implement the low-NOx regulation.

Assembly Bill 1007

AB 1007 (Chapter 371, Statutes of 2005) required the California Energy Commission to prepare a State plan to increase the use of alternative fuels in California. The California Energy Commission prepared the State Alternative Fuels Plan in partnership with CARB and in consultation with other State, federal and local agencies. The State Alternative Fuels Plan presents strategies and actions California must take to increase the use of alternative non- petroleum fuels in a manner that minimizes costs to California and maximizes the economic benefits of in-state production. The State Alternative Fuels Plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuels use, reduce GHG emissions, and increase in-state production of biofuels without causing a significant degradation of public health and environmental quality.

Assembly Bill 32

The California Global Warming Solutions Act of 2006, AB 32, outlines California's major legislative initiative for reducing GHG emissions. AB 32 codifies the statewide goal of reducing GHG emissions to 1990 levels by 2020 and requires CARB to prepare a Scoping Plan that outlines the main state strategies for reducing GHG emissions to meet the 2020 deadline. In addition, AB 32 requires CARB to adopt regulations to require reporting and verification of statewide GHG emissions. Based on this guidance, CARB approved a 1990 statewide GHG level and 2020 target of 431 MMT CO_2e, which was achieved in 2016. CARB approved the Scoping Plan on December 11, 2008, which included GHG emission reduction strategies related to energy efficiency, water use, and recycling and solid waste, among others (CARB 2008). Many of the GHG reduction measures included in the Scoping Plan (e.g., Low Carbon Fuel Standard, Advanced Clean Car standards, and Cap-and-Trade) have been adopted since the Scoping Plan's approval.

CARB approved the 2013 Scoping Plan update in May 2014 (CARB 2014). The update defined the CARB's climate change priorities for the next five years, set the groundwork to reach post-2020 statewide goals, and highlighted California's progress toward meeting the "near-term" 2020 GHG emission reduction goals defined in the original Scoping Plan. It also evaluated how to align the state's longer term GHG reduction strategies with other state policy priorities, including those for water, waste, natural resources, clean energy, transportation, and land use (CARB 2014).

Senate Bill 32

On September 8, 2016, the governor signed Senate Bill (SB) 32 into law, extending the California Global Warming Solutions Act of 2006, by requiring the state to further reduce GHG emissions to 40 percent below 1990 levels by 2030 (the other provisions of AB 32 remain unchanged). On December 14, 2017, the CARB adopted the 2017 Scoping Plan, which provides a framework for achieving the 2030 target. The 2017 Scoping Plan relies on the continuation and expansion of existing policies and regulations, such as the Cap-and-Trade Program, and implementation of recently adopted policies and legislation, such as SB 1383 and SB 100 (discussed later). The 2017 Scoping Plan also puts an increased emphasis on innovation, adoption of existing technology, and strategic investment to support its strategies. As with the 2013 Scoping Plan update, the 2017 Scoping Plan does not provide project-level thresholds for land use development. Instead, it

recommends that local governments adopt policies and locally appropriate quantitative thresholds consistent with statewide per capita goals of six MT CO_2e by 2030 and two MT CO_2e by 2050 (CARB 2017b). As stated in the 2017 Scoping Plan, these goals may be appropriate for plan-level analyses (city, county, sub-regional, or regional level), but not for specific individual projects because they include all emissions sectors in the state (CARB 2017b).

Assembly Bill 1279 and 2022 Climate Change Scoping Plan

AB 1279, the California Climate Crisis Act, was passed on September 16, 2022, and declares the State would achieve net zero GHG emissions as soon as possible, but no later than 2045, and to achieve and maintain net negative GHG emissions thereafter. In addition, the bill states that the State would reduce anthropogenic GHG emissions by 85 percent below 1990 levels no later than 2045.

In response to the passage of AB 1279 and the identification of the 2045 GHG reduction target, CARB published the Final 2022 Climate Change Scoping Plan in November 2022 (CARB 2022). The 2022 Update builds upon the framework established by the 2008 Climate Change Scoping Plan and previous updates while identifying new, technologically feasible, cost-effective, and equity-focused path to achieve California's climate target. The 2022 Update includes policies to achieve a significant reduction in fossil fuel combustion, further reductions in short-lived climate pollutants, support for sustainable development, increased action on natural and working lands to reduce emissions and sequester carbon, and the capture and storage of carbon.

The 2022 Update assesses the progress California is making toward reducing its GHG emissions by at least 40 percent below 1990 levels by 2030, as called for in SB 32 and laid out in the 2017 Scoping Plan, addresses recent legislation and direction from Governor Gavin Newsom, extends and expands upon these earlier plans, and implements a target of reducing anthropogenic emissions to 85 percent below 1990 levels by 2045, as well as taking an additional step of adding carbon neutrality as a science-based guide for California's climate work. As stated in the 2022 Update, "The plan outlines how carbon neutrality can be achieved by taking bold steps to reduce GHGs to meet the anthropogenic emissions target and by expanding actions to capture and store carbon through the state's natural and working lands and using a variety of mechanical approaches" (CARB 2022). Specifically, the 2022 Update:

- Identifies a path to keep California on track to meet its SB 32 GHG reduction target of at least 40 percent below 1990 emissions by 2030.
- Identifies a technologically feasible, cost-effective path to achieve carbon neutrality by 2045, and a reduction in anthropogenic emissions by 85 percent below 1990 levels.
- Focuses on strategies for reducing California's dependency on petroleum to provide consumers with clean energy options that address climate change, improve air quality, and support economic growth and clean sector jobs.
- Integrates equity and protecting California's most impacted communities as driving principles throughout the document.

- Incorporates the contribution of natural and working lands to the State's GHG emissions, as well as their role in achieving carbon neutrality.
- Relies on the most up-to-date science, including the need to deploy all viable tools to address the existential threat that climate change presents, including carbon capture and sequestration, as well as direct air capture.
- Evaluates the substantial health and economic benefits of taking action.
- Identifies key implementation actions to ensure success.

In addition to reducing emissions from transportation, energy, and industrial sectors, the 2022 Update includes emissions and carbon sequestration in NWL and explores how NWL contribute to long-term climate goals. Under the Scoping Plan Scenario, California's 2030 emissions are anticipated to be 48 percent below 1990 levels, representing an acceleration of the current SB 32 target. Cap-and-Trade regulation continues to play a large factor in the reduction of near-term emissions for meeting the accelerated 2030 reduction target. Every sector of the economy will need to begin to transition in this decade to meet the GHG emissions reduction goals and achieve carbon neutrality no later than 2045. The 2022 Update approaches decarbonization from two perspectives, managing a phasedown of existing energy sources and technologies, as well as increasing, developing, and deploying alternative clean energy sources and technology.

Executive Order B-55-18

On September 10, 2018, the governor issued Executive Order B-55-18, which established a new statewide goal of achieving carbon neutrality by 2045 and maintaining net negative emissions thereafter. This goal is in addition to the existing statewide GHG reduction targets. The 2022 Scoping Plan Update assesses progress towards achieving the SB 32 target and layout out a path to achieve carbon neutrality (CARB 2021b). This goal is in addition to the existing statewide GHG reduction targets established by SB 375, SB 32, SB 1383, and SB 100.

Executive Order S-01-07

Executive Order S-01-07 (17 CCR 95480 et seq.) required the state to achieve a 10 percent or greater reduction by 2020 in the average fuel carbon intensity for transportation fuels in California regulated by CARB. CARB identified the Low Carbon Fuel Standard as a discrete early action item under AB 32. The 2020 target was achieved in 2016.

In 2018, CARB approved amendments to the Low Carbon Fuel Standard regulation, which included strengthening and smoothing the carbon intensity benchmarks through 2030 in-line with California's 2030 GHG emission reduction target enacted through SB 32, adding new crediting opportunities to promote zero emission vehicle adoption, alternative jet fuel, carbon capture and sequestration, and advanced technologies to achieve deep decarbonization in the transportation sector.

Executive Order B-16-12

Executive Order B-16-12 orders State entities under the direction of the Governor including CARB, the Energy Commission, and the California Public Utilities Commission to support the rapid commercialization of zero emission vehicles (ZEVs). It directs these entities to achieve various benchmarks related to zero emission vehicles, including:

- Infrastructure to support up to one million zero emission vehicles by 2020,
- Widespread use of zero emission vehicles for public transportation and freight transport by 2020,
- Over 1.5 million zero emission vehicles on California roads by 2025,
- Annual displacement of at least 1.5 billion gallons of petroleum fuels by 2025, and
- A reduction of GHG emissions from the transportation sector equaling 80 percent less than 1990 levels by 2050.

Executive Order N-19-19

Executive Order N-19-19 was signed on September 20, 2019 and is intended to require the redoubling of the state's efforts to reduce GHG emissions and mitigate the impacts of climate change while building a sustainable, inclusive economy. The Executive Order includes four main directives which include investment, transportation, state buildings and operations, and zero-emissions vehicles.

Senate Bill 100

Adopted on September 10, 2018, SB 100 supports the reduction of GHG emissions from the electricity sector by accelerating the state's Renewables Portfolio Standard Program. SB 100 requires electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 50 percent by 2026, 60 percent by 2030, and 100 percent by 2045.

Senate Bill 375

The Sustainable Communities and Climate Protection Act of 2008 (SB 375), signed in August 2008, enhances the state's ability to achieve significant GHG reductions from changes to land use patterns and improved transportation networks. SB 375 directs CARB to develop regional GHG emission reduction targets to be achieved from passenger vehicles by 2020 and 2035. Metropolitan Planning Organizations are required to adopt a Sustainable Communities Strategy (SCS), which allocates land uses in the Metropolitan Planning Organization's Regional Transportation Plan (RTP). On March 22, 2018, CARB adopted updated regional targets for reducing GHG emissions from 2005 levels by 2020 and 2035. Regional targets assigned to AMBAG are a 3 percent per capita GHG emissions reduction from 2005 levels by 2020, and a 6 percent per capita GHG emissions reduction from 2005 levels by 2035.

Assembly Bill 197

AB 197 of 2016 (Chapter 250, Statutes of 2016) expands CARB membership to include two nonvoting members from the Legislature; creates a Joint Legislative Committee on Climate Change Policies to make recommendations to the Legislature concerning climate change policies; provides for annual reporting of GHG emissions from sectors covered by the AB 32 Scoping Plan as well as evaluations of regulatory requirements and other programs that may affect GHG emissions trends; and specifies that the adoption of GHG emissions reduction rules and regulations shall consider the social costs. In addition, Scoping Plan updates are required to identify the range of potential GHG emissions reductions and the cost-effectiveness for each emissions reduction measure, compliance mechanism and incentive.

Executive Order N-79-20

Executive Order N-79-20 established a Statewide goal that 100 percent of in-state sales of new passenger cars and trucks will be zero-emission by 2035 and a further goal of the State that 100 percent of medium- and heavy-duty vehicles in the State be zero-emission by 2045 for all operations where feasible and by 2035 for drayage trucks.

Executive Order N-82-20

Executive Order N-82-20 established a goal of conserving at least 30 percent of California's lands and coastal waters by 2030 and directed state agencies to create a Natural and Working Lands Climate Smart Strategy to advance the State's carbon neutrality goal and builds climate resilience.

Senate Bill 1383

Adopted in September 2016, SB 1383 requires CARB to approve and begin implementing a comprehensive strategy to reduce emissions of short-lived climate pollutants. The bill requires the California Department of Resources Recycling and Recovery (CalRecycle), in consultation with CARB, to adopt regulations that achieve:

- 50-percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2020; and
- 75-percent reduction in the level of the statewide disposal of organic waste from the 2014 level by 2025.

The bill also mandates various state and local agencies develop further strategies to reduce emissions generated by specific industries such as agriculture. The stated goal is to achieve the following reduction targets by 2030:

- Methane – 40 percent below 2013 levels
- Hydrofluorocarbons – 40 percent below 2013 levels
- Anthropogenic black carbon – 50 percent below 2013 levels

California Building Energy Efficiency Standards

The California Code of Regulations Title 24 is referred to as the Building Energy Efficiency Standards or California Energy Code. This code, originally enacted in 1978, establishes energy-efficiency standards for residential and non-residential buildings to reduce California's energy demand. New construction and major renovations must demonstrate their compliance with the current Energy Code through submittal and approval of a Title 24 Compliance Report to the local building permit review authority and the CEC.

Future land use projects would be subject to the 2025 California Building Energy Efficiency Standards, codified in Title 24, Part 6 of the California Code of Regulations, which take effect on January 1, 2026. These standards are designed to reduce energy consumption in residential and non-residential buildings, support California's climate goals, and improve indoor environmental quality.

Key updates to the 2025 standards include expanded requirements for heat pump technologies, electric readiness for future electrification, enhanced ventilation and indoor air quality measures, and battery storage system readiness for homes with larger electrical service capacities. These measures are expected to reduce building energy demand, lower greenhouse gas emissions, and support integration of distributed energy resources.

AB 130 of 2025 imposes a moratorium on changes to California building codes affecting residential units, including both state and local amendments, through 2031, with limited exemptions. Essentially, AB 306 would prohibit CEC or any other adopting agency from considering, approving, or adopting any proposed building standards affecting residential units, unless a certain condition is met, including that the CEC deems those changes necessary as emergency standards to protect health and safety. The 2025 Energy Code will proceed as planned with an effective date of January 1, 2026, and the 2031 Energy Code cycle is anticipated to be unaffected.

California Green Building Standards Code

The 2026 California Green Building Standards Code (CALGreen), codified in Title 24, Part 11 of the California Code of Regulations, and effective in 2025, establishes mandatory minimum environmental performance standards for newly constructed residential and non-residential buildings statewide. These standards are enforced by local jurisdictions and address key sustainability areas including energy efficiency, water conservation, material resource efficiency, and indoor environmental quality.

CALGreen also includes voluntary tiers (Appendices A4 and A5) that provide enhanced environmental performance options. These voluntary measures are intended as model provisions for jurisdictions considering above-code ordinances (also known as "reach codes") or for builders seeking additional compliance flexibility under the California Energy Code.

California State Transportation Agency Climate Action Plan for Transportation Infrastructure

The Climate Action Plan for Transportation Infrastructure (CAPTI) was adopted in July 2021. CAPTI details how the state recommends investing billions of discretionary transportation dollars annually to aggressively combat and adapt to climate change while supporting public health, safety and equity. CAPTI builds on executive orders signed by Governor Gavin Newsom in 2019 and 2020 targeted at reducing GHG emissions in transportation, which account for more than 40 percent of all emissions, to reach the state's ambitious climate goals.

Throughout 2024, the California State Transportation Agency (CalSTA) engaged with public stakeholders to develop new strategies which informed an updated CAPTI 2.0, adopted in January 2025 as an update to the original CAPTI (CalSTA 2025). CAPTI 2.0 builds on the original plan and introduces four new strategies, which include the following:

- S1. Transforming the Future of the State Highway System
- S2. Reducing GHG Impacts of Transportation Investments
- S3. Delivering Equitable Outcomes
- S4. Improving Transparency and Accountability

Each strategy includes specific actions, for a total of 14 new actions necessary for further implementation of the CAPTI framework to align transportation infrastructure investments with California's climate goals. Such changes would help advance a slate of projects that meet climate goals, ensure that these projects are prioritized for state funding, and promote project construction and operations that minimize emissions and impacts from climate change (CalSTA 2025).

c. Regional and Local Laws, Regulations, Policies, and Programs

AMBAG

The AMBAG Sustainability Program has completed Local Government Operations inventories for AMBAG jurisdictions in 2005 and Community-wide GHG inventories in 2005, 2010, 2015, 2018, and 2019 for all AMBAG jurisdictions. AMBAG supports local climate change efforts by providing data and technical support to jurisdictions working on climate action plans. The AMBAG Sustainability program also provides technical support to public sector agencies seeking to implement energy efficiency projects and to educate the community on sustainability and energy related topics. Further, AMBAG holds a seat on the Monterey Bay Electric Vehicle Alliance and supports goals to make the AMBAG region ready for electric vehicles. In collaboration with other local agencies, AMBAG is currently evaluating low-emissions shared mobility options to meet regional transportation needs.

Monterey County

The Monterey County General Plan (Monterey County 2010) addresses greenhouse gas in the Conservation and Open Space Element. The goals and policies of their Conservation and Open

Space Element support GHG reduction by promoting land use and transportation strategies that minimize air pollution and vehicle emissions and supporting clean construction practices. Similarly, Monterey County's Municipal Climate Action Plan, released in 2013, serves as a GHG reduction strategy for municipal operations, aligning with California's AB 32 Scoping Plan and CEQA Guidelines. The Plan establishes a baseline GHG emissions inventory for 2005 and forecasts emissions through 2020, identifying key sectors such as buildings and facilities, vehicle fleet, employee commute, solid waste, water use, and public lighting. It outlines reduction measures across three implementation scenarios, emphasizing energy efficiency upgrades, fleet electrification, and participation in regional programs like AMBAG's Energy Watch. The Plan recommends phasing out high-emission practices and integrating renewable energy sources into County operations. While the Municipal Climate Action Plan has not been updated since its release in 2013, Monterey County itself has reinitiated its Sustainability Program and is developing a 2030 Climate Action Plan to reduce emissions by 40 percent through building electrification, fleet conversion, and expanded telecommuting.

San Benito County

The San Benito County 2035 General Plan (San Benito County 2015) addresses GHG in the Land Use, Public Facilities and Services, and Natural and Cultural Resources Elements. The goals and policies of the San Bento County 2035 General Plan support GHG reduction by requiring mitigation of air emissions from development and construction, promoting cleaner transportation systems, and coordinating with regional air quality agencies to ensure compliance with emission standards (San Benito County 2015a).

The City of Hollister has taken significant steps to advance local energy efficiency and sustainability through its Climate Action Plan, developed in alignment with California's statewide climate goals. The Plan outlines strategies to reduce greenhouse gas emissions across transportation, building energy use, and waste sectors. Hollister participates in 3CE, which supplies residents and businesses with renewable electricity options. The city is also promoting building electrification, including incentives for all-electric new construction and retrofits, and has identified municipal retrofit projects such as upgrading HVAC systems at City Hall and other public facilities. These efforts are part of a broader strategy to meet California's 2045 carbon neutrality target and enhance community resilience to climate change.

Santa Cruz County

The Santa Cruz County General Plan and Local Coastal Program (Santa Cruz County 2024) addresses GHG in their Built Environment and Agriculture, Natural Resources, and Conservation Elements. The goals and policies of the Santa Cruz County General Plan and Local Coastal Program support GHG reduction by promoting multimodal transportation and reducing vehicle emissions.

Additionally, in 2013, Santa Cruz County adopted a Climate Action Strategy, which functions similarly to a CAP in that it focuses on reducing GHG emissions from County operations and community-wide sources through energy efficiency and reduction measures. The Strategy outlines goals and measures across sectors such as transportation, energy use, land use, and

waste management. It aligns with California's AB 32 and CEQA guidelines and includes implementation tracking and reporting mechanisms.

While the Strategy has not been formally updated into a new CAP document, Santa Cruz County continues to implement climate-related initiatives through its Sustainability Program, including participation in regional efforts and updates to General Plan policies that support climate resilience and energy efficiency. For example, in July 2020, the City of Santa Cruz enacted an ordinance which prohibits the installation of natural gas hookups in most new buildings. The ordinance applies to all residential and commercial buildings, except in cases where developers can prove electric systems are not feasible, or where the exception is for the public good, such as for hospitals or water treatment plants (City of Santa Cruz 2020).

Other Local Climate Action Plans

Eight of AMBAG's member jurisdictions have adopted climate action plans that set goals and outline policies to achieve GHG reduction targets for their communities. These cities are Capitola, Carmel-by-the-Sea, Gonzales, Hollister, Monterey, Santa Cruz, and Watsonville, as well as Santa Cruz County (Capitola 2015; Carmel-by-the-Sea 2022; Gonzales 2018; Monterey 2016; Santa Cruz 2022; Watsonville 2021; County of Santa Cruz 2022). In addition, the cities of Greenfield, Pacific Grove, Seaside, and Salinas, and San Benito County, are each currently developing climate action plans (Greenfield 2025; Pacific Grove 2025; Seaside 2025; Salinas 2025; San Benito County 2025). All of AMBAG's jurisdictions have conducted baseline emissions inventories, which establish a reference point for GHG emissions reduction.

The completed climate action planning documents in the AMBAG region address similar issues related to emissions produced by transportation, energy usage, and other operational emissions such as water supply and conveyance, wastewater treatment, and solid waste disposal. The types and quantity of emissions produced in the AMBAG region vary among jurisdictions.

However, for most jurisdictions, transportation and energy usage produce a majority of GHG emissions. Climate action planning policies in the region establish a framework for improved circulation networks and energy conservation. Transportation policies aim to reduce VMT by offering more opportunities for alternative transportation modes, including bicycling, walking, and transit use. In addition, many of the documents include policies to promote transit oriented development and land use policies that encourage a greater diversity of land use in closer proximity to one another. To reduce emissions caused by energy usage, jurisdictions have established policies that will facilitate and encourage energy efficiency for both residential and commercial land uses. Cities and counties include programs to improve energy efficiencies in old and new buildings and decrease the use of fossil fuels by providing incentives for use of renewable energy.

4.8.3 Impact Analysis

a. Methodology and Significance Thresholds

Significance Thresholds

Appendix G of the *CEQA Guidelines* identifies the following general criteria for determining whether a project's impacts would have a significant impact related to GHG emissions. Specific criteria have been developed by AMBAG for this EIR.

1. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. An increase that exceeds the following threshold would be considered a significant impact:
   a. A net increase in GHG emissions by 2050 compared to existing baseline conditions.
2. Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. Any conflict with the following thresholds would be considered a significant impact:
   a. Conflict with regional SB 375 per capita passenger vehicle CO_2 emission reduction targets of 6 percent by 2035 from 2005 levels;
   b. Conflict with state's ability to achieve the SB 32 GHG reduction target, which aims to reduce statewide emissions to 40 percent below 1990 levels by 2030, and the AB 1279 GHG reduction target, which aims to reduce statewide emissions to 85 percent below 1990 levels by 2045;
   c. Conflict with applicable local GHG reduction plans.

The Monterey Bay Air Resources District (MBARD) has not adopted GHG significance thresholds. In the absence of MBARD-adopted thresholds, this section uses the project specific thresholds of significance listed above for each GHG impact criterion.

Methodology

Construction Emissions

Although construction activity is addressed in this analysis, project specific construction-related emissions for projects implementing the 2050 MTP/SCS are speculative because such emissions are dependent on the characteristics of individual projects as well as the types of construction equipment that will be operating. A qualitative, program-level analysis is provided along with mitigation measures consisting of GHG-reducing best management practices.

Operational Emissions

To assess whether the operational emissions generated by the 2050 MTP/SCS would result in a significant increase in mobile source and land use GHG emissions, total CO_2 and CO_2e emissions for the 2050 MTP/SCS were calculated and compared to 2022 baseline conditions. CARB's

EMFAC2021 model is the latest federally approved EMFAC version[1] and was used to calculate mobile emissions from the full fleet of on-road vehicles within the AMBAG region. EMFAC emission factors are established by CARB and accommodate mobility assumptions (e.g., vehicle miles traveled, fleet, speed, time of day) provided by AMBAG's RTDM. EMFAC2021 includes the latest data on California's car and truck population, activity, and emission testing. New forecasting frameworks have been incorporated to project zero-emission vehicle population, and to estimate heavy-duty vehicle miles traveled. New model features are added to reflect more fuel technologies, including modules to show emissions from Plug-in Hybrid Electric Vehicles (PHEV) and natural gas trucks, as well as energy consumption from ZEVs (CARB 2021). EMFAC also reflects the emissions benefits of on-road diesel fleet rules, Advanced Clean Car Standards, and the GHG Standards for Medium- and Heavy-Duty Vehicles.

For CH_4 and N_2O emissions, emission factors were created with EMFAC2021 and derived CO_2e emissions using the GWPs from the IPCC Fifth Assessment (IPCC 2014). The tons per day of CO_2, CH_4, and N_2O emissions were converted into metric tons of CO_2e per year assuming 365 days of activity. GHG emissions from land uses were forecasted in the 2045 Metropolitan Transportation Plan/Sustainable Communities Strategy for Monterey, San Benito, and Santa Cruz Counties Greenhouse Gas Emissions Forecast (AMBAG 2022). The forecast included GHG emission sources for the AMBAG region in the years 2020, 2025, 2030, 2035, 2040, and 2045. For the purposes of this analysis, land use GHG emissions for year 2022 and 2050 were determined via linear interpolation between years with available data. The land use GHG emissions for the years 2022, 2030, 2045, and 2050 were used in this analysis. Table 4.8-2 includes on-road transportation emissions in addition to the adjusted forecasted land use GHG emissions. The total GHG emissions and per capita CO_2e emissions were then calculated in Table 4.8-3 (shown in Impact GHG-2). Per capita CO_2e emissions were calculated for informational purposes by dividing the total GHG emissions, which includes on-road transportation and land use emissions, by the region's forecasted population. If total regionwide GHG emissions associated with the 2050 MTP/SCS do not exceed the 2022 baseline emissions, impacts related to GHG emissions would not be considered significant.

[1] EMFAC2021 accounts for criteria pollutant emissions reductions associated with the Advanced Clean Trucks Regulation and the Omnibus Low-NOx Regulation, both of which were subject to federal CAA waiver disapprovals under Public Laws 119-15 and 119-17, respectively. EMFAC2021 also reflects reductions from federal motor vehicle GHG emissions standards that would be repealed if the U.S. EPA's proposed rescission of the 2009 Endangerment Finding is finalized. However, at the time of this EIR's preparation, the federal disapprovals are subject to legal uncertainty due to ongoing litigation, and the Endangerment Finding had not been rescinded. Emissions modeling for this EIR was conducted prior to the announcement of these proposed federal actions, and CARB had not issued guidance on how to adjust EMFAC2021 modeling to account for these developments. Therefore, EMFAC2021 was the most appropriate and current methodology available for estimating criteria pollutant emissions.

Table 4.8-2 AMBAG Regional Adjusted Forecast Detailed Summary (MT CO_2e)

GHG Emissions Source	2022[1]	2030	2045	2050[1]
Transportation	**2,839,527**	**2,518,378**	**2,277,826**	**2,290,378**
On-Road Transportation[2,3]	2,484,518	2,145,140	1,877,498	1,880,532
Aviation Gasoline Fuel Sales	2,710	2,832	2,999	3,047
JET-A Fuel Sales	8,315	8,809	9,453	9,645
Monterey Regional Airport	41,611	43,244	45,549	46,300
Off-road Natural Gas	8,562	8,770	9,118	9,118
Off-road Diesel	182,564	188,828	195,597	198,287
Off-road Gasoline	111,247	120,755	137,612	143,449
Residential	**594,911**	**525,414**	**548,435**	**554,717**
Electricity - 3CE	101,286	4,114	–	–
Electricity - PG&E	101	65	–	–
Electricity - KCCP	2,514	1,583	–	–
Natural Gas	491,010	519,652	652	554,717
Commercial/Industrial	**663,301**	**517,746**	**537,089**	**547,614**
Electricity - 3CE	162,308	6,599	–	–
Electricity - PG&E	993	628	–	–
Electricity - KCCP	5,488	3,423	–	–
Natural Gas	494,512	507,095	537,089	547,614
Wastewater	**24,758**	**25,818**	**27,279**	**27,712**
Fugitive Emissions from Septic Systems	9,516	9,921	10,480	10,646
Process N_2O from Wastewater Treatment	747	79	823	836
Process N_2O from Effluent Discharge	14,494	15,117	15,976	16,230
Solid Waste	**379,273**	**399,452**	**353,461**	**359,339**
Monterey Peninsula Landfill	99,016	102,902	108,386	110,173
Johnson Canyon Sanitary Landfill	243	253	266	271
John Smith Landfill	58,844	65,127	–	–
Buena Vista Landfill	20	20	–	–
Community Generated Solid Waste	221,150	231,151	244,809	248,895
Agricultural	**452,064**	**440,489**	**422,481**	**416,961**
Enteric Fermentation	258,071	258,071	258,071	258,071
Manure Management	51,973	51,973	51,973	51,973
Nitrogen Fertilizer Application	142,020	130,445	112,437	106,917
Total	**4,953,833**	**4,427,296**	**4,166,571**	**4,196,721**

Notes: Values in this table may not add up to totals due to rounding.

All values are of the unit metric tons of carbon dioxide equivalent (MT CO_2e)

PG&E = Pacific Gas and Electric; 3CE = Central Coast Community Energy; KCCP = King City Community Power; N_2O = nitrous oxide

[1] For all emissions sources except on-road transportation, 2022 emissions were linearly interpolated using the years 2020 and 2025. The 2050 emissions were linearly extrapolated using the years 2040 and 2045. For sources with zero 2045 emissions, 2050 emissions were presumed to be zero.

[2] The on-road transportation emissions for year 2030 were calculated using VMT that was linearly interpolated using the 2022 and 2035 VMTs.

[3] The on-road transportation emissions are based on EMFAC2021 outputs and account for all gasoline and diesel vehicle types (e.g., passenger vehicles, medium-duty trucks, heavy-duty trucks, buses, motorhomes, and motorcycles) traveling within the AMBAG region.

See Appendix E.2 for GHG emissions calculations. Please refer to Appendix F of the 2050 MTP/SCS for the modeling methodology for VMT. For all emissions sources except on-road transportation, interpolated values were derived from the 2045 MTP/SCS Greenhouse Gas Emissions Forecast prepared for AMBAG by Rincon Consultants (2022).

Source: AMBAG 2022

Consistency with Regional SB 375 Targets (Per Capita Passenger Vehicle Emissions)

The SB 375-based threshold is also included as it demonstrates AMBAG's achievement of CARB-specified targets and consistency toward achieving the goals of SB 32. As discussed in Section 4.8.1, *Setting*, the targets from CARB are identified as a three percent per capita reduction from 2005 levels by 2020[2] and a six percent per capita reduction from 2005 levels by 2035. In 2005, GHG emissions from passenger vehicles and light-duty trucks in the AMBAG region were approximately 18.68 pounds of CO_2 per capita.[3] AMBAG must reduce these levels by at least six percent to meet the 2035 target.

AMBAG calculated 2005 emissions using EMFAC2011. EMFAC2011 was used to calculate SB 375-based baseline conditions because it was CARB's latest approved model version at the time of SB 375 target development. Subsequent evaluations of the SB 375 targets require Metropolitan Planning Organizations to utilize the same model version (EMFAC2011) for consistency, or to create an adjustment factor for emissions in 2005 and future years estimated using a different model version. AMBAG calculated the 2035 per capita GHG emissions using EMFAC2014 and created an adjustment factor to account for the two versions of EMFAC used. AMBAG elected to use EMFAC2014 to estimate future emissions as this model version incorporated several changes, new data, and new methodology for calculating motor vehicle emissions compared to EMFAC2011. While a newer EMFAC model was used than the one applied for 2005 emissions, the adjustment factor accounts for potential differences between EMFAC2011 and EMFAC2014 model results.

The SB 375 VMT differs from the full-fleet VMT that is described above since it only includes the following vehicle categories: passenger cars (LDA), light-duty trucks (LDT1 and LDT2), and medium-duty trucks (MDV). If GHG emissions associated with the 2050 MTP/SCS from passenger vehicles and light duty trucks are at least six percent below 18.68 pounds of CO_2 per capita in 2035, the MTP/SCS would meet the SB 375 regional GHG reduction target. Note that there are

[2] AMBAG met the 2020 target of three percent per capita reduction from 2005 levels. Attainment of the 2020 target was not analyzed since the target

[3] Note this 2005 per capita GHG emissions differs from iterations of the MTP/SCS prior to the 2045 plan as it now includes 100 percent of the internal-external (IX) and external-internal (XI) pursuant to CARB's current 2019 direction.

no post-2035 targets. CARB staff began the target update process in 2024 with a public workshop and plans to conclude it in 2026 with CARB approval of the new targets.

Consistency with SB 32, AB 1279, and the 2022 Scoping Plan

Meeting the goals of SB 375 does not guarantee consistency with SB 32, AB 1279, and the 2022 Scoping Plan. As described above, SB 375 is only concerned with VMT from specific vehicle categories (i.e., LDA, LDT1, LDT2, and MDV). For an analysis regarding SB 32 and AB 1279, the full fleet needs to be accounted for because these policies pertain to all mobile emissions as well as land use emissions. To determine that a project would not conflict with the State's ability to achieve the SB 32 target or the AB 1279 target, the 2050 MTP/SCS would need to achieve substantial progress toward achieving the target reductions. Mobile source emissions were calculated to determine regionwide GHG emissions with implementation of the 2050 MTP/SCS. If implementation of the 2050 MTP/SCS would achieve substantial progress toward the emissions reduction targets established by SB 32 and AB 1279, then impacts related to these policies would not be considered significant.

Currently, the State Legislature has codified a target of reducing emissions to 40 percent below 1990 emissions levels by 2030 (SB 32) and 85 percent below 1990 emissions levels by 2045 (AB 1279). The 2022 Scoping Plan Update was developed to demonstrate how the State will achieve the 2045 target and stay on track to meet the 2030 SB 32 target. The plan also identifies a path to achieve carbon neutrality by 2045.

While state and regional regulators of energy and transportation systems, along with the State's Cap-and-Trade program, are designed to be set at limits to achieve most of the reductions needed to attain the State's long-term targets, local governments can do their fair share toward meeting the State's targets by siting and approving projects that accommodate planned population growth and projects that are GHG-efficient. The Association of Environmental Professionals (AEP) Climate Change Committee recommends that CEQA GHG analyses evaluate project emissions in light of the trajectory of state climate change legislation and assess their "substantial progress" toward achieving long-term reduction targets identified in available plans, legislation, or executive orders (AEP 2016).

Consistent with AEP Climate Change Committee recommendations, GHG impacts are analyzed using a threshold based on the State's 2030 and 2045 targets, which evaluates whether the project would impede "substantial progress" toward meeting the reduction goals identified in SB 32, and AB 1279. Because SB 32 is considered an interim target toward meeting the 2045 State goals, consistency with SB 32 is considered to be contributing substantial progress toward meeting the State's long-term 2045 goals. Avoiding interference with, and making substantial progress toward, these long-term State targets is important because these targets have been set at levels that achieve California's share of international emissions reduction targets that will stabilize global climate change effects and avoid the adverse environmental consequences of climate change (AB 1279).

Achieving the State's long-term targets will depend on substantial technological innovation in GHG emission reduction measures and changes in legislation and regulations that will need to

occur over the next 20 years. If the 2050 MTP/SCS GHG emissions are consistent with AB 1279 targets, the 2050 MTP/SCS would also achieve substantial progress toward climate-stabilizing goals set forth by the 2022 Scoping Plan based on the AB 1279 targets.

b. Project Impacts and Mitigation Measures

The following section describes GHG emissions and climate change impacts associated with the transportation improvements and future land use scenario included in the 2050 MTP/SCS. In general, implementation of proposed transportation improvements and the reasonably foreseeable future development facilitated under the land use scenario envisioned by the 2050 MTP/SCS would result in GHG and climate change impacts as described in the following sections.

Threshold 1: Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment? An increase that exceeds the following threshold would be considered a significant impact:

a. A net increase in GHG emissions by 2050 compared to baseline 2022 conditions

Impact GHG-1 CONSTRUCTION OF THE TRANSPORTATION IMPROVEMENT PROJECTS AND DEVELOPMENT WITHIN FUTURE LAND USE PATTERNS ENVISIONED BY THE 2050 MTP/SCS WOULD GENERATE A NET INCREASE GHG EMISSIONS BY 2050 COMPARED TO BASELINE 2022 CONDITIONS. IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

Construction activities associated with transportation improvement projects and future land use patterns envisioned by the 2050 MTP/SCS would generate temporary short-term GHG emissions primarily due to the operation of construction equipment and truck trips. Construction-related emissions are speculative at the 2050 MTP/SCS level because such emissions are dependent on the characteristics of individual projects. However, GHG emissions would be emitted from travel to and from individual project worksites and the operation of construction equipment such as graders, backhoes, and generators. Site preparation and grading typically generate the highest emissions due to the use of grading equipment and soil hauling. The precise construction timing and construction equipment for individual projects are not known currently. Nonetheless, construction activities would result in GHG emissions exceeding the 2022 baseline, resulting in a significant impact.

Mitigation Measures

For all transportation projects under their jurisdiction, TAMC, SBtCOG, and SCCRTC shall implement, and transportation project sponsor agencies can and should implement, the following mitigation measures developed for the 2050 MTP/SCS program where applicable for transportation projects generating construction GHG emissions, and where feasible and necessary based on project and site specific considerations. Cities and counties in the AMBAG region can and should implement these measures, where relevant to land use projects implementing the 2050 MTP/SCS. Implementation of Mitigation Measures AQ-2(b) and AQ-2(c)

in Section 4.3, *Air Quality and Health Impacts/Risks,* would also reduce GHG emissions from the 2050 MTP/SCS.

GHG-1 Construction GHG Reduction Measures

The project sponsor shall incorporate the most recent GHG reduction measures and/or technologies for reducing GHG emissions measures for off-road construction vehicles during construction. The measures shall be noted on all construction plans and the project sponsor shall perform periodic site inspections. Current GHG-reducing measures include the following:

- Use of on-road heavy-duty trucks that meet the CARB's 2007 or cleaner certification standard for on-road heavy-duty diesel engines, and comply with the State On-Road Regulation;
- All on and off-road diesel equipment shall not idle for more than 5 minutes. Signs shall be posted in the designated queuing areas and or job sites to remind drivers and operators of the five-minute idling limit;
- Substitute gasoline-powered in place of diesel-powered equipment, where feasible;
- Use of alternatively fueled construction equipment, such as compressed natural gas (CNG), liquefied natural gas (LNG), propane or biodiesel, in place of diesel-powered equipment for 15 percent of the fleet, to the extent electric powered equipment is not feasible;
- Use of materials sourced from local suppliers;
- Recycling of at least 75 percent of construction waste materials; and
- Project proponents shall incentivize that construction workers carpool, and/or use electric vehicles to commute to and from the project site.

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for AMBAG transportation projects are RTPAs, and transportation project sponsor agencies. Implementing agencies for land use projects are cities and counties. This mitigation measure shall, or can and should, be applied during permitting and environmental review and implemented during construction where appropriate.

Significance After Mitigation

Implementation of Mitigation Measure GHG-1 would reduce short-term construction emissions from individual projects and thus reduce the severity of impacts by requiring best practices for exhaust emissions reductions via readily available, lower-emitting diesel equipment, and/or equipment powered by alternative cleaner fuels (e.g., propane) or electricity, as well as on-road trucks using particulate exhaust filters. Implementation of Mitigation Measures AQ-2(b) and AQ-2(c) would also reduce GHG emissions from individual transportation and land use projects envisioned by the 2050 MTP/SCS. However, these mitigation measures may not be feasible or effective for all projects. Therefore, this impact would remain significant and unavoidable. No additional mitigation measures to reduce this impact to less than significant levels are feasible.

Threshold 1: Would the project generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment? An increase that exceeds the following threshold would be considered a significant impact:

a. A net increase in GHG emissions by 2050 compared to baseline 2022 conditions

Impact GHG-2 OPERATION OF THE 2050 MTP/SCS WOULD NOT GENERATE A NET INCREASE IN GHG EMISSIONS BY 2050 COMPARED TO BASELINE 2022 CONDITIONS. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Total GHG emissions associated with all classes of on-road motor vehicles (e.g., full fleet) were calculated by AMBAG using the CARB's EMFAC2021 model based on the VMT that would be generated due to the 2050 MTP/SCS (refer to Appendix E.2). The land use emissions for the AMBAG region were calculated in a GHG emissions forecast (AMBAG 2022; see Table 4.8-2). Table 4.8-3 compares the total GHG emissions for baseline conditions in 2022 versus future 2050 conditions with implementation of 2050 MTP/SCS. Future conditions in 2050 without implementation of the MTP/SCS are also shown for informational purposes.

As presented in Table 4.8-3, implementation of the 2050 MTP/SCS would result in a net reduction in total emissions of 757,114 MT of CO_2e per year, compared to baseline 2022 conditions, a 15.3 percent reduction. The estimated reduction in total mobile source emissions would be due to a combination of transportation improvements proposed in the 2050 MTP/SCS and State initiatives. The 2050 MTP/SCS focuses on transportation improvements, such as increased alternative modes of transportation and decreasing congestion on roadways, with supportive infill and high-density mixed-use developments. The 2050 MTP/SCS would also invest in electric vehicle charging spaces and electric bikes to promote sustainable modes of travel. At the State level, stricter fuel efficiency and vehicle emissions standards that will phase in over the planning period would decrease emissions from mobile sources, as reflected in EMFAC2021 emission factors. The land use emissions also account for the continuing effects of Title 24 and SB 100, with the former requiring more efficient buildings and the latter requiring an increased procurement of electricity from renewable sources. Note that the modeled GHG emissions for the 2050 MTP/SCS do not account for the reductions from some strategies, such as transportation demand management (TDM), transportation system management (TSM), telecommuting, and transit service enhancements, which cannot be modeled. As such, the emissions shown in Table 4.8-3 for the 2050 MTP/SCS are conservative. Refer to the 2050 MTP/SCS Appendix F for model sensitivity and recommended off-model adjustments. Since the 2050 MTP/SCS would result in a net decrease in overall total GHG emissions in the AMBAG region, impacts from operational-related GHG emissions would be less than significant.

Table 4.8-3 2050 MTP/SCS Net Change in Total GHG Emissions (2022-2050)

Scenario	2022 Baseline	2050 No Project	2050 MTP/SCS
On-Road Mobile Emissions from VMT (MT CO_2e/year)[1]	2,484,518	1,880,108	1,880,532
Land Use Emissions from Table 4.8-2 (MT CO_2e/year)	2,469,316	2,316,187	2,316,187
Total	**4,953,833**	**4,196,295**	**4,196,719**
Population (persons)	766,170	813,708	813,708
Per Capita (MT CO_2e per service population per year)	6.466	5.157	5.158
Total Net Change from Baseline (2022) (MT CO_2e/year)	**N/A**	**-757,538**	**-757,114**
Per Capita Net Change from Baseline (2022) (MT CO_2e/year)	**N/A**	**-1.309**	**-1.308**
Change % Per Capita (Baseline vs. 2050 MTP/SCS)	**N/A**	**-20.24%**	**-20.23%**
Threshold of Significance	–		>0
Threshold Exceeded?	–		No

MT = metric tons; CO_2 = carbon dioxide; CO_2e = carbon dioxide equivalent; N/A = not applicable

Source: On-road motor vehicle emissions were calculated by AMBAG using EMFAC2021. Refer to 2050 MTP/SCS Chapter 5 and Appendix E.2 for complete methodology.

Mitigation Measures

None required.

Threshold 2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases. Any conflict with the following thresholds would be considered a significant impact:

a. Conflict with regional SB 375 per capita passenger vehicle CO_2 emission reduction targets of 6 percent by 2035 from 2005 levels

Impact GHG-3 IMPLEMENTATION OF THE 2050 MTP/SCS WOULD NOT CONFLICT WITH REGIONAL SB 375 PER CAPITA PASSENGER VEHICLE CO_2 EMISSION REDUCTION TARGETS OF 6 PERCENT BY 2035 FROM 2005 LEVELS. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

One of the goals of SB 375 is to reach the GHG emissions reduction targets for passenger vehicles set by CARB through an integrated land use, transportation, and housing plan. Achievement of this goal is an objective of the proposed 2050 MTP/SCS. The target from CARB, analyzed in this EIR, is a six percent per capita reduction from 2005 levels by 2035. To assess whether the 2050 MTP/SCS would reach SB 375's targets, EMFAC2014 was used to model CO_2 emissions for passenger vehicles using a different model from the emissions reported in Table 4.8-3. As

described in Section 4.8.3, *Methodology*, the modeling differs pursuant to SB 375 requirements from CARB and only includes passenger cars and light duty vehicles.

Emissions for 2035 were compared to emissions for 2005 for assessing compliance with SB 375. The 2020 emissions are included and compared to the SB 375 2020 target for informational purposes only. Table 4.8-4 summarizes the per capita transportation-related emissions from passenger vehicles along with the off-model adjustments that were included to represent a reasonable effect of the transportation programs included in the 2050 MTP/SCS.[4]

As shown in Table 4.8-4, implementation of the 2050 MTP/SCS in the year 2035 would result in a decrease of per capita CO_2 emissions of 7.70 percent compared to 2005 levels. Therefore, the 2050 MTP/SCS would achieve the SB 375 targets. Implementation of the 2050 MTP/SCS would help the region achieve its SB 375 target, and this impact would be less than significant.

Table 4.8-4 Per Capita Carbon Dioxide Emission Comparison: Passenger Vehicles

	2005 (SB 375 Baseline)	2035 (with MTP/SCS)
Modeled Per Capita CO_2 Emissions	18.68	16.89
EMFAC2011-2014 Adjustment Factors		5.50
Adjusted Per Capita GHG Reduction from 2005[1]		-4.08
Increased Work from Home		-1.83
Transportation Demand Management		-0.87
Zero Emission Vehicle/EV Charging Stations VMT Reduction		-0.90
Total % Reduction from 2005		**-7.70**
Reduced 2035 Per Capita MTP/SCS GHG Emissions (Lbs CO_2 per service population per day)		**17.24**

CO_2 = carbon dioxide emissions; GHG = greenhouse gas; MBARD = Monterey Bay Air Resources District, ZEV = zero emissions vehicle

[1]Adjustments include the following: increased work-from-home, travel demand management, and promotion of zero emission vehicles and EV charging stations.

Source: Total SB 375 per capita emissions were calculated by AMBAG. Refer to 2050 MTP/SCS Chapter 5 and Appendix G for complete methodology.

Mitigation Measures

None required.

[4] The off-model adjustments do not account for some strategies that cannot be modeled, such as TDM, TSM, telecommuting, and transit service enhancements.

Threshold 3: Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. Any conflict with the following thresholds would be considered a significant impact:

b. Conflict with State's ability to achieve the SB 32 GHG reduction target, which aims to reduce statewide emissions to 40 percent below 1990 levels by 2030, and the AB 1279 GHG reduction target, which aims to reduce statewide emissions to 85 percent below 1990 levels by 2045;

c. Conflict with applicable local GHG reduction plans

Impact GHG-4 IMPLEMENTATION OF THE 2050 MTP/SCS WOULD NOT ACHIEVE THE STATE GHG REDUCTION TARGETS OF 40 PERCENT BELOW 1990 LEVELS BY 2030 AND 85 PERCENT BELOW 1990 LEVELS BY 2045. THEREFORE, THE 2050 MTP/SCS WOULD CONFLICT WITH THE STATE'S ABILITY TO ACHIEVE SB 32, AB 1279, 2022 SCOPING PLAN, AND APPLICABLE LOCAL GHG REDUCTION PLAN TARGETS AND GOALS. IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

SB 32 and AB 1279

The SB 375 targets are a key element of CARB's 2017 Scoping Plan. However, the 2017 Scoping Plan has been superseded by the 2022 Scoping Plan, which establishes a framework for achieving the 2045 target codified by AB 1279. In addition, the 2017 Plan states, "Stronger SB 375 GHG reduction targets [adopted in 2018] will enable the State to make significant progress toward this goal, but alone will not provide all of the VMT growth reductions that will be needed. There is a gap between what SB 375 can provide and what is needed to meet the State's 2030 and 2050 goals" (CARB 2017a). Therefore, consistency with the SB 375 target does not necessarily equate to consistency with SB 32 and the 2017 Scoping Plan. Accordingly, the SB 375 target does not equate to consistency with AB 1279 and the 2022 Scoping Plan.

This analysis conservatively assumes that to be consistent with State targets, the 2050 MTP/SCS would be required to achieve the same proportional GHG reductions as the State by the year 2045 (i.e., an 85 percent reduction in anthropogenic GHG emissions below 1990 levels), as well as achieving the interim 2030 target (i.e., a 40 percent reduction in GHG emissions below 1990 levels). As shown in Table 4.8-5, GHG emissions in 2030 would increase by approximately one percent as compared to 1990 levels, which is not sufficient to achieve the 2030 target of a 40 percent reduction below 1990 levels. GHG emissions in 2045 would decrease by approximately six percent as compared to 1990 levels, which is not sufficient to achieve the 2045 target of an 85 percent reduction below 1990 levels.

It should be noted that the regional 2030 and 2045 GHG emissions shown in Table 4.8-5 do not account for the TDM, TSM, zero emission vehicles and EV charging infrastructure, nor the telecommuting strategies, which would reduce the on-road transportation GHG emissions further. However, implementation of these strategies would not be enough to achieve the SB 32 or AB 1279 reduction targets. Therefore, although the projects, policies, and land use patterns identified in the 2050 MTP/SCS are designed to align transportation and land use planning to reduce transportation related GHG emissions, the 2050 MTP/SCS would conflict with the State's

ability to achieve the SB 32 and AB 1279 GHG emissions reduction goals. As a result, impacts related to conflicts with SB 32 and AB 1279 would be significant.

Table 4.8-5 2030 and 2045 GHG Emissions Compared to 1990 Levels

Scenario	CO_2e Emissions (MT/year)	% Difference in Emissions Compared to 1990 Baseline
1990 Baseline[1]	4,442,218	–
2030 with 2050 MTP/SCS[2]	4,427,297	0.3%
2045 with 2050 MTP/SCS	4,166,572	-6.2%

[1] 1990 Baseline from the 2040 MTP/SCS Final Environmental Impact Report (AMBAG 2018).

[2] In the absence of specific VMT data for year 2030, emissions for year 2030 were calculated via linear interpolation of VMT for years 2022 and 2035

CO_2 = carbon dioxide; MT = metric ton

Source: AMBAG 2022.

Total GHG emissions were calculated by AMBAG. Refer to 2050 MTP/SCS Chapter 5 and Appendix G for complete methodology.

2022 Scoping Plan

The 2050 MTP/SCS would implement a suite of transportation improvement projects and facilitate a land use scenario that is consistent with the transportation sustainability goals of the 2022 Scoping Plan. The land use scenario envisioned by 2050 MTP/SCS concentrates the forecasted growth in population and employment in already urbanized areas and infill development supported by high priority transit services in an effort to reduce VMT.

Active transportation projects would implement complete street design policies that prioritize transit, biking, and walking throughout the AMBAG region, including but not limited to installing pedestrian access and bikeways in the City of Carmel-by-the-Sea (AMBAG ID MON-CAR024-CM-2026), constructing bike and pedestrian access throughout the City of Greenfield (AMBAG ID MON-GRN010-GR-2026), citywide sidewalk improvements in the City of Marina (AMBAG ID MON-MAR039-MA-2026), and developing separate bicycle and pedestrian paths in the City of Monterey (AMBAG ID MON-MRY043-MY-2026). Active transportation projects would increase the number, safety, connectivity, and attractiveness of biking and walking facilities by adding sidewalks, trails, bike lanes, crosswalks, intersection improvements, pedestrian bridges, and signage throughout the AMBAG region.

The 2050 MTP/SCS includes transit projects designed to improve, maintain, enhance, and expand transit services offered by agencies in the AMBAG region, including, but not limited to, transit hubs in Watsonville and Live Oak (AMBAG IDs SC-VAR-P47-VAR-2026; SC-VAR-P46-VAR-2026), the University of California, Santa Cruz vanpool program in Santa Cruz (AMBAG ID SC-UC-P61-UC-2026), and a multimodal transit station in King City (AMBAG ID MON-KCY053-CK-2026). In conjunction with these active transportation projects, the transit projects would increase the availability of low carbon mobility options in the region. The 2050 MTP/SCS also includes zero emission passenger rail transit service in Santa Cruz County (AMBAG ID SC-RTC-35-RTC-2026) and zero emission fleet expansion in San Benito County (AMBAG ID SB-LTA-A58-2026) to enhance

transit electrification, thereby contributing to the 2022 Scoping Plan's goals of increasing the penetration of zero emission vehicles in non-light-duty sectors and electrifying the transportation sector. Therefore, the 2050 MTP/SCS is consistent with the transportation strategies of the 2022 Scoping Plan.

Since the plan would not achieve an 85 percent reduction in GHG emissions from 1990 levels by 2045, the 2050 MTP/SCS would conflict with the State's ability to achieve the 2022 Scoping Plan's goals, resulting in a significant impact.

Local GHG Reduction Plans

Climate Action Plans

The cities of Capitola, Carmel-by-the-Sea, Gonzales, Hollister, Monterey, Santa Cruz, and Watsonville, as well as the County of Santa Cruz, have adopted climate action plans. These plans set goals and targets for the reduction of GHG emissions and outline policies to help achieve those goals. These local GHG reduction plans have been adopted in an effort to comply with the GHG emissions reduction goals recommended for local governments in the AB 32 Scoping Plan and subsequent Scoping Plans.[5] The local climate action plans and GHG reduction plans were adopted in an effort to comply with the GHG emissions reduction goals recommended for local governments in the 2017 Scoping Plan, which was aimed at reducing GHG emissions to 40 percent below 1990 levels by 2030 in accordance with SB 32. Although several of these local climate action plans were adopted prior to publication of the 2022 Scoping Plan, their progress towards the SB 32 target also contributes toward the State's 2045 target of reducing GHG emissions by 85 percent below 1990 levels, as codified by AB 1279 in 2022. More recently adopted climate action plans include strategies that are aimed directly at achieving the emissions reduction target codified by AB 1279 and outlined in the 2022 Scoping Plan. Transportation projects and the land use scenario envisioned in the 2050 MTP/SCS would facilitate transit oriented land use development that aligns with the GHG-reducing policies contained in local climate action plans. Therefore, the 2050 MTP/SCS would not conflict with the goals of local climate action plans designed to make progress to meet the same State targets, and impacts would be less than significant.

Conclusion

The 2050 MTP/SCS would facilitate infill and transit oriented land use development as well as transit and alternative transportation projects, which would improve the transportation network in the AMBAG planning region and encourage the use of transportation modes other than passenger vehicles. Furthermore, by achieving its SB 375 target, the 2050 MTP/SCS contributes transportation-related GHG emission reductions towards meeting the State's GHG reduction target for 2030 under SB 32 and 2045 under AB 1279.

[5] The City of Watsonville and Monterey and San Benito Counties are currently updating their climate action plans. Several other cities are developing climate action plans, including (but not limited to) the cities of Greenfield and Salinas.

However, the expected GHG emissions in the AMBAG region in year 2045 would not be consistent with the State's AB 1279 GHG reduction target for 2045 and the 2022 Scoping Plan goals based on this target, nor would emissions be consistent with the State's SB 32 target of 40 percent below 1990 levels by 2030. Therefore, the 2050 MTP/SCS would conflict with the state's ability to achieve SB 32 and AB 1279 GHG reduction targets. As such, this impact is significant.

Mitigation Measures

For all transportation projects under their jurisdiction, SBtCOG, SCCRTC, and TAMC shall implement, and transportation project sponsor agencies can and should implement, the following mitigation measures developed for the 2050 MTP/SCS program where applicable for transportation projects generating construction GHG emissions, and where feasible and necessary based on project and site specific considerations. Cities and counties in the AMBAG region can and should implement these measures, where relevant to land use projects implementing the 2050 MTP/SCS. Project specific environmental documents may adjust these mitigation measures as necessary to respond to site specific conditions. Implementation of Mitigation Measures T-2(a) and T-2(b) in Section 4.15, *Transportation*, would also reduce GHG emissions from the 2050 MTP/SCS.

GHG-4(a) Transportation-Related GHG Reduction Measures

The implementing agency shall incorporate the most recent GHG reduction measures and/or technologies for reducing VMT and associated transportation related GHG emissions. GHG-reducing mitigation measures include the following:

- Installation of electric vehicle charging stations beyond those required by State and local codes
- Utilization of electric vehicles and/or alternatively fueled vehicles in company fleet
- Provision of dedicated parking for carpools, vanpool, and clean air vehicles
- Provision of new or improved transit amenities (e.g., covered turnouts, bicycle racks, covered benches, signage, lighting, sidewalk connectivity, and accessible crosswalks) if project site is located along an existing transit route
- Optimize transit route networks and service levels to boost ridership
- Provision of employee lockers and showers
- Provision of on-site services that reduce the need for off-site travel (e.g., childcare facilities, automatic teller machines, postal machines, food services)
- Provision of alternative work schedule options, such as telework or reduced schedule (e.g., 9/80 or 10/40 schedules) for employees
- Implementation of transportation demand management programs to educate and incentivize residents and/or employees to use transit, smart commute, and alternative transportation options

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for AMBAG transportation projects are RTPAs and transportation project sponsor agencies. This mitigation measure shall, or can and should, be applied during permitting and environmental review, and implemented during operation where appropriate.

GHG-4(b) Land Use Project Energy Consumption and Water Use Reduction Measures

For land use projects under their jurisdiction, the cities and counties in the AMBAG region can and should implement measures to reduce energy consumption, water use, solid waste generation, and VMT, all of which contribute to GHG emissions. Project specific environmental documents may adjust these mitigation measures as necessary to respond to site specific conditions.

- Require new commercial construction to install solar energy systems or be solar-ready
- Require new residential and commercial development to install low flow water fixtures
- Require new residential and commercial development to install water-efficient drought-tolerant landscaping, including the use of compost and mulch
- Require new development to exceed the applicable Title 24 energy-efficiency requirements
- Encourage new development to be fully electric

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for land use projects are cities and counties. This mitigation measure shall, or can and should, be applied during permitting and environmental review and implemented during operation where appropriate.

Significance After Mitigation

Implementation of project level GHG-reducing measures would reduce GHG emissions but may not be feasible and cannot be guaranteed on a project-by-project basis. It is speculative whether project level GHG emission reductions would be sufficient to achieve regionwide reduction in GHG emissions of 40 percent below 1990 levels by 2030 or 85 percent below 1990 levels in 2045. In addition, the Ninth Circuit Court of Appeals, in California Restaurant Association v. City of Berkeley (2024) 89 F.4th 1094 limited a jurisdiction's ability to prohibit natural gas hook-ups for new development. Though there is no legal constraint to encouraging all electric development and design through policy and building code requirements, there may be some instances where mandatory electric building features are infeasible. No additional feasible mitigation measures are available that would reduce emissions to trajectories consistent with SB 32 or AB 1279 GHG reduction goals. Therefore, implementation of the 2050 MTP/SCS would conflict with SB 32, AB 1279, and the 2022 Scoping Plan goals based on AB 1279, and this impact would remain significant and unavoidable.

a. Specific 2050 MTP/SCS Project That May Result in Impacts

The analysis within this section discusses the potential GHG related impacts associated with the 2050 MTP/SCS. The transportation projects within the 2050 MTP/SCS are evaluated herein in their entirety and are intended to improve circulation rather than cause adverse impacts. However, as described above, the 2050 MTP/SCS would increase GHG emissions as a result of project construction and operation. These effects have been found to be significant, as described above. Any number of the 2050 MTP/SCS projects that require construction equipment or include transportation improvement would presumably increase GHG emissions. Thus, no specific projects are listed in this section related to the adverse impacts on GHG emissions in the AMBAG region.

4.8.4 Cumulative Impacts

a. Methodology

The cumulative analysis presented below primarily relies on a projections-based approach, using regional land use and growth forecasts for the AMBAG region and adjoining counties to evaluate cumulative conditions. The project is assessed within the existing and foreseeable future environmental setting, and a determination is made as to whether its incremental contribution would be cumulatively considerable when considered alongside both the overall envisioned land use scenario and specific large-scale planned projects. Refer to Section 6.4, *Cumulative Impacts*, in Chapter 6, *Other CEQA Required Discussions*, for a description of the cumulative impact methodology.

b. Impact Analysis

The impacts of GHG emissions are, by definition, cumulative impacts, as they add to the global accumulation of GHG in the atmosphere. The cumulative impact analysis area for GHG emissions consists of the AMBAG region, adjoining counties, and the entire State of California. The entire state is included in the analysis area because GHG emissions from the AMBAG region and adjoining counties would influence the ability for the State to achieve its GHG reduction targets.

IMPACT GHG-C-1 DEVELOPMENT IN THE CUMULATIVE IMPACTS ANALYSIS AREA, AS WELL AS PROJECTS IMPLEMENTING THE 2050 MTP/SCS, WOULD GENERATE TEMPORARY SHORT-TERM GHG EMISSIONS WHICH WOULD RESULT IN A SIGNIFICANT CUMULATIVE IMPACT, AND THE 2050 MTP/SCS CONTRIBUTION WOULD BE CUMULATIVELY CONSIDERABLE. CONSTRUCTION AND OPERATIONAL GHG EMISSIONS AS A RESULT OF IMPLEMENTATION OF THE 2050 MTP/SCS WOULD HAVE A CUMULATIVELY CONSIDERABLE CONTRIBUTION TO A SIGNIFICANT CUMULATIVE IMPACT RELATED TO EXCEEDING STATE GHG REDUCTION TARGETS.

Construction activities associated with transportation improvement projects and future land use projects envisioned by the 2050 MTP/SCS would generate temporary GHG emissions. The temporary construction GHG emissions would occur concurrent with ongoing GHG emissions in the cumulative impact analysis area, such as GHG emissions ongoing agricultural activities in Fresno County, an adjoining county to the east. GHG impacts from construction activities, combined with ongoing emissions, would result in a significant cumulative impact. As described

in Section 4.8.3, *Impact Analysis* above, construction-related GHG emissions of the 2050 MTP/SCS would be significant, even after implementation of Mitigation Measure GHG-1, Mitigation Measure AQ-2(b), and Mitigation Measure AQ-2(c). Therefore, the contribution of the 2050 MTP/SCS to cumulative short-term construction emissions would be cumulatively considerable.

The transportation projects and land use scenario envisioned in the 2050 MTP/SCS and other ongoing land uses and operation of future development in the cumulative impact analysis area would also generate GHG emissions. Implementation of the 2050 MTP/SCS would reduce total operational regionwide mobile and land use emissions compared to existing conditions, so the cumulative impact of total operational GHG emissions would not be significant. However, combined with short-term emissions, the GHG emissions from operational activities in the cumulative impact analysis area would conflict with State reduction targets and combined with other statewide emissions, the resulting cumulative impact would be significant. Implementation of Mitigation Measure GHG-4(a) (transportation-related GHG reduction measures) and Mitigation Measure GHG-4(b) (land use project level energy consumption and water use reduction) would reduce impacts related to GHG emissions of the 2050 MTP/SCS. Mitigation Measures TRA-2(a) and TRA-2(b) would reduce VMT associated with future land use development and increases in roadway capacity, subsequently reducing GHG emissions. Nonetheless, after mitigation, implementation of the 2050 MTP/SCS would continue to conflict with the state's ability to achieve State reduction targets.

Overall, the cumulative impacts related to GHG emissions and climate change would be significant, and the 2050 MTP/SCS's contribution to the cumulative impacts related to GHG emissions and climate change would be cumulatively considerable, pre- and post-mitigation.

4.9 Hazards and Hazardous Materials

This section analyzes impacts related to hazardous materials, airports, and emergency planning in the AMBAG region. Impacts related to wildfire are discussed in Section 4.18, *Wildfire*.

4.9.1 Setting

a. Physical Setting

Hazardous Materials and Waste

The term "hazardous material" is defined in the State of California's Health and Safety Code, Chapter 6.95, Section 25501(o) as:

> 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 that 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 waste is hazardous material generated, intentionally or unintentionally, as a byproduct of some process or condition. 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.

According to the U.S. Environmental Protection Agency (USEPA) (2025a), waste may be considered hazardous if it is specifically listed as known hazardous waste or if it meets the one or more of the following characteristics of a hazardous waste:

- **Toxicity.** Poisonous, harmful when ingested or absorbed.
- **Acute Hazardous Waste.** Extremely dangerous even in small amounts; can cause death, serious illness, or incapacitation with short-term exposure.
- **Ignitability.** Capable of being ignited by open flame, liquids with flash points[1] below 60 degrees Celsius.
- **Corrosivity.** Capable of corroding other materials, aqueous wastes with a pH of 2 or less or greater than or equal to 12.5.

[1] Flash point is the lowest temperature at which the vapors of a volatile combustible substance ignite in the air when exposed to flame.

- **Reactivity.** May be unstable under normal conditions, may react with water, may give off toxic gases or may be capable of detonation or explosion under normal conditions or when heated.
- **Toxicity Characteristic Waste.** Waste that leaches toxic chemicals above regulatory thresholds using the Toxicity Characteristic Leaching Procedure (TCLP).

Generation and Disposal of Hazardous Materials and Waste

Many chemicals used in household cleaning, construction, light and heavy industry, dry cleaning, film processing, landscaping and automotive maintenance and repair are considered to generate hazardous materials and waste. Additionally, in some cases, past industrial or commercial uses on a site may have resulted in spills or leaks of hazardous materials and petroleum that have caused contamination of the underlying soil and groundwater. Federal and state laws require that soil and groundwater having concentrations of contaminants that are higher than certain acceptable levels are handled and disposed of as hazardous waste during excavation, transportation, and disposal. The California Code of Regulations (CCR), Title 22, Sections 66261.20-24 contains technical descriptions of characteristics that would cause a soil to be classified as a hazardous waste. Hazardous materials require special methods of disposal, storage and treatment, and the release of hazardous materials requires an immediate response to protect human health and safety and the environment. Improper disposal can harm the environment and people who work in the waste management industry.

Businesses that handle or generate hazardous materials within the AMBAG region are monitored by USEPA; the Central Coast Regional Water Quality Control Board; the Monterey County Hazardous Materials Management Services; the Santa Cruz County Environmental Health Department; the San Benito County Environmental Health Department; Local Enforcement Agency (LEA) programs; and the Monterey Bay Air Resources District (MBARD). Generators of hazardous waste fall into two categories: large-quantity generators (LQG) and small-quantity generators (SQG). An LQG is defined as a person or facility generating more than 2,200 pounds of hazardous waste per month. An SQG is defined as generating greater than 100 kilograms (kg) and less than 1,000 kg (2,200 pounds) of hazardous waste per month. LQGs include industrial and commercial facilities, such as manufacturing companies, petroleum refining facilities and other heavy industrial businesses.

LQGs must comply with federal and state requirements for managing hazardous waste. LQGs need an USEPA identification number that is used to monitor and track hazardous waste activities. SQGs include facilities such as service stations, automotive repair, dry cleaners, and medical offices. The regulatory requirements for SQGs are less stringent than the requirements for LQGs; however, SQGs must also obtain an USEPA identification number, which must be used for traceability on all hazardous waste documentation. Pursuant to federal law (40 Code of Federal Regulations [CFR] 262.41-43), all such generators must register with USEPA for record-keeping and reporting.

Transportation of Hazardous Materials and Waste

Hazardous materials, hazardous wastes, medical waste, and petroleum products are a subset of the goods routinely shipped along the transportation corridors in the AMBAG region. In California, unless specifically exempted, it is unlawful for any person to transport hazardous wastes unless the person holds a valid registration issued by the Department of Toxic Substances Control (DTSC). The 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. There are four registered hazardous waste transporters in Monterey County, one in San Benito County, and three in Santa Cruz County (DTSC 2025a).

Transportation of hazardous materials and wastes in the AMBAG region occurs through a variety of modes: truck, rail, and pipeline. Transportation of hazardous materials by truck is regulated by the DOT. The DOT, Federal Motor Carrier Safety Administration, identifies several highways and county roads in the AMBAG region as a Hazardous Materials Route in its National Hazardous Materials Route Registry (Federal Motor Carrier Safety Administration 2024). These highways and roads include sections of:

- State Route 1
- State Route 17
- State Route 25
- State Route 68
- U.S. 101
- State Route 152
- State Route 156
- State Route 183
- State Route 198
- Monterey County Road G14; and
- Monterey Traffic Underpass from Washington Street to Lighthouse Avenue

According to the U.S. DOT Pipeline and Hazardous Materials Safety Administration and Office of Hazardous Materials Safety, hazardous materials traffic in the U.S. now exceeds 800,000 shipments per day and results in more than 3.1 billion tons of hazardous materials annually (FHWA 2025). Considering the abundance of roads compared to rail and pipelines in the AMBAG region, trucks are likely responsible for transporting most hazardous materials within the AMBAG region. According to the DOT (2025a), truck transport consistently accounts for the largest share of reportable incidents each year. For example, in 2020, truck transport accounted for approximately 2,042 reportable incidents in the State, while rail and air transport accounted for 45 and 83 incidents, respectively. While hazardous waste incidents account for a small percentage of overall highway incidents, the impact of these incidents can be more severe due to the nature of the material(s) involved.

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 (Security and Emergency Response Training Center 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 the DOT and Association of American Railroads, railroads have developed an inventory of emergency response resources and provided the DOT with information on the deployment of those resources. This information is available upon request to appropriate emergency responders (U.S. Department of Transportation 2025b). A list of the rail facilities in the AMBAG region is provided in Section 4.15, *Transportation.*

Pipelines, primarily underground, are used to transport a variety of potentially hazardous substances throughout the AMBAG region. For example, Pacific Gas & Electric maintains and operates a natural gas pipeline that is roughly parallel to State Route 1 in parts of Monterey and Santa Cruz counties, and a pipeline through Hollister in San Benito County (Pacific Gas & Electric 2025). 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 (Transportation Research Board 2004). The Transportation Research Board (2004) encourages the use of zoning regulations to minimize casualties in the event of a catastrophic pipeline 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, such as mini-storage businesses, linear parks and recreational paths, within or in the vicinity of pipeline rights-of-way.

There are no major shipping ports or marine oil terminals in the AMBAG region, and transport by ship on the open sea or rivers is generally not a mode of hazardous materials or waste transport in the region. However, the AMBAG region does contain coastal marinas, boat storage facilities and other similar boat-based service businesses where petroleum products, paints, cleaning solvents and other substances used in the daily operation and maintenance of boats may be stored and handled.

Potential for Hazardous Materials and Hazardous Materials Sites

Many activities in the AMBAG region involve the use of hazardous materials. The use of hazardous materials is commonplace in commercial, industrial, and manufacturing activities, and many businesses within the AMBAG region are permitted to handle and transport hazardous materials. There are historic and existing land uses that have generated hazardous waste as part of daily business operations. LQGs and SQGs include commercial uses such as painters, dry cleaners and photographers, and industrial uses such as automotive service stations, sheet metal

works, metal scrap yards, truck yards, cement and lime warehouses, coal yards, battery manufacture and Pacific Gas & Electric substations. In addition, older structures may contain building materials that are considered hazardous, such as asbestos and lead-based paint. In general, these historic and current uses and building materials are located throughout the AMBAG region (MBARD 2025).

California Government Code Section 65962.5 requires the California Environmental Protection Agency (CalEPA) to prepare an annual Hazardous Waste and Substances List, commonly referred to as the Cortese List. The addition or inclusion of a site on the Cortese List has bearing on the local permitting process and compliance with CEQA. For example, projects proposed at a site on the Cortese List are not eligible for categorical exemptions to CEQA per Section 15300.2(e) of the CEQA Guidelines. The Cortese List is not maintained as a centralized list, however, and a variety of governmental data sources identify sites where hazardous substances may have been released or may have created a hazardous condition on-site. These include:

- DTSC Active Transporter County Search Report (DTSC 2025b);
- DTSC EnviroStor database (DTSC 2025c) (Cortese List) for tracking hazardous waste facilities and site with known contamination or sites where there may be reasons to investigate further;
- State Water Resources Control Board's (SWRCB) GeoTracker database (SWRCB 2025) of records for sites that require cleanup, such as leaking underground storage tank (UST) sites, Department of Defense sites, landfill sites and Cleanup Program sites;
- California Office of Emergency Services (OES) Hazardous Materials Spill Notification database (2024) that includes information on reported hazardous material accidental releases or spills;
- The DOT's Hazardous Materials Incident Report System database (DOT 2025a), which is maintained by the USEPA and contains data on hazardous material spill incidents;
- California Department of Resources Recycling and Recovery's (CalRecycle) Solid Waste Inventory System database (CalRecycle 2025) of active and closed solid waste sites;
- The USEPA Envirofacts database (2025b) of Resource Conservation and Recovery Act (RCRA) sites, as well as other hazardous sites, such as superfund and brownfield sites; and
- The United States Army Corps of Engineers list of Formerly Used Defense Sites for California (2022).

All databases listed above have identified sites within the AMBAG region. The DTSC Active Transporter County Search Report identifies five registered hazardous waste transporters in Monterey County, one in San Benito County, and three in Santa Cruz County (DTSC 2025b). The DOT's Hazardous Materials Incident Report System database identified 18 hazardous materials spill incidents in the AMBAG region between January 1, 2024 and December 31, 2024. One of these incidents was in Salinas, 15 were in Watsonville, and two were in the City of Santa Cruz. Three sites in the AMBAG region are identified on the United States Army Corps of Engineers list of Formerly Used Defense Sites for California. According to CalRecycle's Solid Waste Inventory System database, there are 40 active landfill sites in the AMBAG region and an additional 45 landfill sites that have been closed.

For some databases, such as the DTSC's EnviroStor database and the USEPA Envirofacts database, the list of identified sites is too exhaustive to provide in its entirety for purposes of this EIR because it is not necessary for programmatic impact analysis. For example, the EnviroStor identifies hundreds of sites in the AMBAG region, including 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. Among these sites are superfund sites, state response hazardous sites, contaminated soil sites, and school cleanup sites and leaking underground storage tank (UST) sites. The USEPA Envirofacts database also identifies hundreds of Resource Conservation and Recovery Act sites in the region, including some that are also listed in the EnviroStor database. Examples of some of the Resource Conservation and Recovery Act sites identified in the region include gas stations, dry cleaners, automotive repair shops, pharmacies, automobile dealerships, paint stores, trucking companies, University of California Santa Cruz, and the Monterey Bay Aquarium. The SWRCB GeoTracker database also identifies many leaking UST sites, some have been which remediated and cleaned, and some of which have yet to be cleaned. For purposes of this EIR, it is more important to note that many sites on the Cortese list exist throughout the AMBAG region, typically within proximity to the transportation network and more densely populated areas in the region.

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 (E-1527-13) (ASTM 2013). 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 lines and/or activity and land use limitations. If a Phase I Environmental Site Assessment (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.

Naturally Occurring Asbestos

Asbestos is not a formal mineralogical term, but rather a commercial and industrial term historically applied to a group of silica-containing minerals that form long, very thin mineral fibers (termed amphiboles), which generally form in bundles, that were once widely used in commercial products. Naturally occurring asbestos includes minerals in their natural state, such as in bedrock or soils. Naturally occurring asbestos, which was identified as a toxic air contaminant by the California Air Resources Board (CARB) in 1986, is of concern due to potential exposures to the

tiny fibers that can become airborne if asbestos-bearing rocks are disturbed by natural erosion or human activities, such as road building, excavations, and other ground-disturbing activities. Once disturbed, microscopic fibers can become lodged in the lungs, which can potentially lead to serious health problems. All three AMBAG counties contain reported naturally occurring asbestos and/or ultramafic rocks, such as serpentinite, which can contain asbestos fibers. However, within the three counties, naturally occurring asbestos are most concentrated in the southern area of San Benito County (USGS 2011). In general, naturally occurring asbestos fibers do not pose a threat unless disturbed and introduced into the air as fugitive dust.

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 particularly sensitive to hazardous air emissions and accidental release associated with the handling of extremely hazardous materials, substances, or wastes. According to the California Department of Education (DOE) (2025), there are 268 public schools in the AMBAG region. Student enrollment in the region is currently approximately 122,682 students (Education Data Partnership 2025).

Airports

The AMBAG region has six publicly owned civil aviation airports, which include the following:

- Monterey Regional
- Salinas Municipal
- King City Municipal (Mesa Del Rey)
- Marina Municipal
- Watsonville Municipal
- Hollister Municipal

Of these airports, only the Monterey Regional Airport provides scheduled air carrier service. There are also several private airports in the region that are used primarily for agricultural or business purposes, but one of these, the Frazier Lake Airport, also allows public use. Currently, there are two operational military airfields in the region: Camp Roberts Army Airfield and Heliport and the Hunter-Liggett Army Airfield.

Potential hazards in relationship to airport operations are generally regulated by the Federal Aviation Administration (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) under the authority of the applicable airport land use commission (ALUC) through an airport land use compatibility plan (ALUCP). The ALUCs with authority in the AMBAG region include the Monterey County Airport Land Use Commission, San Benito County Airport Land Use Commission, and the Santa Cruz County Community Development Department. Applicable ALUCPs to the AMBAG region are discussed in Section 4.9.2, *Regulatory Setting*, below.

4.9.2 Regulatory Setting

a. Federal Laws, Regulations, and Policies

USEPA is the lead agency responsible for enforcing federal regulations that affect public health or the environment. The primary federal laws and regulations include the RCRA of 1976 and the Hazardous and Solid Waste Amendments enacted in 1984; the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA); and the Superfund Act and Reauthorization Act of 1986 (SARA). Federal statutes pertaining to hazardous materials and wastes are contained in the CFR Title 40 - Protection of the Environment.

Toxic Substances Control Act

The Toxic Substances Control Act of 1976 (15 U.S. Code Section 2601 et seq.) grants USEPA the authority to develop reporting, record-keeping, and testing requirements for, as well as restrictions on, the manufacture, use, and sale of chemical substances. Pursuant to Title II of the Toxic Substances Control Act, the USEPA adopted the Asbestos Model Accreditation Plan in 1994. The Model Accreditation Plan requires that all persons who inspect for asbestos-containing materials or design or conduct response actions with respect to friable asbestos obtain accreditation by completing a prescribed training course and passing an exam. Section 403 of the Toxic Substances Act establishes standards for lead-based paint hazards in paint, dust, and soil.

Resource Conservation and Recovery Act

RCRA Subtitle C regulates the generation, transportation, treatment, storage and disposal of hazardous waste by LQGs (1,000 kilograms per month or more) through comprehensive life cycle or “cradle to grave” tracking requirements. The requirements include maintaining inspection logs of hazardous waste storage locations, records of quantities being generated and stored, and manifests of pick-ups and deliveries to licensed treatment/storage/disposal facilities. RCRA also identifies standards for treatment, storage, and disposal, which is codified in 40 CFR 260.

Comprehensive Environmental Response Compensation and Liability Act

Congress enacted CERCLA, setting up what has become known as the Superfund program, in 1980 to establish prohibitions and requirements concerning closed and abandoned hazardous waste sites; provide for liability of persons responsible for releases of hazardous waste at these sites; and establish a trust fund to provide for cleanup when no responsible party can be identified. Generally, CERCLA authorizes two kinds of response actions:

- Short-term removals, where actions may be taken to address releases or threatened releases requiring prompt response.
- Long-term remedial response actions that permanently and significantly reduce the dangers associated with releases or threats of releases of hazardous substances that are serious, but not immediately life threatening.

Superfund Amendments and Reauthorization Act

SARA amended the CERCLA in 1986, emphasizing the importance of permanent remedies and innovative treatment technologies to clean up hazardous waste sites; requiring Superfund actions to consider the standards and requirements found in other state and federal environmental laws and regulations; providing new enforcement authorities and settlement tools; increasing involvement of the states in every phase of the Superfund program; increasing the focus on human health problems posed by hazardous waste sites; encouraging greater citizen participation in making decisions on how sites should be cleaned up; and increasing the size of the trust fund to $8.5 billion.

Hazardous Materials Transportation Act

The transportation of hazardous materials is regulated by the Hazardous Materials Transportation Act (49 CFR Section 101 et seq.), which is administered by the Research and Special Programs Administration of U.S. DOT. The Hazardous Materials Transportation Act governs the safe transportation of hazardous materials by all modes. The DOT regulations that govern the transportation of hazardous materials are applicable to any person who transports, ships, causes to be transported or shipped, or who is involved in any way with the manufacture or testing of hazardous materials packaging or containers. The DOT regulations govern every aspect of the movement, including packaging, handling, labeling, marking, placarding, operational standards, and highway routing.

Emergency Planning Community Right-to-Know Act

The Emergency Planning Community Right-to-Know Act, , or the Superfund Amendments and Reauthorization Act (SARA) Title III, was enacted in October 1986. SARA Title III requires any infrastructure at the State and local levels to plan for chemical emergencies, including identifying potential chemical threats. Reported information is then made publicly available so that interested parties may become informed about potentially dangerous chemicals in their community. Emergency Planning Community Right-to-Know Act Sections 301–312 are administered by USEPA's Office of Emergency Management. USEPA's Office of Information Analysis and Access implements the act's Section 313 program. In California, SARA Title III is implemented through the California Accidental Release Prevention Program (CalARP).

Federal Disaster Mitigation Act

The Disaster Mitigation Act of 2000 provided a new 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.

Code of Federal Regulations, Title 14, Part 77

The primary role of the Federal Aviation Administration (FAA) is to promote aviation safety and control the use of airspace. Public use airports that are subject to the FAA's grant assurances must comply with specific FAA design criteria, standards, and regulations. Land use safety compatibility guidance from the 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.

14 CFR 77, 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 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 the FAA determines otherwise.

b. State Laws, Regulations, and Policies

California Asbestos Regulations

In 1990, CARB issued an Airborne Toxic Control Measure, 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 Airborne Toxic Control Measure 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 Airborne Toxic Control Measure 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 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.

Title 8, California Code of Regulations

The California Division of Occupational Safety and Health Administration lead standard for construction activities is implemented under Title 8 of the CCR. The standard applies to any

construction activity that may release lead dust or fumes, including, but not limited to, manual scraping, manual sanding, heat gun applications, power tool cleaning, rivet busting, abrasive blasting, welding, cutting, or torch burning of lead-based coatings. Unless otherwise determined by approved testing methods, all paints and other surface coatings are assumed to contain lead at prescribed concentrations, depending on the application date of the paint or coating.

California Accidental Release Prevention Program

The CalARP Program addresses facilities that contain specified hazardous materials, known as "regulated substances," that, if involved in an accidental release, could result in adverse off-site consequences. The CalARP Program defines regulated substances as chemicals that pose a threat to public health and safety or the environment because they are highly toxic, flammable, or explosive.

California Unified Program Administration

The Unified Program consolidates, coordinates, and makes consistent the administrative requirements, permits, inspections and enforcement activities of six environmental and emergency response programs, as listed below:

- Hazardous Materials Release Response Plans and Inventories (Business Plans);
- CalARP Program;
- Underground Storage Tank Program;
- Aboveground Petroleum Storage Act Program;
- Hazardous Waste Generator and Onsite Hazardous Waste Treatment (tiered permitting) Programs; and
- California Uniform Fire Code: Hazardous Material Management Plans and Hazardous Material Inventory Statements.

The state agency partners involved in the Unified Program have the responsibility of setting program element standards, working with CalEPA on ensuring program consistency and providing technical assistance to the Certified Unified Program Agencies. The following state agencies are involved with the Unified Program:

- CalEPA is directly responsible for coordinating the administration of the Unified Program. The Secretary of the CalEPA certifies Certified Unified Program Agencies
- DTSC provides technical assistance and evaluation for the hazardous waste generator program including onsite treatment (tiered permitting)
- OES is responsible for providing technical assistance and evaluation of the Hazardous Material Release Response Plan (Business Plan) Program and the CalARP Programs
- The Office of the State Fire Marshal is responsible for ensuring the implementation of the Hazardous Material Management Plans and the Hazardous Material Inventory Statement Programs. These programs tie in closely with the Business Plan Program
- SWRCB provides technical assistance and evaluation for the UST program in addition to handling the oversight and enforcement for the aboveground storage tank program

The AMBAG region includes three Certified Unified Program Agencies: the Monterey County HMMS, the San Benito County Environmental Health Department, and the Santa Cruz County Environmental Health Department. These three agencies are responsible for implementing the federal and state laws and regulations for all jurisdictions within Monterey, San Benito, and Santa Cruz counties, respectively.

California Land Environmental Restoration and Reuse Act

The California Land Environmental Restoration and Reuse Act of 2001 established California Human Health Screening Levels (CHHSLs) as a tool to assist in the evaluation of contaminated sites for potential adverse threats to human health. The CHHSLs were developed by the Office of Environmental Health Hazard Assessment, an agency under the umbrella of CalEPA. 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 non-cancer health effects. The CHHSLs were developed using standard exposure assumptions and chemical toxicity values published by USEPA 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.

California Multi-Hazard Mitigation Plan

The State Hazard Mitigation Plan represents the state's primary hazard mitigation guidance document - providing an updated analysis of the state's historical and current hazards, hazard mitigation goals and objectives, and hazard mitigation strategies and actions. The plan represents the state's overall commitment to supporting a comprehensive mitigation strategy to reduce or eliminate potential risks and impacts of disasters in order to promote faster recovery after disasters and, overall, a more resilient state. State Hazard Mitigation Plans are required to meet the Elements outlined in the Federal Emergency Management Agency's State Mitigation Plan Review Guide (revised March 2015, effective March 2016).

OES is responsible for the development and maintenance of the State's plan for hazard mitigation. The State's multi-hazard mitigation plan was last approved by the Federal Emergency Management Agency as an Enhanced State Mitigation Plan in 2018. The plan is designed to reduce the effects of disasters caused by natural, technological, accidental, and adversarial/human-caused hazards. The State Hazard Mitigation Plan sets the mitigation priorities, strategies, and actions for the state. The plan also describes how risk assessment and mitigation strategy information is coordinated and linked from local mitigation plans into the State Hazard Mitigation Plan and provides a resource for local planners of risk information that may affect their planning area. The State of California is required to review and revise its mitigation plan and resubmit for Federal Emergency Management Agency approval at least every five years to ensure continued funding eligibility for certain federal grant programs.

California Public Resources Code 21151.4

Pursuant to Public Resources Code Section 21151.4, projects that can be reasonably anticipated to produce hazardous air emissions or handle extremely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school must consult with the potentially affected school district and provide written notification not less than 30 days prior to the proposed certification or adoption of an environmental document. Where a school district proposes property acquisition or the construction of a school, the environmental document must address existing environmental hazards, and written findings must be prepared regarding existing pollutant sources.

California Education Code

Sections 17071.13, 17072.13, 17210, 17210.1, 17213.1-3 and 17268 of the California Education Code became effective January 1, 2000. Together, they establish requirements for assessments and approvals regarding toxic and hazardous materials that school districts must follow before receiving final site approval from the DOE and funds under the School Facilities Program. These requirements are consistent with those described above for certification or adoption of an environmental document under Public Resources Code Section 21151.4.

California 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.

Carpenter-Presley-Tanner Hazardous Substances Account Act

The Carpenter-Presley-Tanner Hazardous Substance Account Act imposes liability for hazardous substances removal or remedial actions and requires the State Attorney General to recover from the liable person, as defined, certain costs incurred by the DTSC or any of the state's nine RWCQBs, upon the request of the DTSC or Regional Water Quality Control Board. The act authorizes, except as specified, a party found liable for any costs or expenditures recoverable under the act for those actions to establish, as specified, that only a portion of those costs or expenditures are attributable to the party, and requires the party to pay only for that portion. If each party does not establish its liability, the act requires a court to apportion those costs or expenditures, as specified, among the defendants and the remaining portion of the judgment is required to be paid from the Toxic Substances Control Account. Existing law authorizes the money deposited in the Toxic Substances Control Account in the General Fund to be appropriated to the DTSC for specified purposes, including the payment of the costs incurred by the state for those actions.

Lempert-Keene-Seastrand Oil Spill Prevention and Response Act

The Lempert-Keene-Seastrand Oil Spill Prevention and Response Act of 1990 granted the Office of Spill Prevention and Response the authority to direct prevention, removal, abatement, response, containment, and cleanup efforts regarding all aspects of any oil spill in marine waters of California. The Office of Spill Prevention and Response 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 Office of Spill Prevention and Response 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.

Local Community Rail Security Act

The Local Community Rail Security Act of 2006 (Public Utilities Code Sections 7665-7667) requires all rail operators to provide security risk assessments to California Public Utilities Commission, the Director of Homeland Security and the Catastrophic Event Memorandum Account that describe the following:

- Location and function of each rail facility;
- Types of cargo stored at or typically moved through the facility;
- Hazardous cargo stored at or moved through the facility;
- Frequency of hazardous movements or storage;
- Description of sabotage-terrorism countermeasures;
- Employee training programs;
- Emergency response procedures; and
- Emergency response communication protocols.

c. Regional and Local Laws, Regulations, and Policies

Monterey Bay Air Resources District

MBARD attains and maintains air quality conditions in the North Central Coast Air Basin, which comprises Monterey, San Benito, and Santa Cruz counties. MBARD is responsible for air monitoring, permitting, enforcement, long-range air quality planning, regulatory development, education, and public information activities related to air pollution, as required by the Clean Air Act and California Clean Air Act. Projects in the North Central Coast Air Basin are subject to MBARD's rules and regulations, including rules pertaining to asbestos. MBARD Rule 424, National Emission Standards for Hazardous Air Pollutants, sets emissions standards for stationary source emissions, including asbestos emission from building demolition.

City and County General Plans

The general plans and zoning ordinances of the cities within the Monterey Bay area regulate design and the built environment within those communities, while the general plans for each county perform the same function within unincorporated areas. In all cases, planning policies related to hazards and hazardous materials are generally established in the Safety Element or equivalent chapter of each jurisdiction's general plan. Safety Elements are required to address geologic hazards, dam failure, evacuation routes, flooding, and emergency response among other issues. For emergency services, some of the relevant policies may include coordinating with other 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.

Applicable county general plans and examples of city general plans in the AMBAG region are discussed below.

Monterey County

The Monterey County General Plan (County of Monterey 2010) contains Policy PS-8.3 in the Public Services Element that pertains to hazardous substances. Policy PS-8.3 states that the County shall establish or maintain programs for the routine inspection of locations of hazardous substances.

Cities in Monterey County also have general plans with goals and policies pertaining to hazardous materials. For example, the City of Marina's General Plan contains Goal 4.103, which is to protect the public from health threats posed by hazardous materials. Through its General Plan, the City of Marina ensures that proposed industrial or commercial projects that will use or generate hazardous materials are compatible with surrounding uses as designated by the General Plan. Residential uses and other sensitive uses such as schools must be adequately buffered from adjoining uses which involve the use or generation of hazardous materials (City of Marina 2000).

San Benito County

The San Benito County 2035 General Plan (County of San Benito 2015) contains policies in the Health and Safety Element that pertain to hazardous materials and waste as shown below.

- **Policy HS-6.1 – Hazardous Materials Storage and Disposal.** The County shall require proper storage and disposal of hazardous materials to prevent leakage, potential explosions, fires, or the escape of harmful gases, and to prevent individually innocuous materials from combining to form hazardous substances, especially at the time of disposal.
- **Policy HS-6.2 – Hazardous Waste Management Plan.** The County shall maintain and implement the Hazardous Waste Management Plan.
- **Policy HS-6.3 – Consistency with Hazardous Waste Management Plan.** The County shall ensure that all applicable land use decisions concerning zoning, subdivision, conditional use permits or variances granted for the operation or expansion of an off-site hazardous waste facility are consistent with the County Hazardous Waste Management Plan before approving a development application.

- **Policy HS-6.4 – Hazardous Materials Incident Response Area Plan.** The County shall maintain and implement when necessary the Hazardous Materials Incident Response Area Plan.
- **Policy HS-6.5 – Transportation Routes.** The County shall restrict transport of hazardous materials within San Benito County to designated routes.
- **Policy HS-6.6 – Household Hazardous Waste Program.** The County shall continue to sponsor household hazardous waste collection days to help residents lawfully dispose of household hazardous waste that is not accepted by the landfill.
- **Policy HS-6.7 – Small Business Hazardous Waste Program.** The County shall continue to work with small businesses that generate, store, or accumulate hazardous waste to help them comply with regulations for the proper treatment, storage, and disposal of these wastes.
- **Policy HS-6.8 – Information on Hazardous Waste Management.** The County shall provide the public, industry, agriculture, and local government with the available information needed to enable them to take rational and cost effective actions to minimize, recycle, treat, dispose of or otherwise manage hazardous wastes within the county.

Cities in San Benito County also have general plans with goals and policies pertaining to hazardous materials and wastes. For example, the City of Hollister's General Plan contains the following applicable policies (City of Hollister 2005).

- **Policy HS1.3 – Coordination with San Benito County and Other Agencies on Safety Matters.** Cooperate with the County of San Benito and with other government agencies in all matters related to safety, hazardous waste management and emergency planning.
- **Policy HS1.12 – Potential Hazardous Soils Conditions.** Evaluate new development prior to development approvals on sites that may contain hazardous materials.
- **Policy HS1.13 – Hazardous Waste Management.** Support measures to responsibly manage hazardous waste to protect public health, safety and the environment, and support state and federal safety legislation to strengthen requirements for hazardous materials transport.
- **Policy HS1.14 – Hazardous Materials Storage and Disposal.** Require proper storage and disposal of hazardous materials to prevent leakage, potential explosions, fires, or the escape of harmful gases, and to prevent individually innocuous materials from combining to form hazardous substances, especially at the time of disposal. Provide the public, industry, agriculture and local government with the available information needed to enable them to take rational and cost-effective actions to minimize, recycle, treat, dispose of or otherwise manage hazardous wastes within the Hollister Planning Area.

Santa Cruz County

The Santa Cruz County General Plan and Local Coastal Program (County of Santa Cruz 2024) contains policies in the Conservation and Open Space Element that pertain to hazardous materials and waste, as shown below.

- **Policy 6.6.1 – Hazardous Materials Ordinance.** Maintain the County's Hazardous Materials ordinance, placing on users of hazardous and toxic materials the obligation to eliminate or minimize the use of such materials wherever possible, and in all cases to minimize the release, emission, or discharge of hazardous materials to the environment, and properly to handle all hazardous materials and to disclose their whereabouts. Further, maintain the County's ordinance relating to ozone-depleting compounds. Ensure that any amendment of existing ordinance provisions is based on a finding that the amendments will provide protection to the environment and the community against toxic hazards that is equal to or stronger than the existing provisions.
- **Policy 6.6.2 – County Use of Toxic/Hazardous Materials.** Eliminate wherever possible, and minimize where elimination is not feasible, the use of hazardous and toxic materials in the operations and programs of County government.
- **Policy 6.6.3 Maintenance of Standards for Use and Control.** Ensure that Santa Cruz County maintains standards for the use and control of hazardous materials which are at least equal in their protection for the environment and the community to measures imposed by other local governments within Santa Cruz County, and in adjoining counties.
- **Policy 6.7.1 – Managing the County's Fair Share of Hazardous Waste.** Any proposed facility shall be consistent with the fair share principle, and with any inter-jurisdictional agreements on hazardous waste management entered into by Santa Cruz County.
- **Policy 6.7.3 – Location of Facilities.** Require any proposed hazardous waste management facility to be located only in those general areas identified in the Hazardous Waste Management Plan.

Cities in Santa Cruz County also have general plans with goals and policies pertaining to hazardous materials and wastes. For example, the City of Capitola's General Plan contains the following applicable policies (City of Capitola 2014).

- **Policy SN-4.1 – Mitigation Processes.** Mitigate hazard exposure from new development projects through the environmental review process, design criteria, and standards enforcement.
- **Policy SN-4.2 – Site Assessments.** Where deemed necessary, based on the history of land use, require site assessments for hazardous and toxic soil contamination prior to approving development project applications.
- **Policy SN-4.3 – Sensitive Receptors.** Prohibit land uses and development that emit obnoxious odors, particulates, light, glare, or other environmentally sensitive contaminants from being located near schools, community centers, senior homes, and other sensitive receptors.
- **Policy SN-4.4 – Green Building.** Encourage green building practices that reduce potentially hazardous construction materials.
- **Policy SN-4.5 – County Coordination.** Continue to coordinate with the Santa Cruz County Department of Environmental Health Services on enforcement of State and local statutes and regulations pertaining to hazardous materials and waste storage, use, and disposal.

Local Hazard Mitigation Plans

Local jurisdictions develop, adopt, and update hazard mitigation plans to establish guiding principles for reducing hazard risk, as well as specific mitigation actions to eliminate or reduce identified vulnerabilities. Applicable hazard mitigation plans for the AMBAG region include Monterey County Multi-Jurisdictional Hazard Mitigation Plan (Monterey County 2022), County of Santa Cruz Local Hazard Mitigation Plan (Santa Cruz County 2021) and County of San Benito Operational Area Multi-Jurisdiction Local Hazard Mitigation Plan (County of San Benito 2022). These plans serve to reduce or eliminate long-term risk to people and property from natural hazards and their effects in the AMBAG region.

Emergency Response and Evacuation Plans

Emergency response plans include elements to maintain continuity of government, emergency functions of governmental agencies, mobilization and application of resources, mutual aid, and public information. Emergency response plans are maintained at the federal, state, and local levels for all types of disasters, human-made and natural. Local governments have the primary responsibility for preparedness and response activities.

The Monterey County OES alerts and notifies appropriate agencies when disaster strikes, coordinates all responding agencies, ensures resources are available and mobilized, develops plans and procedures for response and recovery, and develops and provides preparedness materials for the public.

The County of San Benito adopted its emergency operations plan in January 2023 (San Benito County 2023). The emergency operations plan addresses the County's response to extraordinary emergency situations associated with natural disasters or human-caused emergencies. The emergency operations plan describes the methods for carrying out emergency operations, the process for rendering mutual aid, the emergency services of governmental agencies, how resources are mobilized, how the public will be informed, and the process to ensure continuity of government during an emergency or disaster.

The County of Santa Cruz currently has a draft version of an emergency management plan (Santa Cruz County 2023). The plan establishes a comprehensive, all-hazards approach to incident management across a spectrum of activities including prevention, preparedness, response, and recovery. It addresses the planned response to extraordinary situations associated with large-scale emergency incidents in or affecting Santa Cruz County.

Airport Land Use Compatibility Plans

The four public airports within Monterey County are: Monterey Regional Airport, Marina Municipal Airport, Mesa Del Rey Airport, and Salinas Municipal Airport. The Monterey County ALUC adopted the Monterey Regional Airport ALUCP and the Marina Municipal Airport ALUCP in February 2019 and May 2019, respectively (Monterey County Airport Land Use Commission, 2019a; 2019b). The ALUC published the plan for Salinas Municipal Airport in 1982 (Monterey County Airport Land Use Commission 1982) and the plan for Mesa Del Rey Airport in 1978

(Monterey County Airport Land Use Commission 1978). The goals of the ALUCPs are to protect residents from the negative environmental noise, safety and traffic impacts that can potentially be induced by airports.

The San Benito County ALUC reviews development proposed within the Airport Influence Area of the Hollister Municipal Airport and Frazier Lake Airpark. The ALUC reviews applications in compliance with the policies in the Hollister Municipal Airport Land Use Compatibility Plan and the Comprehensive Land Use Plan - Frazier Lake Airpark (San Benito County 2012; 2019).

As described above, the Santa Cruz County Community Development Department is the ALUC with authority in Santa Cruz County. According to the Caltrans (2014), 1994 General Plan and Local Coastal Program for the County of Santa Cruz (Santa Cruz County, 1994) and Watsonville 2005 General Plan (City of Watsonville, 1994) serve as the ALUCP for the Watsonville Municipal Airport, which is the only public airport in the County of Santa Cruz. Additionally, in July 2017, the City of Watsonville published Watsonville Municipal Airport Regulations to augment the existing ordinances of the City of Watsonville Municipal Code that regulate land use activities within and near the Watsonville Municipal Airport.

4.9.3 Impact Analysis

a. Methodology and Significance Thresholds

The methodology used for the following evaluation is based on a review of documents and publicly available information about hazardous and potentially hazardous conditions in the AMBAG region to determine the potential for implementation of the 2050 MTP/SCS to result in an increased health or safety hazard to people or the environment. This includes city and county planning documents, and hazardous materials database information maintained by various state and federal agencies, such as DTSC and SWRCB. Due to the large area of the AMBAG region and the programmatic nature of impact analyses, known sites of current or former contamination were not evaluated in detail, and physical surveys were not conducted. Rather, this program-level analysis is based on hazards typically associated with certain transportation projects and land uses, and an overall understanding of the key safety concerns that could result from implementation of the 2050 MTP/SCS.

The evaluation of hazards and hazardous materials impacts reasonably assumes that the construction and development under the 2050 MTP/SCS would adhere to the latest federal, state, and local regulations, and conform to the latest required standards in the industry, as appropriate for individual projects.

Appendix G of the *CEQA Guidelines* identifies the following criteria for determining whether a project's impacts would have a significant impact to hazards and hazardous materials:

1. Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
2. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;

3. Emit hazardous emissions or handles hazardous or acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school;
4. Be located on a site which is included on a list of hazardous materials compiled by the Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment;
5. For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard or excessive noise for people residing or working in the project area; or
6. Impair implementation or physically interfere with an adopted emergency response plan or emergency evacuation plan.

Impacts related to risk of loss, injury or death involving wildland fires, are discussed in detail Section 4.18, *Wildfire.*

b. Project Impacts and Mitigation Measures

The following section describes hazards and hazardous materials impacts associated with the transportation improvements and future land use scenario in the 2050 MTP/SCS. Table 4.9-1 included in Section 4.9.3(c), below, summarizes the specific transportation projects that may result in aesthetics impacts. In general, implementation of proposed transportation improvements and the reasonably foreseeable future development facilitated under the land use scenario envisioned by the 2050 MTP/SCS would result in hazards and hazardous materials impacts as described in the following sections.

Threshold 1:	Would the project create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?
Threshold 2:	Would the project create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

Impact HAZ-1 PROPOSED TRANSPORTATION IMPROVEMENT PROJECTS AND LAND USE PROJECTS INCLUDED IN THE 2050 MTP/SCS MAY FACILITATE THE ROUTINE TRANSPORT, USE, OR DISPOSAL OF HAZARDOUS MATERIAL, AND MAY RESULT IN REASONABLY FORESEEABLE UPSET AND ACCIDENT CONDITIONS INVOLVING THE RELEASE OF HAZARDOUS MATERIALS INTO THE ENVIRONMENT. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Construction of land use and transportation projects associated with implementation of the 2050 MTP/SCS would temporarily increase the regional transport, use, storage and disposal of hazardous materials and petroleum products commonly used at construction sites, such as diesel fuel, lubricants, paints and solvents and asphalt and cement products containing strong basic or acidic chemicals. Hazardous waste generated during construction may consist of welding materials, fuel and lubricant containers, paint and solvent containers and discarded asphalt and cement products.

As described above, DOT has identified several highways and a county road within the AMBAG region as hazardous material routes (Federal Motor Carrier Safety Administration 2024). Additionally, trucks transporting hazardous material would also use local collector and arterial streets to access individual project sites in the AMBAG region. Transportation projects would also require the temporary storage and use of hazardous materials at locations along project roads. Thus, trucks transporting hazardous materials for project construction would use many of the same freeways, arterials, and local streets as other traffic. This would create a risk of accidents and associated release of hazardous materials for other drivers and for people along these routes, as well as truck drivers. Although the transportation of hazardous materials could result in accidental spills, leaks, toxic releases, fire, or explosion, the DOT prescribes strict regulations for the safe transportation of hazardous materials, as described in Title 49 of the CFR and the Hazardous Materials Transportation Act. 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.

Construction associated with implementation of the 2050 MTP/SCS could result in impacts related to use of hazardous materials and disturbance of potentially hazardous materials, including lead and asbestos. However, the most likely incidents involving construction-related hazardous materials are generally associated with minor spills or drips. Small fuel or oil spills are possible, but would have a negligible impact on the environment and public health. All hazardous materials would be stored, handled, and disposed of according to the manufacturers' recommendations and spills would be cleaned up in accordance with applicable regulations. 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 non-petroleum products, additional reporting may be required if the release exceeds federal reportable quantity thresholds over a release period of 24 hours as detailed in Health and Safety Code Section 25359.4 and in 40 CFR 302.4.

The demolition of existing structures, particularly older structures, for construction of land use and transportation projects included in the 2050 MTP/SCS has the potential to expose workers and the public to asbestos containing materials or lead-based paint. Construction could also occur in areas of naturally occurring asbestos, which could expose construction workers and the public to asbestos. Health and Safety Code Section 19827.5 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. Mandatory compliance with asbestos abatement and disposal regulations and requirements, including MBARD Rule 724, would minimize the risk of exposure.

Land use projects included in the 2050 MTP/SCS would increase population, jobs, and households and a variety of land uses including residential, commercial, and industrial. Specific uses such as dry cleaners, gas stations, and certain industrial uses would involve routine transport, use, and disposal of hazardous materials such as household hazardous wastes (e.g., paints, cleaning supplies, solvents, and petroleum products) and commercial and industrial hazardous waste. The

use, create, or dispose of hazardous materials during operation of businesses facilitated by land use projects would be required to comply 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 AMBAG region. Use of hazardous materials at these businesses would also require permits through the local Certified Unified Program Agency and monitoring to avoid hazardous waste release. During operation, accidents or upset of hazardous materials could occur at businesses that routinely use and store hazardous materials. These businesses would be required to prepare spill prevention, containment and countermeasures plans (pursuant to 40 CFR 112) or, for smaller quantities, a spill prevention and response plan. These plans identify best management practices for spill and release prevention and provide procedures and responsibilities for rapidly, effectively, and safely cleaning up and disposing of any spills or releases. Oversight is provided by the Certified Unified Program Agency. Disposal of hazardous waste generated by these businesses would be subject to compliance with DTSC and CalEPA regulations. With compliance with the requirements of applicable regulations, the routine use or accidental spill of hazardous materials at business and industrial uses facilitated by the land use projects included in the 2050 MTP/SCS would not pose a substantial hazard to the public or the environment.

Transportation projects included in the 2050 MTP/SCS include a variety of transportation modifications such as new travel lanes, auxiliary lanes, roadway widening, increased transit service and expansion, and other maintenance and rehabilitation projects. The projects may increase the capacity of roadways to transport hazardous materials. Roadway projects in the 2050 MTP/SCS would also improve road safety thereby potentially reducing transportation-related hazardous materials risks because fewer accidents would occur on safer roads. Based on the requirements of Title 49 CFR 171–180, construction and operation of transportation projects would provide for the safe transport and disposal of hazardous waste.

The 2050 MTP/SCS encourages infill development and increased population and employment density near public transit stops, including rail. There could also be increased urbanization along transportation corridors. Thus, the number of people potentially exposed to hazardous conditions could increase as a result of land use projects included in the 2050 MTP/SCS. Although exposure to hazardous conditions could increase, the routine transport, use, and storage of potentially hazardous materials such as fuels, lubricants, solvents, and oils would be required to comply with all applicable State and federal laws, such as the Hazardous Materials Transportation Act, Resource Conservation and Recovery Act, the California Hazardous Material Management Act, and the CCR, Title 22. As described in Section 4.9.2, *Regulatory Setting*, the DOT regulates the transport of hazardous materials, including rail by and highway, through the Hazardous Materials Transportation Act. The Local Community Rail Security Act of 2006 requires that all rail operators provide security risk assessments to California Public Utilities Commission, which includes emergency response procedures and communication protocols. Mandatory compliance with federal, state and local requirements, such as CalARP Program and the Lempert-Keene-Seastrand Oil Spill Prevention and Response Act, would minimize potential exposure to the public and the environment from accidental releases. Therefore, although population density would increase in proximity to major transportation corridors that are used to transport hazardous and

flammable materials, the increased risk of hazards from routine transport or accidental upsets during transport would be minimal.

In conclusion, both planned land use projects and transportation projects could increase the routine transport, use, storage, and disposal of hazardous wastes in the AMBAG region. The planned land use projects and transportation projects could also increase the potential for unintentional upset and accident conditions. The existing federal, state, and local regulations and oversight would effectively reduce the inherent hazard associated with routine transport, use, storage and disposal activities, and regulations that effectively reduce the potential for individual projects to create a hazard to the public or the environment through reasonably foreseeable upset and accident conditions. Impacts would be less than significant.

Mitigation Measures

None required.

Threshold 3: Would the project emit hazardous emissions or handles hazardous or acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school?

Impact HAZ-2 PROPOSED TRANSPORTATION IMPROVEMENT PROJECTS AND LAND USE PROJECTS INCLUDED IN THE 2050 MTP/SCS WOULD NOT EMIT HAZARDOUS EMISSIONS OR HANDLE HAZARDOUS OR ACUTELY HAZARDOUS MATERIALS, SUBSTANCES OR WASTE WITHIN ONE-QUARTER MILE OF AN EXISTING OR PROPOSED SCHOOL. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

As discussed in Impact HAZ-1, the land use projects included in the 2050 MTP/SCS could include uses such as dry cleaners, gas stations, and certain industrial uses that would involve routine handling of hazardous materials and waste. Thus, the 2050 MTP/SCS could increase the amounts of hazardous materials handled within 0.25 mile of schools, depending on the specific location of land uses relative to schools in the region. As noted previously, there are 268 public schools in the AMBAG region (DOE 2025). Certain industrial uses, such as chemical plants, may also generate hazardous emissions as byproducts, typically in the form of air emissions.

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. Land uses that would generate emissions or involve the handling of extremely hazardous materials, substances, or waste within 0.25 mile of an existing school must notify the affected school district pursuant to Public Resources Code Section 21151.4. As discussed in detail above, compliance with existing regulations would reduce the exposure to potential hazards associated with these land uses.

For new schools that may be developed to address the population distribution changes resulting from land use projects included in the 2050 MTP/SCS, the California Education Code, as discussed in Section 4.9.2, *Regulatory Setting*, would ensure that school sites would be free of contamination or cleaned up to a level that would protect students and staff that would occupy a new school site. Therefore, hazardous emissions and handling impacts on schools related to land use projects included in the 2050 MTP/SCS would be less than significant.

The transportation projects included in the 2050 MTP/SCS could increase the capacity to transport hazardous materials on roads within the AMBAG region, including within 0.25 mile of schools. However, all materials must be used, stored, and disposed of in accordance with applicable federal, state, and local laws, which would effectively reduce the potential impacts associated with hazardous emissions or handling of hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or potential future school. Transportation projects in the 2050 MTP/SCS may also improve road safety, thereby reducing the potential for accidents in proximity of schools related to hazardous materials. Therefore, the hazardous materials impacts related to existing and proposed schools from implementation of the transportation projects included in the 2050 MTP/SCS would be less than significant.

Mitigation Measures

None required.

Threshold 4:	Would the project be located on a site which is included on a list of hazardous materials sites compiled by the Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment?

Impact HAZ-3 THE 2050 MTP/SCS INCLUDES LAND USE PROJECTS AND TRANSPORTATION PROJECTS THAT COULD OCCUR ON SITES ON THE LIST OF HAZARDOUS MATERIAL SITES COMPILED BY GOVERNMENT CODE SECTION 65962.5. IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

Throughout the AMBAG region 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 described above, there are hundreds of documented sites of contamination in some stage of DTSC or SWRCB oversight in the region. 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 programmatic level document. Further, because the precise timing of future land use developments is unknown, an evaluation of the potential for specific sites of known contamination within the AMBAG region to be affected by land use projects included in the 2050 MTP/SCS cannot be conducted. However, land use can be used to generally characterize the potential for release of hazardous materials (i.e., hazardous materials releases are more likely to have occurred in areas that currently or historically supported industrial uses). In addition, construction activities that disturb subsurface materials could encounter previously unidentified contamination from past practices or placement of undocumented fill or even unauthorized disposal of hazardous wastes. Encountering these hazardous materials could expose workers, the public or the environment to adverse effects depending on the volume, materials involved and concentrations.

Development on identified hazard sites within the AMBAG region would be preceded by investigation, remediation and cleanup under the supervision of the Regional Water Quality Control Board, DTSC, or the applicable hazardous materials division (e.g., County of Monterey Health Department, Santa Cruz County Environmental Health Division, or San Benito County Health and Human Services) before construction activities could begin. The agency responsible for oversight would determine the types of remediation and cleanup required and could include excavation and off-haul of contaminated soils, installation of vapor barriers beneath habitable structures, continuous monitoring wells onsite with annual reporting requirements, or other mechanisms to ensure the site does not pose a health risk to workers or future occupants. In addition, in many instances implementing and/or permitting 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. However, with the exceptions for streamlining projects in transit priority areas and siting public schools, there are no general regulatory requirements to conduct a Phase I ESA, or subsequent investigation of potential contamination. Therefore, because it cannot be assumed these practices would regularly occur, the impacts related to land use projects included in the 2050 MTP/SCS would be significant because there could be significant hazard to the public or the environment.

Development on sites listed in environmental databases pursuant to Government Code Section 65962.5 would be required to undertake remediation procedures prior to grading and development under the supervision of the applicable agency, depending upon the nature of any identified contamination. Nevertheless, the impacts of transportation projects and the land use scenario included in the 2050 MTP/SCS would be significant because there could be significant hazard to the public or the environment related to projects located on sites listed pursuant to Government Code Section 65962.5.

Mitigation Measures

For transportation and development projects under their jurisdiction, TAMC, SBtCOG, and SCCRTC shall implement, and transportation project sponsor agencies can and should implement, the following mitigation measures developed for the 2050 MTP/SCS program where applicable for transportation projects that result in hazardous materials impacts, and where feasible and necessary based on project and site specific considerations. Cities and counties in the AMBAG region can and should implement these measures, where relevant to land use projects implementing the 2050 MTP/SCS. Project specific environmental documents may adjust these mitigation measures as necessary to respond to site specific conditions.

HAZ-3 Site Remediation

If an individual project included in the 2050 MTP/SCS is located on or near a hazardous materials and/or waste site pursuant to Government Code Section 65962.5, the implementing agency shall prepare a Phase I ESA in accordance with the American Society for Testing and Materials' E-1527-05 standard. For work requiring any demolition or renovation, the Phase I ESA shall make recommendations for any hazardous building materials survey work that shall be done. All

recommendations included in a Phase I ESA prepared for a site shall be implemented. If a Phase I ESA indicates the presence or likely presence of contamination, the implementing agency shall require a Phase II ESA, and recommendations of the Phase II ESA shall be fully implemented. Examples of typical recommendations provided in Phase I/II ESAs include removal of contaminated soil in accordance with a soil management plan approved by the local environmental health department; covering stockpiles of contaminated soil to prevent fugitive dust emissions; capturing groundwater encountered during construction in a holding tank for additional testing and characterization and disposal based on its characterization; and development of a health and safety plan for construction workers.

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for transportation projects are RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects are cities and counties. This mitigation measure shall, or can and should, be applied during project permitting and environmental review and implemented during project construction, as applicable.

Significance After Mitigation

With implementation of this mitigation, impacts would be reduced to less than significant because project sites with hazardous material contamination that are on the list compiled by the Government Code Section 65962.5 would be identified prior to commencement of project construction. Additionally, prior to commencement of construction, measures to remediate contamination, such as containment and disposal of contaminated soil pursuant to federal and state regulations would be required. However, it cannot be guaranteed that all future project level impacts can be mitigated to a less than significant level. There are no other feasible potential mitigation measures. Therefore, impacts would remain significant and unavoidable.

Threshold 5:	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

Impact HAZ-4 TRANSPORTATION IMPROVEMENT PROJECTS AND LAND USE DEVELOPMENT INCLUDED IN THE 2050 MTP/SCS LOCATED WITHIN AN AIRPORT LAND USE PLAN OR WITHIN TWO MILES OF A PUBLIC OR PUBLIC USE AIRPORT WOULD NOT RESULT IN A SAFETY HAZARD OR EXCESSIVE NOISE FOR PEOPLE RESIDING OR WORKING IN THE PROJECT AREA WITH COMPLIANCE WITH APPLICABLE REGULATIONS. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Land use projects and transportation projects included in the 2050 MTP/SCS may be located near a public use airport or a private airstrip. As discussed in Section 4.9.1, *Setting*, there are six airports or airstrips in the AMBAG region, including in Monterey County near the City of Monterey and in the Cities of Salinas, King City, Marina, Watsonville, and Hollister. Impacts associated with development near existing airports are largely dependent upon site and project specific information that is not currently available and would be provided in the future as projects

within the 2050 MTP/SCS undergo project level environmental review. However, any development and subsequent planning decisions in proximity to airports would be subject to review under the State Aeronautics Act provided under Public Utilities Code §§ 21167 et seq. Specific projects that may affect navigable airspace are also subject to FAA review, as outlined under 14 CFR Parts 77.5, 77.7 and 77.9. Additionally, land use development would be subject to existing zoning regulations, including height restrictions. Because there are existing federal, state, and local regulations and oversight in place that would effectively reduce the inherent hazard associated with development near airports to an acceptable and safe level, the impacts of the 2050 MTP/SCS would be less than significant.

Mitigation Measures

None required.

Threshold 6: Would the project impair implementation or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Impact HAZ-5 LAND USE DEVELOPMENT AND TRANSPORTATION PROJECTS INCLUDED IN THE 2050 MTP/SCS WOULD NOT IMPAIR IMPLEMENTATION OR PHYSICALLY INTERFERE WITH ADOPTED EMERGENCY RESPONSE OR EVACUATION PLANS. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Construction of the land use development and transportation projects included in the 2050 MTP/SCS would require temporary road closures that could impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan. Some of the transportation projects may require multiple years to construct. However, standard construction practices include notification of emergency responders where road closures are required. Because road closures are temporary and would be coordinated with emergency responders so that alternative evaluation routes could be developed and employed, construction activities would have a less than significant impact.

The land use projects included the 2050 MTP/SCS emphasize infill and transit oriented development, which would generally focus growth in existing urbanized areas of the AMBAG region. Thus, population density in urbanized areas would increase, which may improve emergency response by eliminating the need to travel to more rural and dispersed locations in the region. Alternatively, large concentrations of people could also cause adverse effects related to the implementation of emergency plans because the increased population may overburden adopted evacuation routes and other emergency response resources. However, the management of emergency response and emergency evacuation plans includes regular updates to these plans that incorporate new or proposed developments. Thus, land use projects in the 2050 MTP/SCS would be reflected in the regular and required updates of emergency and evacuation plans applicable to the AMBAG region. In addition, project level CEQA reviews routinely assure that individual projects do not adversely impact emergency response or evacuation plans.

Additionally, the proposed transportation projects would generally increase mobility and circulation capacity and, thereby, have the potential to improve response times for police, fire,

and emergency service providers, especially in heavily congested areas. In addition, as described above, emergency and evacuation plans must be regularly updated to incorporate current conditions. Therefore, potential impacts related to interference with emergency response and evacuation plans would be less than significant.

Mitigation Measures

None required.

c. Specific 2050 MTP/SCS Projects That May Result in Impacts

Table 4.9-1 identifies transportation projects with the potential to cause or contribute to direct or indirect impacts to hazards and hazardous materials impacts such as those discussed above. Specifically, Table 4.9-1 identifies projects with the potential to increase the capacity on roads that U.S. DOT has identified as hazardous material routes, as increasing the capacity of these roads would increase the amount of hazardous material and waste transported on the roads. Program-level impact determinations were provided for the overall 2050 MTP/SCS Project above. This section is not intended to provide project-specific impact determinations under CEQA. Rather, the projects identified in Table 4.9-1 are representative of projects that may result in project-level impacts with or without mitigation and were selected based on their potential scope and likelihood to result in the hazards and hazardous materials impacts identified above. The intent of this summary is to support potential future streamlining efforts as a screening tool to facilitate early identification of projects likely to result in the impacts identified above. Streamlining opportunities are discussed in Section 1.5*, Implementation Issues and Future Environmental Review,* in Chapter 1, *Introduction.*

Table 4.9-1 2050 MTP/SCS Projects that May Result in Hazardous Materials Impacts

AMBAG Project No.	Project	Location	Impact
MON-CT023-CT-2026	State Route 156 and US 101 Interchange	Monterey County	HAZ-1
MON-CT030-SL-2026	U.S. 101 - Salinas Corridor	Monterey County	HAZ-1
MON-CT036-CT-2026	SR 156 - Castroville Boulevard Interchange	Monterey County	HAZ-1
MON-MAR136-MA-2026	SR 1 – Imjin Bridge (Northbound)	Monterey County	HAZ-1
MON-MAR137-MA-2026	SR 1 – Imjin Bridge (Southbound)	Monterey County	HAZ-1
MON-SOL014-SO-2026	SR 146 Bypass (Pinnacles Highway)	Monterey County	HAZ-1
MON-GRN008-GR-2026	U.S. 101 - Walnut Avenue Interchange	Monterey County	HAZ-1
SB-CT-A02-2026-2026	SR 156/Fairview Road Intersection Improvements	San Benito County	HAZ-1
SB-CT-A43-2026-2026	State Highway Operation and Protection Program	San Benito County	HAZ-1
SB-CT-A44-2026	Route 25 Expressway Conversion Project, Phase 1	San Benito County	HAZ-1
SB-CT-A45-2026	Route 25 Expressway Conversion Project, Phase 2	San Benito County	HAZ-1

4.9.4 Cumulative Impacts

a. Methodology

The cumulative analysis presented below primarily relies on a projections-based approach, using regional land use and growth forecasts for the AMBAG region and adjoining counties to evaluate cumulative conditions. The project is assessed within the existing and foreseeable future environmental setting, and a determination is made as to whether its incremental contribution would be cumulatively considerable when considered alongside both the overall envisioned land use scenario and specific large-scale planned projects. Refer to Section 6.4, *Cumulative Impacts*, in Chapter 6, *Other CEQA Required Discussions*, for a description of the cumulative impact methodology.

b. Impact Analysis

Because hazardous sites could extend from a property or roadway in the AMBAG region onto adjoining areas, the cumulative impact analysis area for hazards and hazardous materials consists of the AMBAG region and the adjoining counties.

Impact HAZ-C-1 DEVELOPMENT IN THE CUMULATIVE IMPACTS ANALYSIS AREA, AS WELL AS PROJECTS IMPLEMENTING THE 2050 MTP/SCS, COULD RESULT IN HAZARDS AND EXPOSURE TO HAZARDOUS MATERIALS. THE 2050 MTP/SCS WOULD HAVE CUMULATIVELY CONSIDERABLE CONTRIBUTIONS TO SIGNIFICANT CUMULATIVE IMPACTS RELATED TO HAZARDS AND HAZARDOUS MATERIALS.

Several potential hazards impacts would be site-specific, such as airport hazards and emergency response. Impacts related to airport hazards depend on the characteristics and design of individual projects and their location relative to distance and location of nearby airports. Existing regulations place limitations on the types of development that can be permitted within various aircraft zones surrounding an airport, such as building height restrictions or prohibiting residential occupancy. Mandatory compliance with these regulations would prevent substantial hazards related to airports. Cumulative impacts would be less than significant.

Emergency response plans are generally specific to a particular city or county or parts thereof. For example, in the event of an imminent emergency in Monterey County, emergency response is typically from police, ambulance and fire departments local to the county, and not from areas outside of the AMBAG region, such as Santa Clara County. Thus, the cumulative impacts related to conflicts with emergency response plans would be less than significant.

While some potential impacts related to hazards and hazardous materials are generally related to site-specific and project-specific characteristics and conditions, hazardous sites or releases can occur across multiple adjoining property or jurisdictions. The transport of hazardous materials may occur on rail or on roadways, such as U.S. 101, that traverse both the AMBAG region and adjacent counties. Although such transport would be subject to existing federal, state, and local regulations and oversight, as outlined in Section 4.9.2, *Regulatory Setting*, hazards to the public or the environment through upset and accident conditions could occur within the AMBAG region as well as adjoining counties. In addition, land use development envisioned as part of the 2050 MTP/SCS could result in the development of sites listed in environmental databases pursuant to

Government Code Section 65962.5. Cumulative impacts related to hazards and hazardous materials would be significant and implementation of the 2050 MTP/SCS would result in cumulatively considerable impacts. Transportation improvement projects and land use development included in the 2050 MTP/SCS would be required to undergo remediation and can and should comply with Mitigation Measure HAZ-3; however, this mitigation measure may not apply to areas outside the AMBAG region, and it cannot be guaranteed that all future project level impacts can be mitigated to a less than significant level. Thus, cumulative impacts related to the use and transport of hazardous materials and hazardous materials sites would be significant and unavoidable, and the 2050 MTP/SCS would have a cumulatively considerable contribution to these impacts.

4.10 Hydrology and Water Quality

This section describes water quality, groundwater recharge, water supply, drainage, runoff, flooding, and inundation impacts of development facilitated by the 2050 MTP/SCS.

4.10.1 Setting

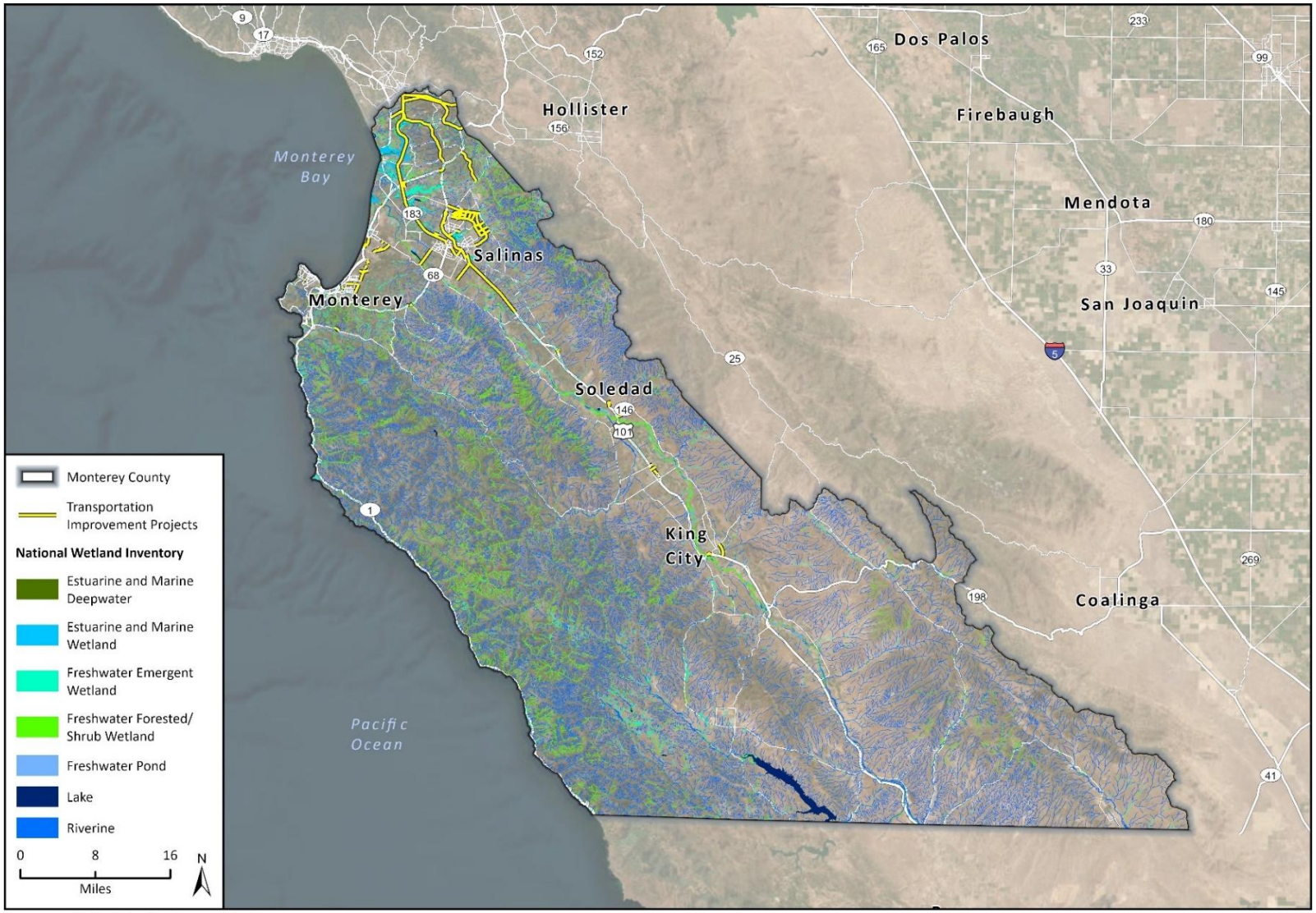
Surface Waters

The AMBAG region contains two primary watersheds: the Salinas River, which traverses the length of Monterey County, and the Pajaro River, which begins in San Benito County and runs through southeastern Santa Cruz County (Greater Monterey County Regional Water Management Group [GMCRWMG] 2018). In addition, several smaller watersheds are located between the western face of the Coast Range mountains and the Pacific Ocean in both Monterey and Santa Cruz counties, and in the southwest and northeast portions of San Benito County.

The Salinas River Watershed spans Monterey and San Luis Obispo Counties. The Salinas River originates at the Santa Margarita Reservoir in San Luis Obispo County, just to the south of AMBAG's planning area, and extends approximately 155 miles northward to the Monterey Bay (GMCRWMG 2018). The headwaters of the Salinas River are generally undeveloped, while the remainder of the valley is predominantly agricultural with several urban areas, the largest being the City of Salinas. The 1,300-square mile Pajaro River Watershed includes portions of Santa Cruz, Santa Clara, San Benito, and Monterey Counties. It supports diverse environments, and urban and agricultural land uses. The Pajaro River feeds the Monterey Bay, a federally protected National Marine Sanctuary. The river supplies water and provides recreational opportunities to the diverse communities within the watershed (Pajaro River Watershed Regional Water Management Group [PRWRWMG] 2019).

The California Integrated Regional Water Management (IRWM) planning effort is a process that promotes prioritizing water related efforts in a region identifying and implementing water management solutions throughout that region. Based on information provided in the IRWMs plans in the Monterey Bay area, the following discussion of hydrology and water resources is divided into the following four geographic areas: (1) greater Monterey County, (2) the Monterey Peninsula area, (3) the Pajaro River Watershed and (4) northern Santa Cruz County. Greater Monterey County generally includes the entire Salinas River Watershed north of the San Luis Obispo County line, all the Gabilan and Bolsa Nueva Watersheds in the northern part of the county, and all of the coastal watersheds of the Big Sur coastal region within Monterey County (Pajaro Valley Water Management Agency [PVWMA] 2019). The Monterey Peninsula area lies between the Salinas River and the Big Sur coast, from Point Lobos on the south to Sand City on the north. The Pajaro River Watershed is bound by the Santa Cruz Mountains to the north and Gabilan Range to the south, while its water drains into Monterey Bay (PVWMA 2019). The northern Santa Cruz County region encompasses all of Santa Cruz County except for the Pajaro River Watershed (County of Santa Cruz 2019).

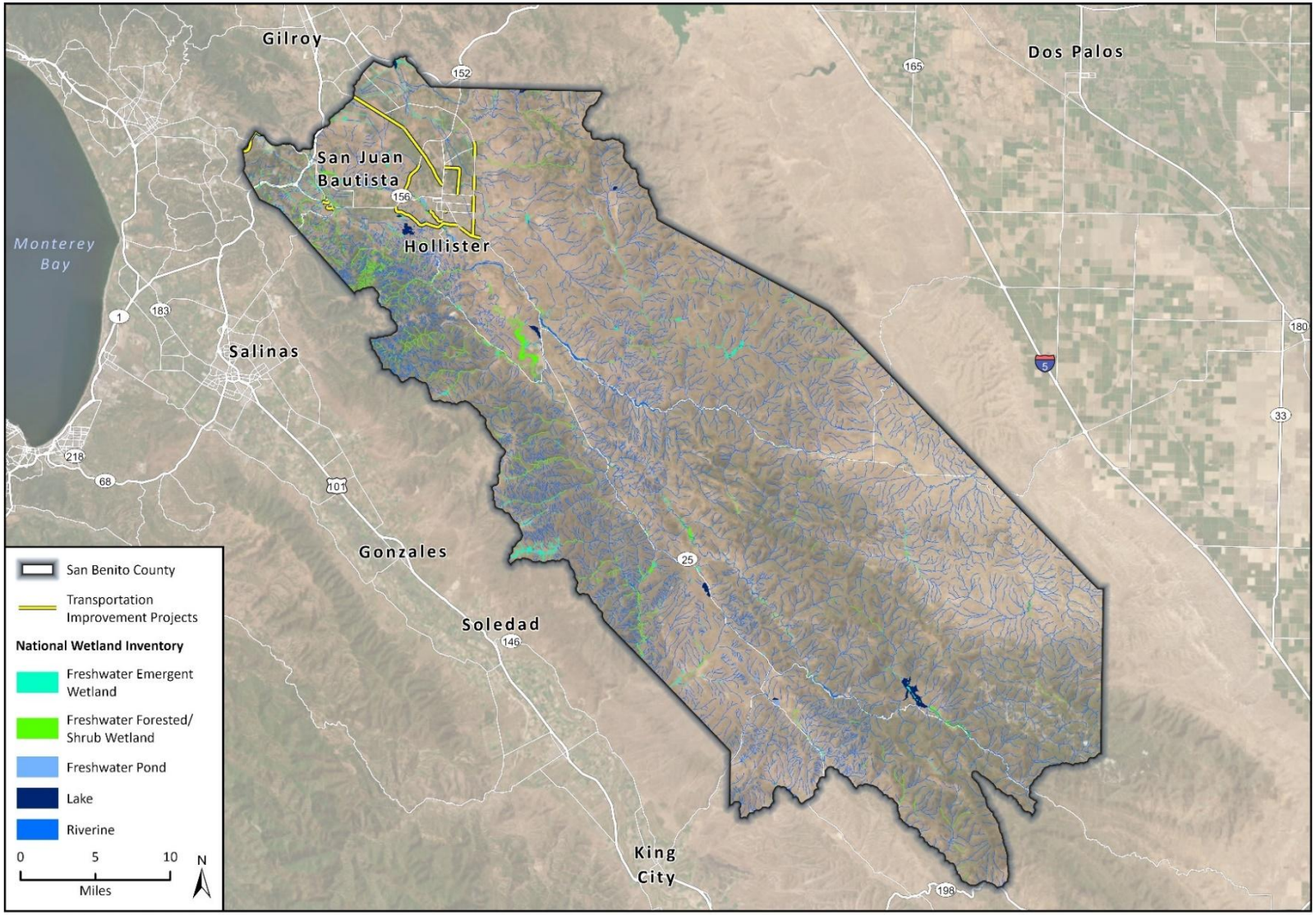
Figure 4.10-1 Monterey County Surface Waters



Imagery provided by Esri and its licensors © 2025.
Additional data provided by National Wetland Inventory 2025, AMBAG 2025.

23-14882_BIO
4.4-4 Monterey County Wetlands and Aquatic Resources Map

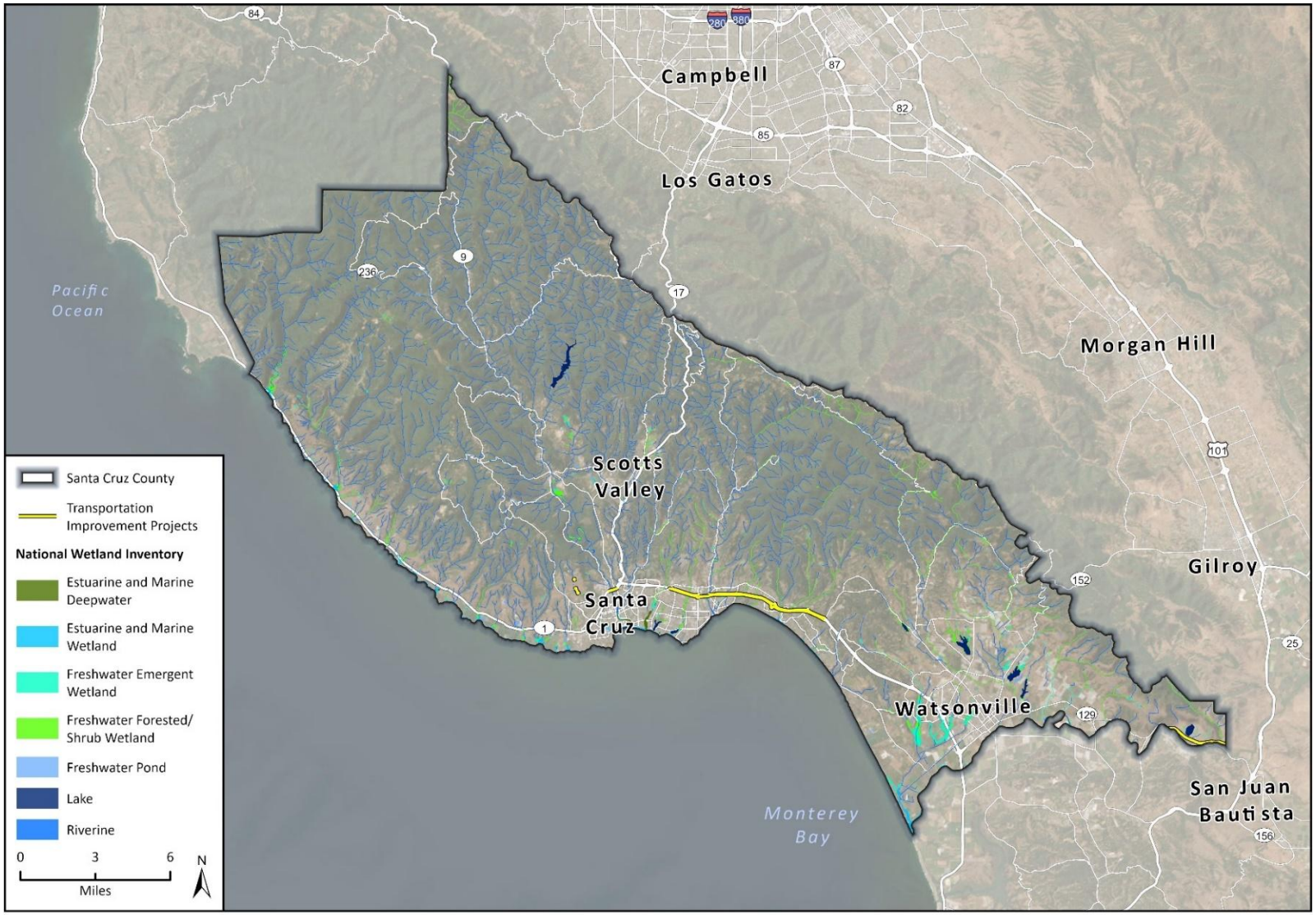
Figure 4.10-2 San Benito County Surface Waters



Imagery provided by Esri and its licensors © 2025.
Additional data provided by National Wetland Inventory 2025, AMBAG 2025.

23-14882_BIO
4.4-5 San Benito County Wetlands and Aquatic Resources Map

Figure 4.10-3 Santa Cruz County Surface Waters



Imagery provided by Esri and its licensors © 2025.
Additional data provided by National Wetland Inventory 2025, AMBAG 2025.

23-14882_BIO
4.4-6 Santa Cruz County Wetlands and Aquatic Resources Map

Groundwater

Groundwater basins within the AMBAG region include: Corralitos Basin, Salinas Valley Basin, Carmel Valley Basin, Lockwood Valley Basin, Cholame Valley Basin, and Peach Tree Valley Basin in Monterey County; Bitter Water Valley Basin, Hernandez Valley Basin, Vallecitos Creek Valley Basin, Pancho Valley Basin, Gilroy-Hollister Valley Basin, Santa Ana Valley Basin, Quien Sabe Basin, Dry Lake Valley Basin, and Panoche Valley Basin in San Benito County; and Santa Margarita Basin, Needle Rock Point Basin, West Santa Cruz Terrace Basin, Santa Cruz County Basin, Corralitos-Purisima Highlands Basin, and Corralitos-Pajaro Valley Basin in Santa Cruz County. A number of these basins are designated as either medium or high priority basins, and are managed by a groundwater sustainability plan (GSP), as further discussed in sections below.

a. Water Quality

Water quality is a concern because of its potential effect on human health, aquatic organisms, and ecosystem conditions. Quality is determined by factors such as native condition of groundwater and surface water, sources of contamination (natural and human induced), and extent of seawater intrusion.

Surface Water

In the AMBAG region, polluted stormwater and urban runoff discharges have degraded the water quality of creeks, rivers, sloughs, reservoirs, and the Pacific Ocean. Runoff pollutants can include pesticides, fertilizers, green waste, animal waste, human waste, petroleum hydrocarbons such as gasoline and motor oil, trash, and other constituents. Due to the prevalence of agriculture in the Salinas River Valley and the lower Pajaro Valley, pesticide-laden runoff is one of the primary sources of surface water contamination, as shown below in Table 4.10-1. In addition, stormwater flowing over roadways and other transportation facilities carries urban pollutants through natural drainage systems or man-made storm drain facilities to bodies of surface water. Such discharges from farmland and transportation facilities are referred to as “non-point” sources because the pollutants are generated from multiple locations rather than a single source and location. Many of these discharges result in untreated pollutants entering waterways. Pollutants contained within urban runoff primarily include suspended solids, oil, grease, pesticides, pathogens, and air pollutants.

The State Water Resources Control Board (SWRCB), in compliance with the Clean Water Act (CWA), Section 303(d), has prepared a list of impaired water bodies in the State of California. Table 4.10-1 shows the water bodies in greater Monterey Bay area that are listed as impaired by SWRCB. The list in Table 4.10-1 is not inclusive of all water bodies in the AMBAG region that are on the 2024 Section 303(d) list of impaired water bodies.

The impairments listed in Table 4.10-1 indicate that the Pajaro River and lower Salinas River experience the broadest array of water quality issues, primarily due to pesticides and other substances in agricultural runoff. Polluted runoff has also impaired the ocean as well as inland waterways. The Northern Santa Cruz County IRWMP states that urban runoff has degraded water quality at moderate levels in coastal lagoons and at ocean beaches. Sewer leaks and overflows

contribute to this problem (County of Santa Cruz 2019). All urban lagoons in the planning region are posted as unsafe for swimming year-round due to high bacteria levels. Furthermore, local beaches are frequently posted as unsafe for human contact in response to elevated bacteria. Santa Cruz County has had 50-100 beach-days of posting every year since AB 411 reporting began in 1999 (County of Santa Cruz 2019).

To address surface water quality impairments, the Central Coast Regional Water Quality Control Board (CCRWQCB) has prescribed total maximum daily loads (TMDLs)[1] in the AMBAG region for sediment, pathogens, nitrate-nitrogen, fecal coliform, fecal indicator bacteria, nitrogen compounds, orthophosphate, toxicity, pesticides, phosphorous compounds, mercury, and nutrients. CCRWQCB indicates that in certain water bodies, natural processes of erosion and sedimentation have been accelerated due to anthropogenic watershed disturbances. Anthropogenic sources have been found to contribute to several identified sources of pollution. For example, the presence of fecal coliform does not support beneficial uses of non-contact water recreation and water contact recreation; sources are, in decreasing order of contribution: urban, human, birds and bats roosting in the tunnel, livestock, and background. Nitrate-nitrogen presence in the AMBAG region, conflicting with municipal and domestic supply of water beneficial use, is related to anthropogenic sources such as City of San Luis Obispo Water Reclamation Facility, croplands, reservoirs, and residential areas. Un-ionized ammonia, nitrate, and orthophosphate originating from irrigated agriculture, urban lands, grazing lands, and natural sources are contributing loads to receiving waters particularly in the lower Salinas River watersheds (CCRWQCB 2019). The nitrate and sediment TMDLs, completed in 2012, identified irrigated agriculture as a substantial anthropogenic source of both nitrate and sediment loading.

[1] A TMDL is the calculation of the maximum amount of a pollutant allowed to enter a waterbody so that the waterbody will meet and continue to meet water quality standards for that particular pollutant.

Table 4.10-1 Water Bodies Listed as Impaired

Water Body	Impairment Constituent
Monterey County	
Alisal Creek (Monterey County)	Ammonia, Bensulide, Bifenthrin, Chlorophyll-a, Chlorpyrifos, Cyhalothrin, Lambda, Cypermethrin, Dimethoate, Imidacloprid, Malathion, Methomyl, Nitrate, Organophosphate Pesticides, Oxyfluorfen, Permethrin, Sodium, Toxicity, Turbidity
Alisal Slough (Monterey County)	Ammonia, Diazinon, Imidacloprid, Malathion, Nitrate, Toxicity, Turbidity
Arroyo Seco River	Temperature, water, pH
Bennett Slough	Chlorophyll-a, Oxygen, Dissolved, Turbidity, pH
Big Creek (Big Sur Coast)	pH
Blanco Drain	DDD (Dichlorodiphenyldichloroethane), DDE (Dichlorodiphenyldichloroethylene), DDT (Dichlorodiphenyltrichloroethane), Diazinon, Nitrate, Selenium, Toxicity, Turbidity, pH
Carmel River	Benthic Community Effects, Toxicity
Castroville Slough	Nitrate, Oxygen, Dissolved, pH
Chualar Creek	Ammonia, Bensulide, Bifenthrin, Chlorpyrifos, Cyhalothrin, Lambda, Diazinon, Dimethoate, Escherichia coli (E. coli), Fecal Coliform, Imidacloprid, Malathion, Methomyl, Nitrate, Organophosphate Pesticides, Oxygen, Dissolved, Permethrin, Temperature, water, Toxicity, Turbidity, pH
Chualar Creek, South Branch	Ammonia, Nitrate, Temperature, water, Toxicity, Turbidity, pH
Don Dahvee Creek (Monterey County)	Copper, Escherichia coli (E. coli), Lead, Zinc
Elkhorn Slough	Copper, DDT (Dichlorodiphenyltrichloroethane), Dieldrin, Nitrate, Oxygen, Dissolved, Pesticides, Sedimentation/Siltation, Total Coliform, pH
Espinosa Slough	Ammonia, Bifenthrin, Diazinon, Malathion, Nitrate, Pesticides, Priority Organics, Pyrethroids, Toxicity, Turbidity, pH
Gabilan Creek	Ammonia, Benthic Community Effects, Copper, Escherichia coli (E. coli), Fecal Coliform, Imidacloprid, Nitrate, Oxygen, Dissolved, Toxicity, Turbidity, pH
Hartnell Gulch West Fork (Monterey County)	Escherichia coli (E. coli)
Limekiln Creek	pH
McGowan Ditch	DDD (Dichlorodiphenyldichloroethane), DDE (Dichlorodiphenyldichloroethylene), Malathion, Nitrate, Oxyfluorfen, Toxicity
Merrit Ditch	Ammonia, Bifenthrin, Clothianidin, Copper, Cypermethrin, Diazinon, Escherichia coli (E. coli), Malathion, Nitrate, Permethrin, Pyrethroids, Toxicity, Turbidity, pH
Monterey Harbor	Arsenic, Copper, Oxygen, Dissolved, PCBs (Polychlorinated biphenyls), Toxicity

Water Body	Impairment Constituent
Moro Cojo Slough (Monterey County)	Ammonia, Copper, Nickel, Nitrate, Oxygen, Dissolved, Pesticides, Sedimentation/Siltation, Selenium, Total Coliform, Toxicity, Turbidity, pH
Moss Landing Harbor	Arsenic, Chlorpyrifos, DDT (Dichlorodiphenyltrichloroethane), Dieldrin, Indicator Bacteria, Nickel, Oxygen, Dissolved, PCBs (Polychlorinated biphenyls), Sedimentation/Siltation, Toxicity, pH
Natividad Creek	Ammonia, Benthic Community Effects, Bifenthrin, Chlorpyrifos, Copper, Diazinon, Escherichia coli (E. coli), Fecal Coliform, Imidacloprid, Malathion, Nitrate, Organophosphate Pesticides, Oxygen, Dissolved, Permethrin, Pyrethroids, Temperature, water, Toxicity, Turbidity
Old Salinas River	Ammonia, Bifenthrin, Chlorophyll-a, Chlorpyrifos, Copper, Cyhalothrin, Lambda, DDD (Dichlorodiphenyldichloroethane), DDE (Dichlorodiphenyldichloroethylene), Diazinon, Imidacloprid, Malathion, Nickel, Nitrate, Oxygen, Dissolved, Permethrin, Pyrethroids, Selenium, Toxicity, Turbidity, pH
Old Salinas River Estuary	Nutrients, Pesticides
Pacific Ocean at Monterey State Beach (Del Monte Beach)	Enterococcus, Total Coliform
Pacific Ocean at Stillwater Cove Beach	Enterococcus
Quail Creek	Ammonia, Bensulide, Bifenthrin, Chlorpyrifos, Copper, Cyhalothrin, Lambda, Cypermethrin, Diazinon, Dimethoate, Escherichia coli (E. coli), Imidacloprid, Malathion, Methomyl, Nitrate, Organophosphate Pesticides, Oxyfluorfen, Oxygen, Dissolved, Permethrin, Temperature, water, Toxicity, Turbidity, Zinc, pH
Salinas Reclamation Canal	Aluminum, Ammonia, Benthic Community Effects, Bifenthrin, Chlorpyrifos, Clothianidin, Copper, Cyfluthrin, Cyhalothrin, Lambda, Cypermethrin, DDD (Dichlorodiphenyldichloroethane), DDE (Dichlorodiphenyldichloroethylene), Deltamethrin, Dimethoate, Disulfoton, Escherichia coli (E. coli), Fecal Coliform, Fenpropathrin, Imidacloprid, Lead, Malathion, Methomyl, Nitrate, Organophosphate Pesticides, Permethrin, Priority Organics, Pyrethroids, Thiamethoxam, Toxicity, Turbidity, pH
Salinas River (lower, estuary to near Gonzales Rd crossing, watersheds 30910 and 30920)	Aluminum, Arsenic, Benthic Community Effects, Bifenthrin, Chlordane, Chloride, Chromium, DDD (Dichlorodiphenyldichloroethane), DDE (Dichlorodiphenyldichloroethylene), DDT (Dichlorodiphenyltrichloroethane), Dieldrin, Enterococcus, Escherichia coli (E. coli), Fipronil, Imidacloprid, Manganese, Nickel, Nitrate, PCBs (Polychlorinated biphenyls), Selenium, Sodium, Temperature, water, Total Dissolved Solids, Toxaphene, Toxicity, Turbidity, pH

Water Body	Impairment Constituent
Salinas River (middle, near Gonzales Rd crossing to confluence with Nacimiento River)	Benthic Community Effects, Temperature, water, Toxicity, Turbidity, pH
Salinas River Lagoon (North)	Chlorpyrifos, DDE (Dichlorodiphenyldichloroethylene), Nutrients, Toxicity, pH
Salinas River Refuge Lagoon (South)	Turbidity, pH
San Antonio River (below San Antonio Reservoir)	Escherichia coli (E. coli), pH
San Jose Creek (Monterey County)	pH
Santa Rita Creek (Monterey County)	Ammonia, Clothianidin, Cyhalothrin, Lambda, Escherichia coli (E. coli), Fecal Coliform, Imidacloprid, Lead, Malathion, Nitrate, Oxygen, Dissolved, Pyrethroids, Sodium, Temperature, water, Toxicity, Turbidity
Tembladero Slough	Aluminum, Bifenthrin, Chlordane, Chlorophyll-a, Chlorpyrifos, Chromium, Clothianidin, Copper, Cypermethrin, DDD (Dichlorodiphenyldichloroethane), DDE (Dichlorodiphenyldichloroethylene), Diazinon, Dieldrin, Disulfoton, Enterococcus, Imidacloprid, Lead, Malathion, Methomyl, Nickel, Nitrate, Oxyfluorfen, Oxygen, Dissolved, Permethrin, Pyrethroids, Selenium, Thiamethoxam, Total Coliform, Toxicity, Turbidity, pH
Tularcitos Creek	Chloride, Sodium
Watsonville Creek	Escherichia coli (E. coli), Nitrate, Oxygen, Dissolved, Turbidity, pH
Willow Creek (Monterey County)	pH
Carneros Creek (Monterey County)	Ammonia, Chlorophyll-a, Chlorpyrifos, Copper, DDE (Dichlorodiphenyldichloroethylene), Escherichia coli (E. coli), Nitrate, Organophosphate Pesticides, Oxygen, Dissolved, Turbidity, pH
San Lorenzo Creek (Monterey County)	Boron, Chloride, Sodium, Specific Conductivity, Turbidity, pH
Pajaro River	Aluminum, Benthic Community Effects, Boron, Chlordane, Chloride, Chlorpyrifos, Chromium, DDD (Dichlorodiphenyldichloroethane), DDE (Dichlorodiphenyldichloroethylene), DDT (Dichlorodiphenyltrichloroethane), Dieldrin, Escherichia coli (E. coli), Heptachlor epoxide, Imidacloprid, Manganese, Nickel, Nitrate, Oxyfluorfen, Oxygen, Dissolved, PCBs (Polychlorinated biphenyls), Sedimentation/Siltation, Selenium, Sodium, Toxicity, Turbidity, pH
Nacimiento River (below Nacimiento Reservoir)	pH
Pacific Ocean, Pt. Pinos to Pt. Piedras Blancas	Dieldrin, Mercury
Salinas River (upper, confluence of Nacimiento River to Santa Margarita Reservoir)	Benthic Community Effects, Chloride, Oxygen, Dissolved, Sodium, Toxicity, pH
San Antonio Reservoir	Mercury, Microcystins

Water Body	Impairment Constituent
Pacific Ocean, Monterey Bay (excludes inner three miles nearshore)	Chlordane, DDT (Dichlorodiphenyltrichloroethane), Dieldrin, PCBs (Polychlorinated biphenyls), Toxaphene
Pajaro River Estuary	DDE (Dichlorodiphenyldichloroethylene), Diazinon, Malathion, Nickel, Oxygen, Dissolved, Temperature, water, Toxicity, pH
Salsipuedes Creek (Santa Cruz County)	Aluminum, Escherichia coli (E. coli), Lead, Manganese, Nitrate, Oxygen, Dissolved, Toxicity, Turbidity, pH
San Benito County	
Hernandez Reservoir	Mercury
Millers Canal	Aluminum, Arsenic, Chlorophyll-a, Nitrate, Oxygen, Dissolved, Selenium, Temperature, water, Toxicity, Turbidity, pH
San Benito River	Aluminum, Boron, Copper, Escherichia coli (E. coli), Manganese, Sedimentation/Siltation, Specific Conductivity, Toxicity, Turbidity, pH
San Carlos Creek (downstream of New Idria Mine)	Mercury
San Juan Creek (San Benito County)	Ammonia, Arsenic, Nitrate, Oxygen, Dissolved, Selenium, Toxicity, Turbidity
Tequisquita Slough	Chlorophyll-a, Fecal Coliform, Nitrate, Oxygen, Dissolved, Selenium, Toxicity, Turbidity, pH
Tres Pinos Creek	Boron, Escherichia coli (E. coli), Sodium, Turbidity, pH
Carnadero Creek (Uvas Creek below Bloomfield Road)	Escherichia coli (E. coli), Imidacloprid, Nitrate, Oxygen, Dissolved, Toxicity, Turbidity
Llagas Creek (below Chesbro Reservoir)	Benthic Community Effects, Chloride, Chlorpyrifos, Copper, Escherichia coli (E. coli), Manganese, Nitrate, Oxygen, Dissolved, Sedimentation/Siltation, Selenium, Sodium, Specific Conductivity, Total Dissolved Solids, Toxicity, Turbidity
Pacheco Creek	Oxygen, Dissolved, Turbidity
Hernandez Reservoir	Mercury
Millers Canal	Aluminum, Arsenic, Chlorophyll-a, Nitrate, Oxygen, Dissolved, Selenium, Temperature, water, Toxicity, Turbidity, pH
Santa Cruz County	
Aptos Creek	Aluminum, Benthic Community Effects, Indicator Bacteria, Sedimentation/Siltation
Arana Gulch	Chlorpyrifos, Escherichia coli (E. coli), Toxicity, Turbidity
Beach Road Ditch	Nitrate, Oxygen, Dissolved, Turbidity, pH
Bean Creek	Sedimentation/Siltation
Bear Creek(Santa Cruz County)	Sedimentation/Siltation
Boulder Creek	Sedimentation/Siltation
Branciforte Creek	Chlorpyrifos, Enterococcus, Escherichia coli (E. coli), Sedimentation/Siltation, Toxicity

Water Body	Impairment Constituent
Camp Evers Creek	Escherichia coli (E. coli), pH
Carbonera Creek	Indicator Bacteria, Nutrients, Sedimentation/Siltation
Corcoran Lagoon	Total Coliform, pH
Corralitos Creek	Turbidity, pH
Fall Creek	Sedimentation/Siltation
Gallighan Slough	Indicator Bacteria
Hanson Slough	Indicator Bacteria
Harkins Slough	Chlorophyll-a, Indicator Bacteria, Oxygen, Dissolved, Toxicity, Turbidity
Kings Creek	Sedimentation/Siltation
Lockhart Gulch	Oxygen, Dissolved, pH
Lompico Creek	Nitrate, Sedimentation/Siltation
Love Creek	Sedimentation/Siltation
McEnery Spring	pH
Moore Creek	Escherichia coli (E. coli), Oxygen, Dissolved, Specific Conductivity, pH
Mountain Charlie Gulch	Sedimentation/Siltation
Newell Creek (Lower)	pH
Newell Creek (Upper)	Sedimentation/Siltation
Nobel Gulch Creek	Escherichia coli (E. coli)
Pacific Ocean (Point Ano Nuevo to Soquel Point)	Dieldrin
Pacific Ocean at Capitola Beach (Santa Cruz County)	Enterococcus, Total Coliform
Pacific Ocean at Cowell Beach (Santa Cruz County)	Enterococcus, Total Coliform
Pacific Ocean at Main Beach (Santa Cruz County), at Boardwalk	Enterococcus, Total Coliform
Pacific Ocean at Main Beach (Santa Cruz County), at San Lorenzo River mouth	Total Coliform
Pacific Ocean at Mitchells Cove Beach	Enterococcus, Total Coliform
Pacific Ocean at Natural Bridges Beach	Total Coliform
Pacific Ocean at New Brighton Beach (Santa Cruz County)	Total Coliform
Pacific Ocean at Rio Del Mar (Santa Cruz County), Aptos Creek mouth	Total Coliform
Pacific Ocean at Seabright (Castle) Beach	Total Coliform
Pacific Ocean at Twin Lakes Beach (Santa Cruz County)	Total Coliform
Pacific Ocean at Waddell Creek Beach	Total Coliform

Water Body	Impairment Constituent
Pinto Lake	Ammonia, Chlorophyll-a, DDT (Dichlorodiphenyltrichloroethane), Dieldrin, Mercury, Microcystins, Oxygen, Dissolved, Scum/Foam-unnatural, pH
Porter Gulch Creek	Enterococcus, Escherichia coli (E. coli)
Rider Creek	Sedimentation/Siltation
Rodeo Creek Gulch	Turbidity, pH
San Lorenzo River	Aluminum, Benthic Community Effects, Chlordane, Chloride, Chlorpyrifos, Enterococcus, Nitrate, PCBs (Polychlorinated biphenyls), Sedimentation/Siltation, Sodium, Temperature, water, Toxicity
San Lorenzo River Lagoon	Indicator Bacteria
San Vicente Creek (Santa Cruz County)	Aluminum
Santa Cruz Harbor	Arsenic, Copper, Dieldrin, Oxygen, Dissolved, PCBs (Polychlorinated biphenyls)
Schwan Lake	Escherichia coli (E. coli), Nutrients, Total Coliform
Scott Creek Lagoon	Chloride, Copper, Sodium, Total Coliform
Shingle Mill Creek	Nitrate, Sedimentation/Siltation
Soquel Creek	Enterococcus, Escherichia coli (E. coli), Oxygen, Dissolved, Toxicity
Soquel Lagoon	Indicator Bacteria, Oxygen, Dissolved, Sedimentation/Siltation, Temperature, water
Struve Slough	Chlorophyll-a, Escherichia coli (E. coli), Fecal Coliform, Oxygen, Dissolved, Toxicity, Turbidity, pH
Valencia Creek	Aluminum, Escherichia coli (E. coli), Sedimentation/Siltation
Waddell Creek Lagoon	Arsenic, Chloride, Selenium, Sodium, pH
Watsonville Slough	Aluminum, Chlorpyrifos, Copper, DDE (Dichlorodiphenyldichloroethylene), Imidacloprid, Malathion, Nickel, Nitrate, Oxygen, Dissolved, Pyrethroids, Toxicity, Turbidity
Zayante Creek	Chlorpyrifos, Sedimentation/Siltation, Toxicity

Source: State Water Resources Control Board, California 2024 Integrated Report, 303(D) Listed Waters. https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/2024-integrated-report.html

Groundwater Quality

Overextraction, leading to dropping groundwater levels and saltwater intrusion, has rendered some coastal groundwater wells unsuitable for use throughout the AMBAG region. Consequences of overdraft include declining groundwater levels, a decrease in groundwater quality, reduced streamflow, and seawater intrusion along the coast that destroys wells. The probability of saltwater intrusion is high due to the current groundwater overdraft situation in the Pajaro Valley, and the consequence of this occurring is high due to the economic effects of

fallowing large expanses of farmland to reduce groundwater pumping. In other areas, a rising water table could pose a risk to groundwater quality in the event of water table rise on commercial and residential structures and infrastructure, including the wastewater pump station near Rio Del Mar Esplanade in Santa Cruz County (County of Santa Cruz 2021).

As with much of the AMBAG region, one of the most persistent water quality problems in Monterey County is the intrusion of salt water into groundwater aquifers and wells (County of Monterey 2022). In Monterey County, the Pure Water Monterey Groundwater Replenishment Project is a collaborative effort led by Monterey One Water and the Monterey Peninsula Water Management District. The project treats and purifies up to 3,500 acre-feet of recycled water annually using advanced water purification technologies. This purified water is then injected into the Seaside Groundwater Basin, serving as a sustainable source of potable water and helping to mitigate seawater intrusion. The project supports long-term water supply reliability for the Monterey Peninsula, which faces increasing challenges from climate change, including reduced rainfall and rising sea levels that threaten coastal aquifers (Monterey One Water 2021).

While groundwater is the major source of water supply in San Benito County, most local groundwater in the county is mineralized and of marginal quality for either drinking or agriculture. This is because of both natural conditions and the effects of agricultural activities and urbanization (County of San Benito 2015a).

In Santa Cruz County, the Pure Water Soquel project is being spearheaded by Soquel Creek Water District in partnership with the City of Santa Cruz who will provide the source water. The project will purify 1500 acre-feet of water per year, which will be injected into the Mid-County Groundwater Basin for use as both a supply and for seawater intrusion prevention. Impacts from rising sea level will accelerate coastal erosion, increase the extent of coastal inundation, and increase localized elevated groundwater levels (County of Santa Cruz 2021).

b. Flooding and Dam Inundation

Flooding is associated with coastal storms, heavy rainfall, flash flooding, and run-off. Increased impervious surfaces, the channelization of streams, and increased development in floodplains has resulted in intensified flood flows and increased flooding. (County of Monterey 2022). Flooding in steep, mountainous areas is usually confined to the stream channel and adjacent floodplain. Larger rivers typically have longer, more predictable flooding sequences and broad floodplains.

Inundation also may be caused by dam failure or overtopping resulting from heavy precipitation. A dam failure is usually the result of the age of the structure, inadequate spillway capacity, or structural damage caused by an earthquake or flood. Dam failures typically occur when spillway capacity is inadequate and excess flow overtops the dam, or when internal erosion through the dam or foundation occurs. Complete failure occurs if internal erosion or overtopping results in a complete structural breach, releasing a high-velocity wall of debris-filled water that rushes downstream, and inundates downstream areas. Inundation, whether due to flooding or dam failure, has the potential to release pollutants as encountered throughout the path of the flood flow. (County of Monterey 2022).

Monterey County

In Monterey County, substantial wave run-up can take place during storms in the Pacific Ocean between November and February, in conjunction with high tides and strong winds, resulting in coastal flooding. Portions of Monterey County most susceptible to flooding are the Salinas Valley, the City of Seaside, the City of Monterey, and the Elkhorn Slough area (Figure 4.10-4) (County of Monterey 2022). Areas designated as 100-year and 500-year flood plains exist associated with the Salinas Valley and the Elkhorn Slough is associated with a 100-year flood plain. Seven existing dams are in or owned by Monterey County; four of which, specifically the San Antonio, Los Padres, Forest Lake, and Nacimiento facilities, pose an Extremely High downstream hazard and are considered by Federal Emergency Management Agency (FEMA) as High Hazard Potential Dams (County of Monterey 2022).

A dam failure is possible at any dam in Monterey County. The most likely location of a failure would be at dams classified as having extremely high downstream hazard, which as previously mentioned includes the Nacimiento, San Antonio, Forest Lake, and Los Padres Dams. Dam inundation maps show that the greatest risk from dam failure is in Carmel Valley, where failure of the Los Padres would cause inundation of urbanized areas and alter the riparian corridor. Dam failure in Salinas Valley would also be significant, whether caused by the failure of San Antonio or Nacimiento Reservoir. Studies reveal that either failure would overflow the 100-year floodplain in Salinas Valley. However, the risk would predominately be to agricultural land. The Nacimiento, San Antonio, and Los Padres Dams are older and are the most likely locations of a dam failure. All three dams and reservoirs are inspected annually to ensure that they are in good operating condition (County of Monterey 2022).

San Benito County

There are three potential sources of flood hazards in San Benito County: flooding along river and streams from excess storm runoff, flooding that might follow landslide blockage of stream canyons, and flooding of low-lying lands downstream of dams in the event of a dam failure. Roughly four percent of San Benito County is mapped within FEMA-designated high-risk (100-year) floodplains and less than one percent of the county is within low-risk floodplains (500-year) (County of San Benito 2015a). The San Juan and Hollister Valleys in northern San Benito County are most susceptible to 100-year floods. These two valleys constitute the largest low-lying area of the county, forming two structural basins between the Gabilan Range to the west and the Diablo Range to the east. Normal flooding processes in the county are driven by rainfall precipitation associated with regional frontal storm systems that occur from November through April. In addition, flooding may occur from landslide blockage of canyons and, as discussed below, from dam failure, particularly in identified flood zones (Figure 4.10-5) (County of San Benito 2015b).

Reservoirs could inundate portions of the County in the event of a dam failure. Dam failure can occur due to various natural or human causes. Dams are evaluated regularly to verify their structural integrity, including additional stresses that may result from local or regional earthquakes (County of San Benito 2015b). San Benito County may be subject to dam inundation

from three surface reservoirs within the County - Hernandez, Paicines, and San Justo - and from the Leroy Anderson Dam in neighboring Santa Clara County to the north (County of San Benito 2015b). The San Justo and Leroy Anderson Dams are located near urban areas. In the event of complete dam failure, water could inundate the San Juan Valley; however, the probability of such an occurrence is low (County of San Benito 2015b).

Santa Cruz County

Within Santa Cruz County there are numerous areas subject to flooding due to rivers, creeks, or coastal storms. The two main rivers in the county that are subject to flooding are the Pajaro River and the San Lorenzo River (County of Santa Cruz 2021). The Pajaro River and adjacent floodplain runs through agricultural lands within the Pajaro Valley and, downstream, through downtown Watsonville. The San Lorenzo River runs through the populated San Lorenzo Valley and into downtown Santa Cruz (Figure 4.10-6). A levee was constructed along the San Lorenzo River in Santa Cruz in 2002 which has substantially reduced the flood risk of downtown flooding (County of Santa Cruz 2021).

Given their locations, a major dam failure at either the Bay Street Reservoir or Newell Creek Dam could result in extensive flooding in the San Lorenzo Valley and the City of Santa Cruz (County of Santa Cruz 2021). A dam failure at either the Mill Creek, Oak Site, or Sempervirens Dams could result in inundation in northern Santa Cruz County, to the east of the community of Boulder Creek. Given the monitoring protocol at the Newell Creek and Bay Street reservoirs, the probability of dam failure is very low (County of Santa Cruz 2021).

c. Tsunami and Seiche

Tsunamis are high sea waves that are caused by earthquake, submarine landslide, or other disturbances. A seiche is a temporary disturbance or oscillation in water level of a lake or partially enclosed body of water, usually caused by changes in atmospheric pressure.

Monterey County

Since record keeping began in 1946, ten observed tsunamis have generated waves in Monterey County (County of Monterey 2022). Nine of these tsunamis were produced by earthquakes, one by a distant volcanic eruption, and most resulted in wave run-ups of about one meter or less. The entire coastal area of Monterey County is susceptible to a tsunami. However, the coastal low-lying areas and riverine valleys to the north are highly susceptible to tsunamis. The Monterey County Multi-Jurisdictional Hazard Mitigation Plan does not identify specific regional hazards from seiches (County of Monterey 2022).

San Benito County

San Benito County is an inland county separated from the Pacific Ocean by the Coast Range and does not contain any large bodies of water. Therefore, the County is not vulnerable to tsunamis or seiches (County of San Benito 2015b).

Figure 4.10-4 Monterey County Flood Map

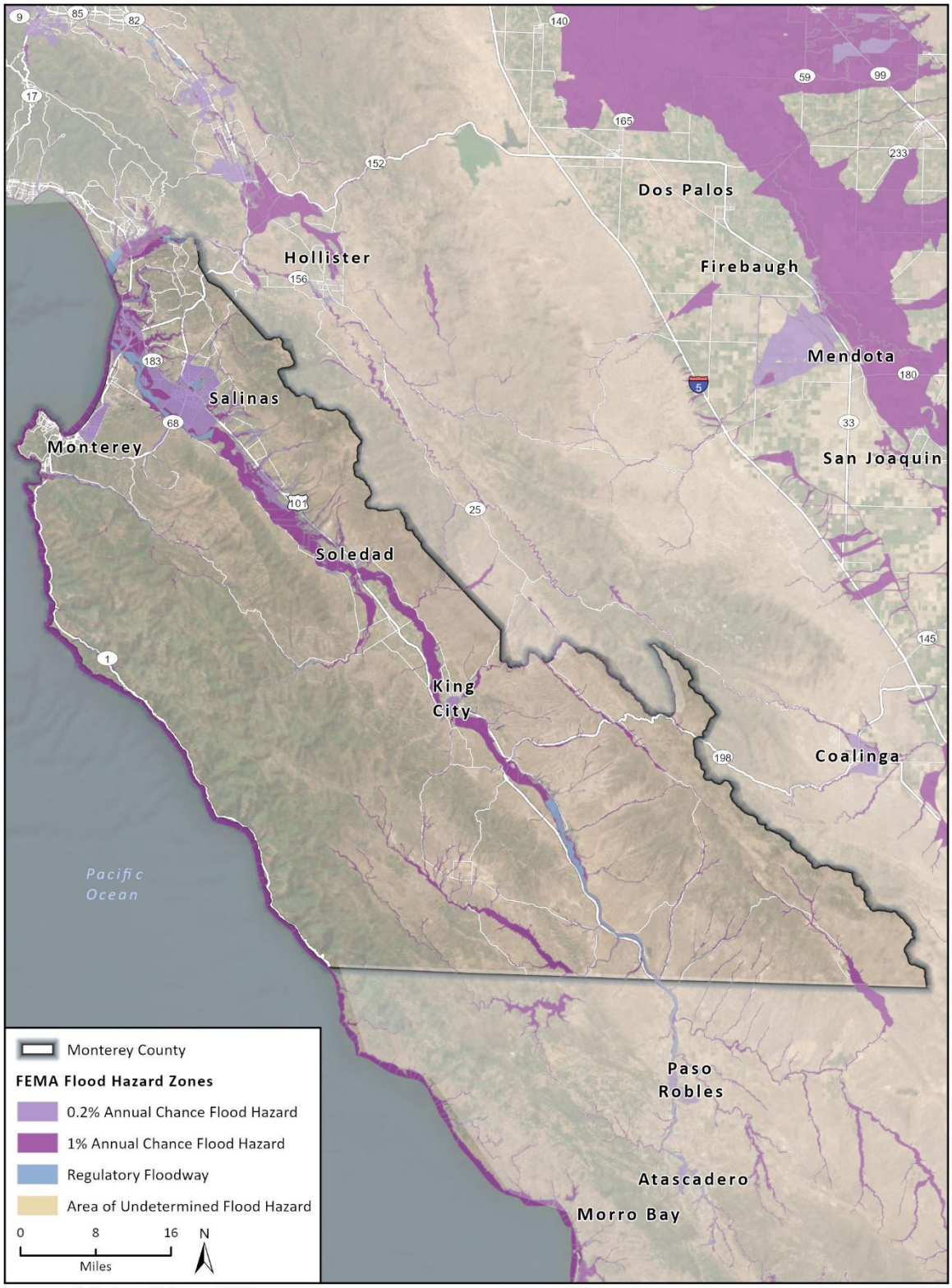


Figure 4.10-5 San Benito County Flood Map

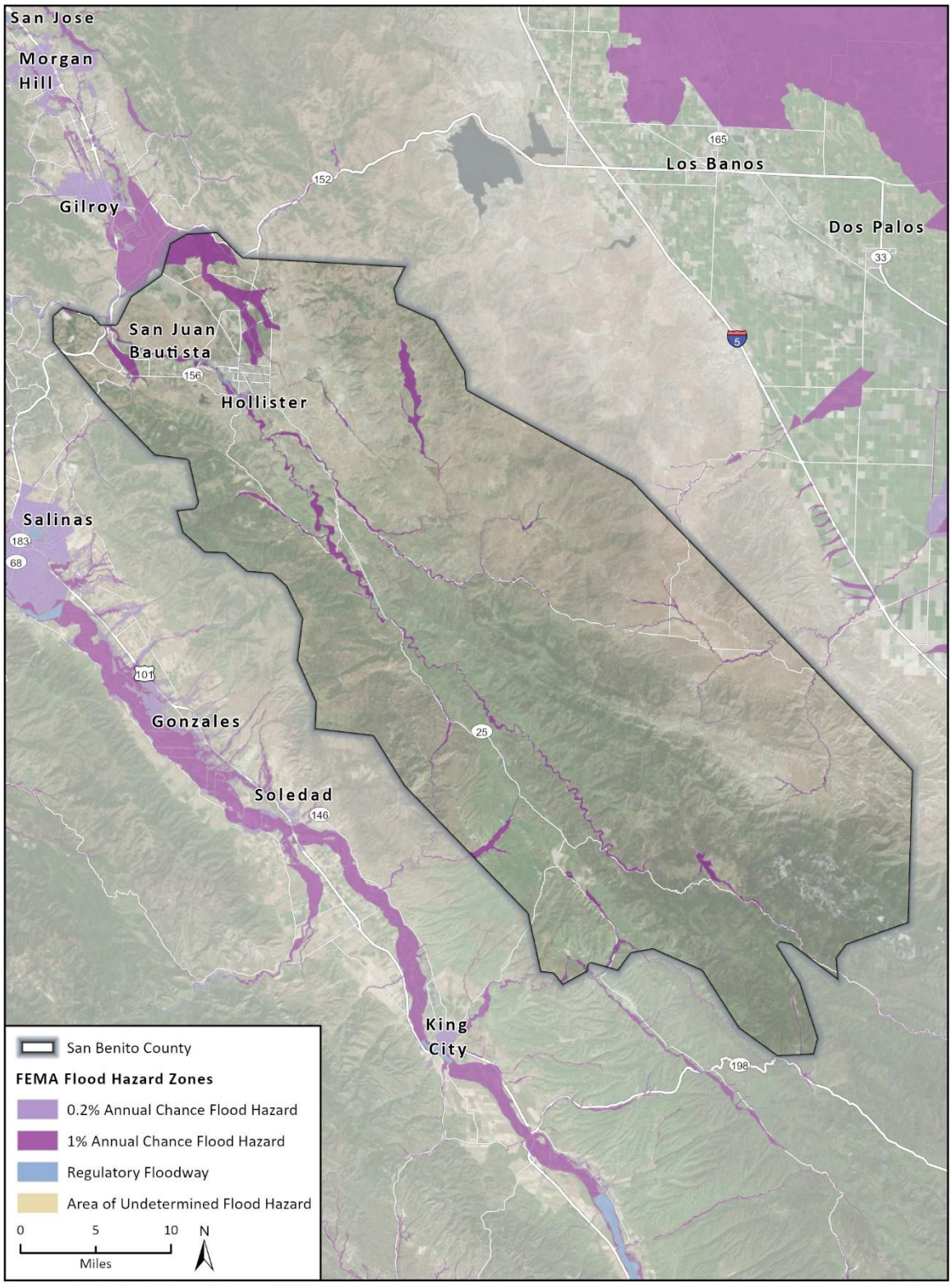
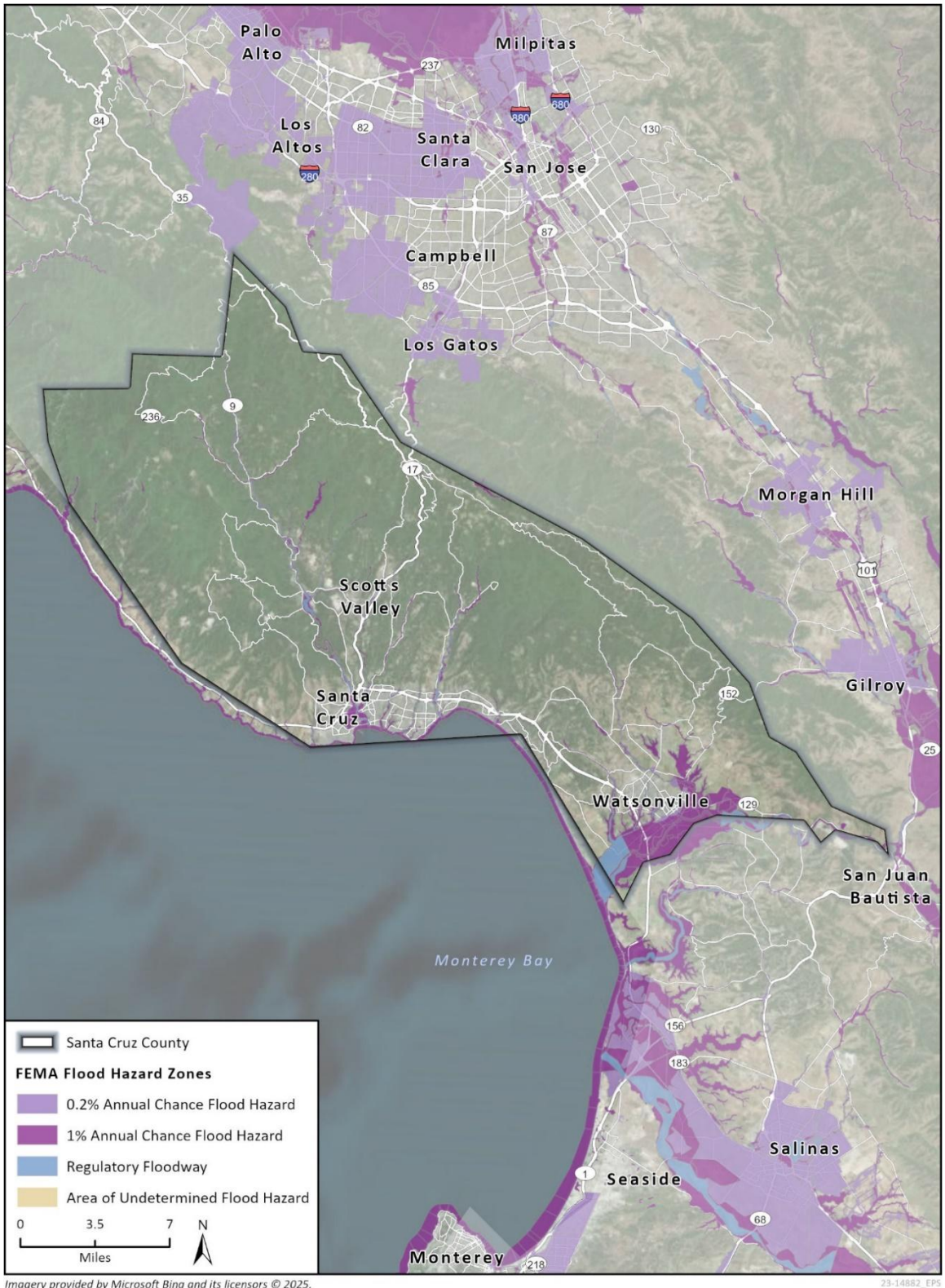


Figure 4.10-6 Santa Cruz County Flood Map



Santa Cruz County

Some damage associated with tsunamis has occurred along the Santa Cruz County coastline. Most recently, the magnitude 9.0 earthquake in Japan in 2011 caused inundation in Santa Cruz County. Several previous tsunamis, initiated by events across the world, have resulted in more substantial inundation to the county throughout its history (County of Santa Cruz 2021). Like Monterey County, the Santa Cruz County coastline could be inundated during a tsunami event. Areas most susceptible as referenced in the Santa Cruz County Local Hazard Mitigation Plan are in proximity to the Pajaro River mouth and low lying coastal areas between the Cities of Santa Cruz and Capitola. Seiches have been observed in the Santa Cruz Harbor, though are not identified as a geologic hazard in Santa Cruz County (County of Santa Cruz 2021).

4.10.2 Regulatory Setting

a. Federal Laws, Regulations, and Policies

Clean Water Act

Congress enacted the CWA, 33 U.S.C. Section 1251 et seq., formerly the Federal Water Pollution Control Act of 1972, with the intent of restoring and maintaining the chemical, physical, and biological integrity of the waters of the United States. The CWA requires states to set standards to protect, maintain, and restore water quality through the regulation of point source and non-point source discharges to surface water. Point source discharges are regulated by the National Pollutant Elimination System (NPDES) permit process (CWA Section 402). NPDES permitting authority is administered by the SWRCB and nine Regional Water Quality Control Boards (RWQCBs). The AMBAG region is within a region administered by the CCRWQCB. Section 401 of the CWA requires that any activity that would result in a discharge into waters of the U.S. be certified by the applicable RWQCB. This certification ensures that the proposed activity does not violate state water quality standards. Section 404 of the CWA authorizes the U.S. Army Corps of Engineers to regulate the discharge of dredged or fill material to the waters of the U.S. and adjacent wetlands. Discharges to waters of the U.S. must be avoided where possible, and minimized and mitigated where avoidance is not possible. Section 303(d) of the CWA requires states to establish TMDL programs for streams, lakes, and coastal waters that do not meet certain water quality standards.

Section 10 of the Rivers and Harbors Act

Section 10 of the Rivers and Harbors Act, administered by the U.S. Army Corps of Engineers, requires permits for all structures (such as riprap) and activities (such as dredging) in navigable waters of the United States.

Coastal Zone Act Reauthorization Amendments

The Coastal Zone Act Reauthorization Amendments of 1990 (CZARA) require coastal states to have a Coastal Nonpoint Pollution Control Program. CZARA provides state coastal management agencies regulatory control (federal consistency review authority) over all federal activities and federally licensed, permitted, or assisted activities. Additionally, CZARA requires implementation

of 56 management measures to achieve and maintain water quality standards, enforceable policies and mechanisms, and monitoring and tracking of management measure implementation.

National Flood Insurance Act/Flood Disaster Protection Act

The National Flood Insurance Act of 1968 (42 U.S.C. Section 4001 et seq.) made national flood insurance available for the first time. The Flood Disaster Protection Act of 1973 (42 U.S.C. Section 4001 et seq.) made the purchase of flood insurance mandatory for the protection of property located in Special Flood Hazard Areas. These laws are relevant because they led to mapping of floodplains and to local management of floodplain areas according to guidelines that include prohibiting or restricting development in flood hazard zones.

Floodplain Management (Executive Order 11988)

Executive Order 11988, issued in coordination with the National Environmental Policy Act of 1969, the National Flood Insurance Act of 1968, and the Flood Disaster Protection Act of 1973, directs federal executive agencies to avoid, wherever practicable, the short- and long-term adverse impacts associated with the occupancy and modification of floodplains, and to prevent direct or indirect support of floodplain development. This applies to agencies involved in acquiring, managing, or disposing of federal lands and facilities; funding or undertaking construction projects; and conducting programs that affect land use, such as water resource planning, regulation, and licensing. Agencies must evaluate the potential effects of their actions in floodplains, ensure that planning and budgeting reflect flood hazard considerations, and implement procedures that align with floodplain management policies.

b. State Laws, Regulations, and Policies

Porter Cologne Water Quality Control Act

The Porter Cologne Water Quality Control Act of 1967 Water Code Section 13000 et seq. requires the SWRCB and the nine RWQCBs to adopt water quality criteria to protect state waters. These criteria include the identification of beneficial uses, narrative and numerical water quality standards, and implementation procedures. The Water Quality Control Plan, or Basin Plan, protects designated beneficial uses of state waters through the issuance of Waste Discharge Requirements (WDRs) and through the development of TMDLs (CCRWQCB 2019). Anyone proposing to discharge waste that could affect the quality of the waters of the State must obtain a WDR authorization from the RWQCB or SWRCB as appropriate, in compliance with Porter-Cologne.

Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act (SGMA), mentioned above under "Groundwater," was enacted in September 2014, and establishes a structure for the local management of California's groundwater resources, towards the goal of facilitating sustainable groundwater management, or the management and use of groundwater in a manner that can be

maintained over a 50-year planning and implementation horizon without causing undesirable (i.e., unsustainable) results. Groundwater overdraft is a common hindrance to sustainable groundwater management, and is known to affect groundwater basins throughout the AMBAG region. SGMA establishes the key elements, presented below, which facilitate sustainable groundwater management including consideration to historical overdraft conditions.

1. Requires the establishment of a Groundwater Sustainability Agency (GSA) for each groundwater basin in the state, subject to Department of Water Resources (DWR) approval, with the GSA for each respective groundwater basin or subbasin consisting of one or more local agencies with management authority over the basin(s).
2. If the DWR does not approve of a proposed GSA, or if no agency steps forward or is formed to fulfill the role of GSA, this role defaults to the DWR which then assumes the GSA responsibilities, including development of a GSP for the affected basin(s).
3. Requires all groundwater basins designated by the DWR as Medium- or High Priority to prepare and implement a GSP to achieve and maintain sustainable groundwater conditions for the applicable basin according to a SGMA-established timeline, which depends upon the priority ranking of the basin. In Santa Cruz, San Benito, and Monterey counties, groundwater basins are all designated as Medium- or High Priority.
4. Provides for the proposed revisions, by local agencies, to the boundaries of a DWR Bulletin 118 basin, including the establishment of new subbasins.
5. Provides authority for DWR to adopt regulations to evaluate GSPs and review the GSPs for compliance every 5 years.
6. Requires DWR to establish Best Management Practices (BMPs) and technical measures for GSAs to develop and implement GSPs.

Within the AMBAG region, the Salinas Valley Basin GSA is responsible for development and implementation of a comprehensive GSP for the Salinas Valley Groundwater Basin, inclusive of its multiple subbasins. Those subbasins which have been designated by the California DWR as being Medium Priority or High Priority are identified in Table 4.10-2, which also shows the status of the GSP (or Alternative GSP) development for each subbasin. The Monterey Peninsula Water Management District GSA, Marina Coast Water District GSA, and City of Marina GSA are also responsible for implementing GSPs in their respective basins within Monterey County.

The San Benito County Water District GSA is the only GSA in San Benito County, exclusively managing the Gilroy-Hollister Valley Basin.

In Santa Cruz County, all basins are designated as being Medium Priority or High Priority, as identified in Table 4.10-2. Each GSA is responsible for implementing the GSP in its respective basin. These include the County of Santa Cruz GSA, Santa Margarita Groundwater Agency, Santa Cruz Mid-County Groundwater Agency GSA, and Pajaro Valley Water Management Agency GSA.

Table 4.10-2 Medium and High Priority Basins and GSP Status

Groundwater Basin Name (Basin Number)	County	SGMA Basin Prioritization[1]	GSP Status[2]
Santa Margarita (3-027)	Santa Cruz	Medium	GSP Approved (April 27, 2023)
Santa Cruz Mid-County (3-001)	Santa Cruz	High	GSP Approved (June 3, 2021)
Corralitos-Pajaro Valley (3-002.01)	Santa Cruz	High	Alternative GSP Approved (August 2019)
Gilroy-Hollister Valley-North San Benito (3-003.05)	San Benito	Medium	GSP Approved (July 23, 2023)
Salinas Valley-180/400 Foot Aquifer (3-004.01)	Monterey	High	GSP Approved (January 3, 2020); Review in Progress
Salinas Valley-Langley Area (3-004.09)	Monterey	High	GSP Approved (April 27, 2023)
Salinas Valley-East Side Aquifer (3-004.02)	Monterey	High	GSP Approved (April 27, 2023)
Salinas Valley-Monterey (3-004.10)	Monterey	Medium	GSP Approved (April 27, 2023)
Carmel Valley (3-007)	Monterey	Medium	Under development
Salinas Valley-Forebay Aquifer (3-004.04)	Monterey	Medium	GSP Approved (April 27, 2023)
Salinas Valley-Upper Valley Aquifer (3-004.05)	Monterey	Medium	GSP Approved (April 27, 2023)

[1,2] Department of Water Resources 2025a, 2025b

Adjudicated Areas

When water users within a basin are in dispute over legal rights to the water, a court can issue a ruling known as an adjudication, which determines and allocates water rights for the groundwater basin. Adjudications can cover an entire basin, a portion of a basin, or a group of basins and all non-basin locations between. The court decree will define the area of adjudication. The court typically appoints a watermaster to administer the court's decree. Adjudicated basins are not subject to SGMA.

In basins or areas where a lawsuit is brought to adjudicate, the groundwater rights of all the overliers and appropriators are determined by the court.

The court also decides:

1. Who the water rights owners are.
2. How much groundwater those rights owners can extract.
3. How the groundwater area will be managed. Often, a watermaster is emplaced by the court to manage the ownership of rights and water use.

Within the AMBAG region, the Seaside Basin is the only adjudicated basin.

Antidegradation Policy

California's antidegradation policy, formally known as the Statement of Policy with Respect to Maintaining High Quality Waters in California, restricts degradation of surface and ground waters. It protects waters where existing water quality is higher than necessary for the protection of beneficial uses. Any actions with the potential to adversely affect water quality must be consistent with the maximum benefit to the people of the State; not unreasonably affect present and anticipated beneficial use of the water; and not result in water quality less than prescribed in water quality plans and policies.

Cobey-Alquist Floodplain Management Act

The Cobey-Alquist Floodplain Management Act (Water Code Section 8400 et seq.) gives support to the National Flood Insurance Program by encouraging local governments to plan, adopt, and enforce land use regulations for floodplain management, to protect people and property from flooding hazards. The Act also identifies requirements that jurisdictions must meet to receive state financial assistance for flood control.

California Department of Transportation (Caltrans) Stormwater Permit

The *National Pollutant Discharge Elimination System Statewide Stormwater Permit And Waste Discharge Requirements For State Of California Department Of Transportation* (Caltrans MS4 Permit), Order No. 2022-0033-DWQ, regulates stormwater and non-stormwater discharges from Caltrans properties and facilities associated with operation and maintenance of the state highway system. It contains four basic requirements:

- Caltrans must comply with the requirements of the Construction Stormwater General Permit;
- Caltrans must implement a year-round program in all parts of the state to effectively control stormwater and non-stormwater discharges;
- Caltrans stormwater discharges must meet water quality standards through implementation of construction and operational BMPs, and other measures deemed necessary by SWRCB and/or other agency having authority in reviewing the stormwater component of the project; and
- Caltrans must comply with the prohibition of discharge of trash to surface waters of the State or deposition of trash where it may be discharged into surface waters of the State through compliance with the requirements of Attachment E of the Caltrans Stormwater Permit, with a demonstration of full compliance by December 2, 2030.

The Caltrans MS4 Permit incorporates the requirements of SWRCB Resolution 2015-0019, which amended the *Water Quality Control Plan for Ocean Waters of California* and the *Water Quality Control Plan for Inland Surface Waters, Enclosed Bays, and Estuaries of California* to include trash-related requirements, referred to in the order as the "Trash Provisions." Implementation of the Trash Provisions includes the following:

- Caltrans must install, operate, and maintain any combination of full capture systems, other treatment controls, and/or institutional controls for all storm drains that capture runoff from Significant Trash Generating Areas (where trash accumulates in substantial amounts). Caltrans must develop and implement monitoring plans that demonstrate such combinations achieve full capture system equivalency.
- Caltrans must coordinate efforts with MS4 permittees subject to NPDES permits that implement the Trash Provisions to install, operate, and maintain full capture systems, other treatment controls, and/or institutional controls in Significant Trash Generating Areas and/or Priority Land Uses.

To comply with the permit, Caltrans developed the Statewide Stormwater Management Plan to address stormwater pollution controls related to highway planning, design, construction, and maintenance activities throughout California. The Statewide Stormwater Management Plan assigns responsibilities within Caltrans for implementing stormwater management procedures and practices, as well as training, public education and participation, monitoring and research, program evaluation, and reporting activities. The Statewide Stormwater Management Plan describes the Caltrans stormwater management program and the minimum procedures and practices Caltrans uses to reduce pollutants in stormwater and non-stormwater discharges. It outlines procedures and responsibilities for protecting water quality, including the selection and implementation of BMPs. Projects on Caltrans facilities are required to follow the guidelines and procedures outlined in the latest Statewide Stormwater Management Plan and include BMPs in the project design to address stormwater runoff.

California Green Building Standards Code

The California Green Building Standards Code (CalGreen, Cal. Code Regs. Title 24, Part 11) includes mandatory measures for residential and nonresidential development. For example, Section 4.106.2 requires residential projects that disturb less than one acre and are not part of a larger common plan of development to manage stormwater drainage during construction through on-site retention basins, filtration systems, and/or compliance with a stormwater management ordinance. Section 5.106.1 requires newly constructed nonresidential projects and additions of less than one acre to reduce 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. Section 5.303 sets measures for indoor water use for non-residential development requiring metering devices to conserve water.

Phase II Municipal Stormwater Permit

The Municipal Stormwater Permitting Program regulates stormwater discharges from MS4s. The NPDES MS4 permits in California are issued in two phases by SWRCB and the RWQCBs. Phase I MS4 permits are issued by the RWQCBs to medium (i.e., serving between 100,000 and 250,000 people) and large (i.e., serving more than 250,000 people) municipalities. Most of these permits are issued to a group of co-permittees encompassing an entire metropolitan area. The Phase II

MS4 Permit is issued by the SWRCB and is applicable to smaller municipalities (i.e., populations of less than 100,000 people) and nontraditional small MS4s (e.g., military bases, public campuses, prison, and hospital complexes). The Phase II MS4 Permit (*Waste Discharge Requirements [WDRs] for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems [MS4s] General Permit],* Order No. 2013-0001-DWQ, NPDES No. CAS000004, as amended by Order Nos. 2015-0133-EXEC, 2016-0069-EXEC, 2017-0031-DWQ, 2018-0001-EXEC, 2018-0007-EXEC, and ORDER WQ 2019-0009-EXEC) became effective on July 1, 2013, last amended February 8, 2019, and covers Phase II permittees statewide, including a majority of the AMBAG region. The Phase I and Phase II MS4 Permits require permittees to develop a stormwater management program and individual dischargers to develop and implement Stormwater Management Plans.

Construction Stormwater General Permit

The *General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities*, Order No. 2022-0057-DWQ, NPDES No. CAS000002 (Construction Stormwater General Permit), adopted by SWRCB, regulates construction activities that include clearing, grading, and excavation resulting in soil disturbance of at least one acre of total land area. The Construction Stormwater General Permit authorizes the discharge of stormwater to surface waters from construction activities and requires all developers of land where construction activities will occur over more than one acre to do the following:

- Complete a Risk Assessment to determine pollution prevention requirements pursuant to the three risk levels established in the Construction Stormwater General Permit;
- Eliminate or reduce non-stormwater discharges to storm sewer systems and other waters of the United States;
- Develop and implement a Stormwater Pollution Prevention Plan (SWPPP) that specifies construction BMPs that will reduce pollution in stormwater discharges to the Best Available Technology/Economically Achievable/Best Conventional Pollutant Control Technology standards;
- Perform inspections and maintenance of all BMPs; and
- Conduct stormwater sampling, if required based on risk level.

To obtain coverage under the Construction Stormwater General Permit, a project applicant must electronically file all permit registration documents with SWRCB prior to the start of construction. Permit registration documents must include a Notice of Intent, Risk Assessment, site map, SWPPP, annual fee, and signed certification statement. The SWPPP must contain a visual monitoring program; a chemical monitoring program for "non-visible" pollutants to be implemented if there is a failure of BMPs; and a sediment monitoring plan if the site discharges directly to a waterbody listed on the 303(d) list for sediment.

Typical BMPs contained in SWPPPs are designed to minimize erosion during construction, stabilize construction areas, control sediment, control discharges from groundwater dewatering, and control pollutants from construction materials. The SWPPP must also include a discussion of the program to inspect and maintain all BMPs.

The Construction Stormwater General Permit also contains post-construction requirements for projects not covered under a Phase I or Phase II MS4 Permit. The Construction Stormwater General Permit requires implementation of operational BMPs and low impact development features to reduce runoff and pollutants in stormwater discharge.

The Construction Stormwater General Permit also includes groundwater dewatering requirements for projects not covered under a De Minimis or Low Threat Discharge Permit. The dewatering requirements mandate dischargers to implement BMPs to control the volume and velocity of dewatering discharges. The Construction Stormwater General Permit also requires testing and treatment, if necessary, of groundwater discharge to verify the discharge meets or exceeds the effluent limitations specified in the permit.

Industrial Stormwater Permit

The *General Permit for Stormwater Discharges Associated with Industrial Activities* (Industrial General Permit; Order No. 2015-0122-DWQ; NPDES No. CAS00001, as amended in 2015 and 2018) regulates operation of industrial facilities in California based on the Standard Industrial Classification Codes specified in the permit. These facilities include, but are not limited to, manufacturing plants, mining facilities, oil and gas facilities, hazardous waste facilities, landfills, wastewater treatment facilities, recycling facilities, and vehicle maintenance shops that have the potential to discharge stormwater runoff into water bodies. To comply with the Industrial General Permit, the operators of these regulated industrial facilities must implement an operational SWPPP that outlines the measures and stormwater BMPs the operator of an industrial facility must implement to reduce stormwater pollution. Operators of facilities regulated by the Industrial General Permit are also required to conduct stormwater monitoring of pollutants including, but not limited to, sediment, metals, oils, and total suspended solids. In addition, the Industrial General Permit requires industrial discharge to comply with TMDL implementation requirements for impaired water bodies. The SWRCB and RWQCBs implement and enforce the Industrial General Permit, which may impact any industrial development under the 2050 MTP/SCS land use scenario.

California Coastal Act

The California Coastal Act (Public Resources Code Section 30000 et seq.) is the primary law that governs decisions of the Coastal Commission. Chapter 3 of the California Coastal Act contains Coastal Resources Planning and Management Policies. Policies include protection of certain water oriented recreational activities (Section 30220); minimizing the adverse effects of wastewater discharge, controlling runoff, and preventing depletion of ground water supplies (Section 30231); and water supply and flood control through channelization, dams, or other substantial alternations (Section 30236).

c. Local Laws, Regulations, and Policies

Salinas Phase I Municipal Sources (MS4)

The Phase I MS4 Permits are issued by the RWQCBs and are applicable to larger municipalities (i.e., populations of greater than 100,000 people). The AMBAG region has one Phase I MS4 for the City of Salinas. This NPDES permit regulates the discharge of stormwater within the City of Salinas. Specific guidance is administered through the Salinas Phase I MS4 Permit, as presented in Order No. R3-2019-0073 which became effective on October 1, 2019.

The Salinas Phase I Stormwater Permit regulates stormwater runoff from development projects in the city, and requires that development projects adhere to the Central Coast Water Board approved Post-Construction Storm Water Management Requirements for Development Projects in the Central Coast (Post-Construction Requirements).

Other jurisdictions within the AMBAG region are covered under the Statewide Phase II MS4 permit, as discussed above. There are many Phase II MS4 permittees in the AMBAG region. Some examples of MS4 permittees in the region including the County of Santa Cruz, City of Santa Cruz, City of Capitola, City of Hollister, City of Monterey, and County of Monterey.

Central Coast Post-Construction Stormwater Requirements

The Post-Construction Requirements became effective on September 6, 2012 through adoption of Resolution R3-2012-0025. Resolution R3-2012-0025 made findings that Central Coast municipalities must implement the Post-Construction Requirements to comply with the statewide Phase II Municipal General Permit, Order No. 2003-0005-DWQ in effect at that time. The primary objective of these Post-Construction Stormwater Management Requirements is to ensure that the permittee is reducing pollutant discharges to the maximum extent practicable, and preventing stormwater discharges from causing or contributing to a violation of water quality standards in all applicable development projects that require approvals and/or permits issued under the permittee's planning, building, or other comparable authority. Regulated projects include all new development or redevelopment projects that create and/or replace greater than 2,500 square feet of impervious surface. Therefore, many of proposed land use changes as facilitated by the 2050 MTP/SCS would be regulated by the Central Coast Post-Construction Stormwater Requirements. Performance requirements contained within relate to site design and runoff reduction, water quality treatment, runoff retention, peak management, and special circumstances. Specific provisions include, but are not limited to, limiting disturbance of creeks and natural drainage features, implementing low impact development treatment systems, and compliance with stormwater control plan requirements.

Monterey County

The Monterey County Code Chapter 16.14 (Urban Stormwater Quality Management and Discharge) was adopted to enhance watercourses within the unincorporated urbanized areas by controlling the entry of urban pollutants into stormwater runoff that may enter the County storm drain system. Other goals of this chapter, under Ordinance No. 5154, Section 2, 3-16-2010, include, but are not limited to: benefit the people and the environment of the County by

protecting water quality in the waters within its jurisdiction, reduce the presence of pollutants in stormwater to the maximum extent practicable, and effectively prohibit non-stormwater discharges into the County storm drain system. In addition, Monterey County has adopted an Agricultural Water Conservation Plan (Ordinance 3851) requiring growers in agricultural zoned property to file plans with the Monterey County Water Resources Agency showing water conservation measures implemented during the previous year. Similarly, an ordinance requiring the filing of Urban Water Conservation Plans (Ordinance 3886) was adopted in 1996. Monterey County Code Section 16.16.050 contains provisions for flood hazard reduction. Provisions include anchoring, construction materials and methods, elevation and floodproofing and flood openings. Section 21.64.130 provides specific regulations to protect the Carmel River and surrounding Carmel Valley floodplain, to promote the public health and safety by lessening local flood potential and flood related hazards.

The Monterey County General Plan Conservation and Open Space Element (County of Monterey 2010) contains goals and policies related to hydrology and water quality. Specifically, Goal OS-3 is to, "…prevent soil erosion to conserve soils and enhance water quality." Related policies under Goal OS-3 are to implement BMPs (Policy OS-3.1), establish criteria to evaluate and address drainage, water quality and stream stability problems from increased stormwater runoff (Policy OS-3.3), and regulation of activity on slopes to reduce water quality impacts (Policy OS-3.5).

Monterey County, along with the Monterey Peninsula cities of Carmel-by-the-Sea, Del Rey Oaks, Monterey, Pacific Grove, Sand City, and Seaside, is a participating member of the Monterey Regional Storm Water Management Program (MRSWMP). Participating members collaborate on projects and other permit-related activities to satisfy certain individual MS4 General Permit requirements.

Cities in Monterey County

The General Plans and Municipal Codes of the cities within Monterey County contain stormwater policies like those applicable within the county. Compliance with county, state, and federal stormwater requirements would facilitate compliance with local stormwater regulations at the city level. For example, the City of Monterey's General Plan contains goals, policies, and programs related to hydrology and water quality in the Safety Element. Policy a.17 requires applicable new development and redevelopment to incorporate storm drainage and water quality improvements into their design plans for construction, and to protect downstream watershed processes, in compliance with existing environmental regulations and associated development agreements (City of Monterey 2024). Additionally, in October 2024 the City of Salinas adopted its final Stormwater Master Plan Update. The Stormwater Master Plan Update includes analyses of the city's collection system capacity, impact of future developments and land use changes, and a prioritized capital improvement program (City of Salinas 2024).

San Benito County

The San Benito County Code of Ordinances Chapter 19.17 (Grading, Drainage and Erosion Control) sets forth rules and regulations to control excavation, grading, drainage and erosion, establishes the administrative procedure for issuance of permits, and provides for approval of plans and inspection of grading construction, drainage measures and erosion control methods. Pursuant to Section 19.17.011(c), in granting a grading permit, the county may attach such conditions as necessary to prevent creation of a public nuisance or hazard to public or private property. The conditions may include, but are not limited to:

- The use of check dams, cribbing, rip rap, or other devices to prevent erosion;
- Application of mulching, fertilizing, watering, or other methods to establish new vegetation, and stockpiling and reapplication of topsoil;
- Restricting the locations of where earth or organic material may be deposited;
- Requiring the preparation of erosion control plans indicating proposed methods for the control of runoff, erosion, and sediment control;
- Requiring the preparation of revegetation plans detailing the revegetation of all exposed surfaces during development; and
- Requiring the preparation of drainage plans that include on-site retention of water to pre-development levels.

Increases in peak stormwater flows are addressed in the San Benito County Code of Ordinances, Title 23 (Subdivision Ordinance), Chapter 23.31 (Improvement Designs), Article III (Storm Drainage Design Standards). These standards focus on the 100-year design storm standard for the sizing of detention basins used to provide peak flow attenuation. Chapter 15.05 of the San Benito County Code governs the utilization of water resources in the county. It provides for a permitting system for the extraction of groundwater as well as measures intended to protect these resources. Section 19.15 of the San Benito County Code of Ordinances contains provisions for flood hazard reduction for construction, utilities, subdivisions, recreational vehicles, and manufactured homes. Specific construction standards include anchoring, elevation and floodproofing, and construction materials and methods.

The San Benito County 2035 General Plan (County of San Benito 2015a) Public Facilities and Services Element Goal PFS-6 is, "…to manage stormwater from existing and future development using methods that reduce potential flooding, maintain natural water quality, enhance percolation for groundwater recharge, and provide opportunities for reuse." This goal is supported by policies PFS-6.1 for adequate stormwater facilities, PFS-6.2 use of best management practices, PFS-6.3 natural drainage design, PFS-6.7 runoff water quality, and PFS-6.8 reduce erosion and sedimentation. The Natural and Cultural Resources Element contains Policy NCR-4 related to water resources, which is, "…to protect water quantity and quality in natural water bodies and groundwater basins and avoid overdraft of groundwater resources." The goal is supported by Policy NCR-4.2 water quality tests, Policy NCR-4.5 groundwater recharge, and Policy NCR-4.7 best management practices.

San Benito County is a member of the Pajaro River Watershed Flood Prevention Authority, established in 2000, with the mission to identify, fund, and implement flood prevention and control strategies in the Pajaro River Watershed.

Cities in San Benito County

The General Plans and Municipal Codes of the cities within San Benito County contain stormwater policies like those applicable within the county. Compliance with county, state, and federal stormwater requirements would facilitate compliance with local stormwater regulations at the city level. For example, the City of San Juan Bautista's 2035 General Plan's Land Use and Conservation Elements contains goals, objectives, and policies related to hydrology, and water quality and supply. Objective LU 2.7 prohibits land uses for gas and oil exploration to protect groundwater supplies and water quality. Goal CO 2 aims for clean water for residents and visitors by improving groundwater quality by maintaining high potable water quality standards (Policy CO 2.1.1).

Santa Cruz County

The Santa Cruz County Code of Ordinances Chapter 7.79 sets forth rules and regulations to control runoff and pollution by protecting the surface and groundwater quality, groundwater recharge, beneficial uses, and watershed health of receiving waters of the county from discharge of pollutants. Sections 7.79.040 through 7.79.060 prohibit discharges, illicit connections, and waste disposal into receiving waters. Section 7.79.100 requires BMPs for construction activities to be planned prior to issuance of a county grading permit. Chapter 16.22 of the Santa Cruz County Code of Ordinances establishes rules and regulations to eliminate and prevent the conditions of accelerated erosion. Per Section 16.22.060, prior to issuance of a building permit or development permit, an erosion control plan indicating proposed methods for the control of runoff, erosion, and sediment movement must be submitted to and approved by the county. Santa Cruz County Code of Ordinances Section 12.10.220 adopts the California Residential Building Code, which includes base flood elevation and design flood evaluation for flood resistant development.

The Santa Cruz County General Plan and Local Coastal Program contains objectives and policies specific to water supply, wastewater treatment, disposal, and drainage. Specifically, Goal ARC-4 Water Resources is to, "Protect and manage water resources in the County in order to preserve the quality and quantity of surface water and groundwater supplies and protect natural habitats for current and future generations." The objective is implemented through ARC-4.2.3 (LCP) Water Quality Constraint Area Designation, which designates areas located within one mile of upstream intakes as water quality constraint areas, and ARC-4.2.3 through ARC-4.2.7 which designate and require new parcel sizes to adhere to certain thresholds to maintain watersheds and supplies. Additionally, Objective ARC-4.4 Surface Water Quality is, "…to protect and enhance surface water quality in the County's streams, coastal lagoons, and marshes by establishing best management practices on adjacent land uses." This objective is implemented through ARC-4.4.1 (LCP), Impacts from New Development on Water Quality, which directs to not approve new development

adjacent to marshes, streams, and bodies of water if such development would cause adverse impacts on water quality that cannot be fully mitigated; ARC-4.4.3 (LCP), Erosion Control for Stream and Lagoon Protection, which, for all new and existing development and land disturbances, requires the installation and maintenance of sediment basins, and/or other strict erosion control measures, as needed to prevent siltation of streams and coastal lagoons.; and ARC-4.4.4 (LCP), Protecting Riparian Corridors and Coastal Lagoons, which requires drainage facilities to infiltrate, filter, or treat stormwater runoff as needed to protect water quality for all new development within 1,000 feet of riparian corridors or coastal lagoons, encouraging vegetative-based treatments where feasible (County of Santa Cruz 2024).

Santa Cruz County and the City of Capitola have a Stormwater Management Program (2010) that builds on efforts to preserve and enhance Santa Cruz County watersheds and is the county and city's response to the new statewide NPDES permit requirements for agencies designated by the SWRCB. Activities in the Stormwater Management Program are based on the U.S. Environmental Protection Agency (US EPA) stormwater regulations, the SWRCB General Permit for Discharges of Stormwater from Small Municipal Separate Storm Sewer System (Small MS4), and CCRWQCB guidance as contained within the Model Urban Runoff Program (MURP), which guides the development of urban runoff programs for small municipalities.

Cities in Santa Cruz County

The General Plans and Municipal Codes of the cities within Santa Cruz County contain stormwater policies like those applicable within the county. Compliance with county, state, and federal stormwater requirements would facilitate compliance with local stormwater regulations at the city level. For example, the City of Santa Cruz 2030 General Plan contains objectives and policies relevant to hydrology and water quality within Chapter 7, *Civic and Community Facilities*, and Chapter 10, *Natural Resources and Conservation*. Specifically, NRC1.2 encourages low impact uses and practices in watershed lands upstream of the city's riverine, stream, and riparian environments, while CC3.3.1 directs to manage watershed lands relative to protecting the sources of drinking water. CC5.1 directs to develop and maintain a Stormwater Master Plan, and CC5.1.1 implements the city's stormwater quality program. CC5.1.8 requires new development to maintain predevelopment runoff levels (City of Santa Cruz 2019). Additionally, the City of Watsonville's Growth and Conservation Strategy in their 2005 General Plan contains goals and policies pertaining to water conservation (City of Watsonville 1994). Policy 3.D, Establishment of a Greenbelt, directs the city to, "…protect natural resources – groundwater recharge areas, riparian areas, rivers, creeks, sloughs, visual access to open space, and wildlife habitat."

Many cities within the AMBAG region have similar hydrology and water quality goals and policies in their respective general plans.

4.10.3 Impact Analysis

a. Methodology and Significance Thresholds

Impacts to hydrology and water quality are evaluated based on adherence to local, state, and federal standards; the nature of potential soil disturbance, construction activities, and

groundwater dewatering during construction; potential change in land use and operational activities; potential changes in pre- and post-project impervious surface areas and stormwater flows; and compliance with NPDES requirements, including construction and operational BMPs for control of surface runoff and reduction of pollutants in stormwater runoff. For this programmatic analysis, proposed projects are geospatially compared to existing floodplains in the region to determine whether project implementation could pose an environmental risk related to flooding, inundation, or related downstream pollution impacts.

Appendix G of the *CEQA Guidelin*es identifies the following criteria for determining whether a project's impacts would have a significant impact on hydrology and water quality:

1. Violate any water quality standards or waste discharge requirements, or otherwise substantially degrade surface or ground water quality;
2. Substantially decrease groundwater supplies or interfere substantially with groundwater recharge, such that the project may impede sustainable groundwater management of the basin;
3. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site;
4. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner which would substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;
5. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner that would create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems, or provide substantial additional sources of polluted runoff;
6. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows;
7. In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due to project inundation; or
8. Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan.

b. Project Impacts and Mitigation Measures

The following section describes hydrology and water quality impacts associated with the transportation projects and future land use scenario in the 2050 MTP/SCS. Table 4.10-3 included in Section 4.10.3(c), below summarizes the specific 2050 MTP/SCS transportation projects that may result in the hydrology and water quality impacts discussed below. In general, implementation of proposed transportation improvements and the reasonably foreseeable

future development facilitated under the land use scenario envisioned by the 2050 MTP/SCS would result in the hydrology and water quality impacts as described in the following sections.

Threshold 1:	Would the project violate any water quality standards or waste discharge requirements, or otherwise substantially degrade surface or ground water quality?
Threshold 3:	Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner which would result in substantial erosion or siltation on- or off-site?

Impact HYD-1 **TRANSPORTATION IMPROVEMENTS AND FUTURE PROJECTS INCLUDED IN THE LAND USE SCENARIO ENVISIONED IN THE 2050 MTP/SCS WOULD RESULT IN SOME STORMWATER DISCHARGE, WOULD RESULT IN ADDITIONAL IMPERVIOUS SURFACES, AND WOULD ALTER SOME SITE-SPECIFIC DRAINAGE PATTERNS. ALL PROJECTS WOULD COMPLY WITH APPLICABLE WATER QUALITY STANDARDS OR WASTE DISCHARGE REQUIREMENTS, AND WOULD NOT SUBSTANTIALLY ALTER THE EXISTING DRAINAGE PATTERN OF THE OVERALL REGION OR OF THE SPECIFIC SITE OR AREA IN A MANNER WHICH WOULD RESULT IN SUBSTANTIAL EROSION OR SILTATION. WITH COMPLIANCE WITH EXISTING REGULATIONS, IMPACTS WOULD BE LESS THAN SIGNIFICANT.**

Implementation of proposed transportation improvements and future projects included in the land use scenario envisioned in the 2050 MTP/SCS would result in both short-term and long-term impacts to water quality.

Increase in Impervious Surfaces from Transportation Projects

Certain transportation improvements would increase overall impervious surface area throughout the AMBAG region. For example, new roadways or road widening projects would introduce pavement in areas that are currently undeveloped. Infill development projects envisioned under the land use scenario would also introduce impervious surfaces, if the infill site is currently unpaved. However, it is likely that most infill sites are already developed, thus minimizing the increase of impervious surfaces. These and other more outlying projects that would increase impervious surfaces may generate adverse impacts to surface water quality.

Pollutants and chemicals associated with urban activities would run off new roadways and other new impervious surfaces flowing into nearby bodies of water during storm events. These pollutants would include but are not limited to: heavy metals from auto emissions, oil, grease, debris, and air pollution residues. Similarly, 2050 MTP/SCS projects with landscaping may require fertilizer/pesticide application, which would enter nearby bodies of water and cause adverse effects to water quality. Such contaminated urban runoff may remain largely untreated, thus resulting in the incremental long-term degradation of water quality. Short-term adverse impacts to surface water quality may also occur during the construction periods of individual improvement projects because areas of disturbed soils would be highly susceptible to water erosion and downstream sedimentation.

This impact is of particular concern where projects are located on previously contaminated sites. Without effective erosion and stormwater control, contaminated soils exposed during construction activities may result in surface water contamination. In addition, grading and

vegetation removal in proximity to creeks for construction, widening, and bridge repair could increase erosion and sedimentation of creek banks. This could affect both water quality and the stability of slopes along the creeks.

Construction-Related Water Quality Control

As discussed in Section 4.10.2, *Regulatory Setting*, the Construction Stormwater General Permit regulates construction projects that would disturb greater than one acre of land area. The Construction Stormwater General Permit requires the preparation of a SWPPP that contains specific BMPs to control the discharge of pollutants, including sediment, into the local surface water drainages. Specific BMPs may include, but are not limited to: silt fencing, fiber rolls, trenching, and slop stabilization techniques. Almost all 2050 MTP/SCS projects, especially new and extended roadways, would disturb more than one acre and would be subject to these regulations. In addition, CalGreen regulations (Cal. Code Regs. Title 24, Part 11) include mandatory measures for residential and nonresidential development. Section 5.106.1 requires newly constructed nonresidential projects and additions of less than one acre to reduce 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. At a local level, the cities and counties within the AMBAG region have their own policies and regulations governing stormwater discharge and erosion contained within their General Plans and Municipal Codes, as discussed in Section 4.10.2, *Regulatory Setting*. These regulations would limit the impact of such construction projects to a less than significant level.

Construction of transportation and development projects under the 2050 MTP/SCS would also result in the permanent change of existing drainage patterns on individual project sites or within a project area, which would impact water quality. Project grading and construction of impervious surfaces for transportation projects may alter existing drainage patterns by altering slopes and reducing infiltration. Additionally, development projects included in the SCS land use scenario would also increase impervious surfaces and develop structures that may alter existing drainages. However, compliance with regulations, including the Construction Stormwater General Permit, would reduce impacts from project construction by requiring measures to reduce runoff and pollutants from leaving a project site.

Operational Water Quality Control

For operational water quality control, the NPDES MS4 Phase I and Phase II requirements, as discussed in Section 4.10.2, *Regulatory Setting,* require agencies and developments to implement SWMPs, which in turn require the implementation of source and treatment control measures. NPDES MS4 permittees are also required to develop and enforce ordinances and regulations to reduce the discharge of sediments and other pollutants in runoff and must verify compliance. The majority of the AMBAG region is covered by the Phase II MS4 Permit, with the exception of the City of Salinas which is covered by the Phase I MS4 Permit. Development and local transportation projects that create or replace greater than 2,500 square feet of impervious

surface would be required to the Post-Construction Stormwater Management Requirements for Development Projects in the Central Coast region and implement operational BMPs to reduce pollutants in stormwater runoff.

For Caltrans projects, the Caltrans specific Stormwater Permit, as discussed Section 4.10.2, *Regulatory Setting*, regulates stormwater and non-stormwater discharges from Caltrans properties and facilities associated with operation and maintenance of the state highway system. The Caltrans MS4 Permit incorporates the requirements of SWRCB Resolution 2015-0019. Additionally, Caltrans developed a Statewide Stormwater Management Plan which describes the Caltrans stormwater management program and the minimum procedures and practices used to reduce pollutants in stormwater and non-stormwater discharges. It outlines procedures and responsibilities for protecting water quality, including the selection and implementation of BMPs. Projects on Caltrans facilities are required to follow the guidelines and procedures outlined in the latest Statewide Stormwater Management Plan and include BMPs in the project design to address stormwater runoff.

Any projects involving industrial facilities in California including, but not limited to, manufacturing plants, mining facilities, oil and gas facilities, hazardous waste facilities, landfills, wastewater treatment facilities, recycling facilities, and vehicle maintenance shops that have the potential to discharge stormwater runoff into water bodies, are required to comply with the regulations contained within the Industrial General Permit. To comply with the Industrial General Permit, the operators of these regulated industrial facilities must implement an operational SWPPP that outlines the measures and stormwater BMPs the operator of an industrial facility must implement to reduce stormwater pollution. Operators of facilities regulated by the Industrial General Permit are also required to conduct stormwater monitoring of pollutants, and industrial discharge must comply with TMDL implementation requirements for impaired water bodies.

Some typical BMPs to meet regulatory standards for project operation include erosion control and revegetation programs, low impact development (LID), alternative discharge options, and integrated pest management techniques in landscaped areas. During operations and maintenance of envisioned projects, operational BMPs would result in compliance with applicable stormwater runoff discharge permits. In addition, consistent with the Post-Construction Stormwater Management Requirements for development projects in the Central Coast region (July 2013), post project stormwater flows from a project site are required to be the same or less than pre-project stormwater flows. Based on compliance with these requirements, land use development patterns included in the 2050 MTP/SCS would not result in impacts to the local stormwater system.

Likewise, some transportation projects would also increase impervious surface area compared to existing conditions, such as transportation projects that involve adding new or additional travel lanes to paved roads. Depending on the leading jurisdictional agency, transportation projects would be required to comply with the relevant MS4 permit, either the Phase II MS4, Phase I MS4, or Caltrans MS4. Depending on the location and design specific to transportation projects included in the 2050 MTP/SCS, stormwater runoff may be captured in existing storm drain systems and conveyed to local or regional wastewater treatment facilities. Additionally, roadways, such as state highways are often adjacent to pervious surfaces, such as gravel

shoulders, agricultural fields, or other unpaved surfaces. Runoff from the roadway surface can flow overland into these pervious areas and infiltrate the ground, reducing impacts to the local stormwater system.

Wastewater Treatment and Water Quality

The land use pattern included in the 2050 MTP/SCS would generate new sources of wastewater, which would also be conveyed to wastewater treatment facilities in the region for secondary or tertiary treatment. Discharges of treated wastewater, also called effluent, from the treatment plants are regulated by the RWQCB and must meet water quality effluent limitations established in the individual NPDES permit issued by the RWQCB for the treatment plants. Thus, although implementation of the 2050 MTP/SCS would increase the volume of point-source wastewater discharges in the AMBAG region at individual treatment plants, required compliance and monitoring of effluent prior to discharge from treatment facilities would ensure impacts would be less than significant.

Development under the 2050 MTP/SCS would not substantially degrade water quality or violate water quality standards because compliance with state regulation such as NPDES and MS4 permits would require implementation of BMPs and development to reduce discharge of runoff and maintain water quality. In addition, local ordinances require measures such as erosion control reduce the discharge of pollutants into storm drain systems. Although individual projects included in the 2050 MTP/SCS have the potential to adversely affect water quality at a project specific level, projects would adhere to existing regulations related to water quality. Therefore, water quality impacts would be less than significant.

Mitigation Measures

None required.

Threshold 2: Would the project substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Impact HYD-2 **WITH COMPLIANCE WITH EXISTING REGULATIONS, TRANSPORTATION IMPROVEMENTS AND FUTURE PROJECTS INCLUDED IN THE LAND USE SCENARIO ENVISIONED IN THE 2050 MTP/SCS WOULD NOT SUBSTANTIALLY DEPLETE GROUNDWATER SUPPLIES OR INTERFERE SUBSTANTIALLY WITH GROUNDWATER RECHARGE SUCH THAT SUSTAINABLE GROUNDWATER MANAGEMENT OF THE BASIN WOULD BE IMPEDED. IMPACTS WOULD BE LESS THAN SIGNIFICANT.**

Groundwater recharge rates and patterns may be affected by development that increases the extent of impermeable surfaces, such as concrete and asphalt, which inhibit the infiltration of surface water runoff to the subsurface. As a result, the volume and velocity of surface water runoff across the new impermeable surfaces also increases. These effects can be reduced through the implementation of LID features, which include systems and practices designed to simulate natural processes of runoff and infiltration. Such features may include but are not

limited to vegetated swales, permeable paving, and landscaping incorporated into the design of a proposed project to reduce the adverse effects associated with new impervious surfaces by facilitating the infiltration of surface runoff to the subsurface.

The 2050 MTP/SCS encourages infill development within urbanized areas of the AMBAG region, and the land development envisioned by the 2050 MTP/SCS would interfere with groundwater recharge by increasing the extent of impervious surfaces already present in this area. Urbanized areas are typically characterized by extensive impervious surfaces such as buildings and paved roads; as such, infill development would have minimal potential to further alter the rates and patterns of groundwater recharge to the overall basin. However, infill as well as any outlying development on currently unpaved sites would result in a net increase of impervious surfaces in the area and would have associated impacts on site specific runoff and infiltration patterns.

Land Use

As development under the 2050 MTP/SCS occurs, site specific drainage features would be designed to retain, capture, and convey increased runoff in accordance with the city or county design standards and as applicable requirements, including compliance with all appropriate state and regional NPDES MS4 permits. These would include the Phase II MS4 permit which covers a majority of the AMBAG region, the Phase I MS4 permit, or the Industrial General MS4 permit, as discussed above under Impact HYD-1, above. Compliance with these standards and regulations typically includes the use of LID features which, as described above, are designed to simulate natural processes of runoff and infiltration to minimize or avoid potential adverse effects associated with new development.

Transportation

In addition to the development that would occur under the 2050 MTP/SCS, transportation projects would also increase the extent of impervious surfaces. Many of the planned transportation projects, such as the addition of new lanes to existing roads or highways, would have negligible effect on the overall extent of impervious surfaces, as they would occur in areas already characterized by paved surfaces. For example, transportation projects would affect groundwater supplies by incrementally reducing groundwater recharge potential. This reduction in groundwater recharge could occur because the impermeable surfaces associated with the proposed improvements would increase surface water runoff within existing rights-of-way at the expense of natural infiltration. As with the infill development discussed above, transportation projects would also be implemented with project specific drainage plans for new features would be designed to retain, capture, and convey runoff in accordance with the city or county design standards, where applicable, and federal and state requirements, including complying with the applicable MS4 permit. This could include the Phase I, Phase II, or Caltrans permit, as discussed above.

Sustainable Groundwater Management

Activities would be implemented under California regulations governing use of groundwater, including SGMA, provisions related to the adjudication of Seaside Basin, and any groundwater policies or regulations of applicable local general plans. Taken as a whole, these regulations are intended to reduce groundwater use and subsequent overdraft of groundwater basins. As described above, the Medium- and High-Priority basins in the AMBAG region are being managed by DWR-approved GSAs, each of which is responsible for developing a GSP for its respective basin(s), or have submitted an existing management plan that meets all the requirements of a GSP, for DWR's consideration to approve as an Alternative GSP for compliance with SGMA. The GSPs are required to provide mechanisms that allow the sustainable use of groundwater, with growth projections considered. By nature, the transportation projects envisioned by the 2050 MTP/SCS would not entail substantial groundwater extraction. Still, compliance with groundwater sustainability plans and SGMA requirements as described in Section 4.14.2 would minimize any potential impacts to groundwater basins. Additionally, proposed projects occurring within the coastal zone would be subject additional permitting requirements and regulations under the California Coastal Act, including measures to prevent the depletion of ground water supplies, as further described in Section 4.10.2, *Regulatory Setting.* As such, the 2050 MTP/SCS would not substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.

Summary

Existing regulatory requirements at the local, state, and federal level include measures to minimize any increases in off-site stormwater runoff by encouraging on-site infiltration, which would effectively minimize the potential reduction in groundwater recharge to an acceptable level. Although implementation of projects under the 2050 MTP/SCS would result in the addition of new impervious surfaces and could potentially alter site specific patterns of groundwater recharge, compliance with applicable regulations would ensure project implementation would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge, such that the sustainable groundwater management of the basin would be impeded. Therefore, impacts of the proposed 2050 MTP/SCS to groundwater supply and recharge and to sustainable groundwater management plans, would be less than significant.

Mitigation Measures

None required.

Threshold 4: Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner which would substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?

Threshold 5: Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner that would create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

Impact HYD-3 TRANSPORTATION IMPROVEMENTS AND FUTURE PROJECTS INCLUDED IN THE LAND USE SCENARIO ENVISIONED IN THE 2050 MTP/SCS WOULD ALTER SITE SPECIFIC DRAINAGE PATTERNS. HOWEVER, WITH COMPLIANCE WITH EXISTING REGULATIONS, PROPOSED PROJECTS WOULD NOT ALTER EXISTING DRAINAGE PATTERNS SUCH THAT THEY WOULD SUBSTANTIALLY INCREASE THE RATE OR AMOUNT OF SURFACE RUNOFF, OR CREATE OR CONTRIBUTE RUNOFF WATER THROUGHOUT THE REGION WHICH WOULD EXCEED THE CAPACITY OF STORMWATER DRAINAGE SYSTEMS. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Implementation of proposed transportation improvements and future projects included in the land use scenario envisioned in the 2050 MTP/SCS would result in additional impervious surfaces in the region which may increase stormwater flows, resulting in increased volume and/or velocity of stormwater runoff. Potential increases in stormwater volume and/or velocity could result in on- or off-site flooding. However, planned transportation and land use projects would be designed to comply with existing state and local jurisdiction requirements, including applicable municipal code sections related to stormwater runoff and drainages, such as curb and gutter design, and would build drainage infrastructure to control and accommodate the increase in stormwater flows. As discussed in Section 4.10.2, *Regulatory Setting,* these ordinances include the Monterey County Code Chapter 16.14 to control the entry of urban pollutants into stormwater runoff; San Benito County Code of Ordinances Chapter 19.17 to regulate the control of excavation, grading, drainage, and erosion; and Santa Cruz County Code of Ordinances Chapter 7.79 to control runoff and pollution by protecting the surface and groundwater quality and groundwater recharge of receiving waters of the county from discharge of pollutants. Compliance with local ordinances would control runoff via drainage basins, silt fencing, vegetation erosion control, and other measures to reduce runoff into stormwater drainage systems.

Construction of land use and transportation projects under the 2050 MTP/SCS would temporarily disturb underlying soils and would result in exposure of soil to runoff. Without precautions, construction activities would produce pollutants in stormwater runoff. Compliance with NPDES permits and other local ordinances described above would control erosion and sedimentation due to urban development. Projects occurring within the coastal zone would be subject to additional permitting under the California Coastal Act, which contains provisions to minimize the adverse effects of wastewater discharge and to control runoff, as described in Section 4.10.2, *Regulatory Setting.*

Land use projects under the 2050 MTP/SCS would implement post-construction drainage control measures for compliance with the NPDES MS4 permit, which would include implementation of LID features. These measures may include incorporation of permeable paving, vegetated swales, infiltration retention basins, and other features that would minimize stormwater runoff that could carry urban pollutants. During operation of the 2050 MTP/SCS transportation projects, nonpoint source pollution would be minimized through the maintenance of LID features, and through compliance with the NPDES MS4 permit. In addition, potentially adverse impacts associated with nonpoint source pollution would be minimized through project compliance with Caltrans guidelines for preparation of a hydraulic study if modifications are made to California State highways that intercept a waterway or encroach on a floodplain. Further, any stormwater discharge sourced from the proposed transportation projects, during both construction and operation, would be subject to applicable state and local regulations, as further described in Section 4.10.2, *Regulatory Setting.*

Compliance with existing stormwater management and nonpoint source pollution control regulations would ensure alterations of drainage patterns caused by 2050 MTP/SCS transportation and land use projects would not increase the rate or amount of surface runoff such that flooding would occur, that the capacity of existing or planned stormwater drainage systems would be exceeded, or that substantial additional sources of polluted runoff would be created. Impacts would be less than significant.

Mitigation Measures

None required.

Threshold 6:	Would the project substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows?
Threshold 7:	In flood hazard, tsunami, or seiche zones, would the project risk release of pollutants due. to project inundation?

Impact HYD-4 **TRANSPORTATION IMPROVEMENTS AND FUTURE PROJECTS INCLUDED IN THE LAND USE SCENARIO ENVISIONED IN THE 2050 MTP/SCS WOULD ALTER SOME SITE-SPECIFIC DRAINAGE PATTERS AND WOULD POTENTIALLY INTRODUCE NEW DEVELOPMENT IN AREAS WITH RISK OF INUNDATION. HOWEVER, COMPLIANCE WITH APPLICABLE REGULATIONS WOULD ENSURE OVERALL BUILDOUT WOULD NOT SUBSTANTIALLY ALTER DRAINAGE PATTERNS IN THE REGION IN A MANNER WHICH WOULD IMPEDE OR REDIRECT FLOOR FLOWS, OR RISK RELEASE OF POLLUTANTS DUE TO PROJECT INUNDATION IN FLOOD HAZARD, TSUNAMI, OR SEICHE ZONES. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.**

Implementation of proposed transportation improvements and future projects under the land use scenario envisioned by the 2050 MTP/SCS would be subject to flooding hazards due to altered drainage patterns that could impede or redirect flood flows and risk release of pollutants due to inundation related to storm events, sea level rise, and dam failure.

Redirecting Flood Flows

Transportation projects and land use development envisioned in the 2050 MTP/SCS would occur primarily outside of 100-year flood plains. For example, much of the land use development envisioned in the 2050 MTP/SCS would occur in already urbanized areas that are not subject to flood events. However, some development would occur in floodplains, and because transportation projects are sometimes linear, they would also cross floodplain areas.

The transportation projects and land development would have the potential to alter existing drainage patterns within the flood plain. In accordance with federal, state, and local stormwater management regulations, new construction must maintain pre-project hydrology. Local ordinances generally provide prescriptive requirements related to infrastructure capacity and design and limit the potential for development to increase off-site flows. All projects would be subject to NPDES MS4 requirements and the Central Coast Post-Construction Stormwater Management Requirements, which regulate increases in runoff flows from new development and redevelopment projects. The required LID drainage control measures may, in some cases, result in improved retention of stormwater rates and volumes compared to existing conditions.

Any developments proposed within the 100-year flood zone would be required to meet local, state, and federal flood control design requirements. Implementing agencies would conduct or require project-specific hydrology studies for projects proposed to be constructed within floodplains to demonstrate compliance with Executive Order 11988 (for federally funded projects), the NFIP, the National Flood Insurance Act, and the Cobey-Alquist Floodplain Management Act, as well as any further FEMA, state, and city or county requirements that are adopted at the local level. These studies would identify project design features that reduce impacts on either floodplains or flood flows that would be required through the permitting process. With these floodplain development requirements, continuing flood protection programs, and the drainage requirements described above, impacts related to impeding or redirecting flood flows would be less than significant.

Risk Release of Pollutants due to Project Inundation

Low lying coastal areas in northern Monterey County and southern Santa Cruz County are susceptible to risk of release of pollutants due to inundation from tsunamis, as shown in Table 4.10-3. According to the Monterey County Multi-Jurisdictional Hazard Mitigation Plan (2022), since observation began, there have been ten tsunamis in the region. Most of these tsunamis were produced by earthquakes and resulted in wave run-ups of one meter or less. Therefore, the likelihood that the region will experience a tsunami has been estimated to be high, averaging one- to 11-foot wave run-ups for coastal and low lying areas (County of Monterey 2022). In 2011, the 9.0 earthquake in Japan caused a tsunami in the AMBAG region resulting in damage in both Monterey and Santa Cruz counties (County of Santa Cruz 2021). Given the high likelihood for tsunami hazards in the region and the potential for land use development included in the 2050 MTP/SCS to be located near the coast, development under the 2050 MTP/SCS would occur in areas subject to tsunami hazards.

Various areas throughout the AMBAG region, particularly within identified flood zones, are susceptible to risk of flooding. A flood event in these areas could potentially result in the release of pollutants as well. FEMA designated 100-year and 500-year flood zones exist throughout the AMBAG region, as shown in Figure 4.10-4, Figure 4.10-5, and Figure 4.10-6. New development located within these designated flood zones would be at risk of flood hazards and therefore pose a risk of release of pollutants and hazardous materials. Specific transportation projects programmed in the 2050 MTP/SCS for these areas are shown in Table 4.10-3.

The Monterey County General Plan (County of Monterey 2010) Safety Element contains goals and policies to reduce the risk of hazards resulting from seismic activity, including tsunamis. Specifically, Policy S-1.6 requires new development to be prohibited in areas of known geologic or seismic hazards unless measures recommended by a California certified engineering geologist or geotechnical engineer are implemented to reduce the hazard. The Santa Cruz General Plan and Local Coastal Program (County of Santa Cruz 2024b) Public Safety and Noise Chapter serves to reduce the risk of hazards resulting from seismic, flood, and fire hazards. Specifically, Policy 6.1.5 requires the location and/or clustering of development away from potentially hazardous areas when feasible and condition development permits based on the recommendations of the site's Hazard Assessment or other technical reports. Policy 6.4.3 allows development in areas immediately adjacent to coastal bluffs and beaches only if a geologist determines that wave action, storm swell, and tsunami inundation are not a hazard to the proposed development, or that the hazard can be adequately mitigated. Because these policies limit development in tsunami zones, they also limit pollutants and hazardous materials that might be stored in areas subject to tsunami.

While there are general plan policies applicable to the AMBAG region that prohibit or limit development in areas subject to tsunamis, development would occur in inundation zones given that several cities and unincorporated areas in the AMBAG region are coastal, located on the Monterey Bay. The types of development that would be most likely to result in release of pollutants during inundation include uses such as wastewater treatment plants, chemical manufacturing plants, or hazardous materials landfills. Generally, the 2050 MTP/SCS envisions infill development in already urbanized areas where wastewater treatment plants, landfills, and chemical manufacturing plants, and thus sources of pollution and hazardous waste at risk of release in the event of inundation, already exist.[2] Therefore, through the land use development envisioned in the 2050 MTP/SCS would have the potential to introduce new sources of hazardous materials and pollution, the existing built environment also has the potential to contain hazardous materials and pollutants which would be at risk of release in the event of inundation. Compared to existing conditions, proposed new uses would not substantially increase the risk of release of pollutants into the environment because of inundations. Impacts would be less than significant.

[2] Wastewater treatment plants in the AMBAG region include the Monterey One Water Treatment Plant, The City of San Juan Bautista Wastewater Treatment Plant, and the City of Santa Cruz Wastewater Treatment Plant. Landfills in the AMBAG region include the Johnson Canyon Sanitary Landfill in Monterey County, the John Smith Landfill in San Benito County, and the Buena Vista Landfill in Santa Cruz County. Chemical manufacturing plants are located throughout the Monterey County, San Benito County, and Santa Cruz County areas.

Seiche

As described in Section 4.10.1, *Setting*, seiches are not identified as a hazard in the AMBAG region. Therefore, no impacts related to seiches would result.

Mitigation Measures

None required.

Threshold 8: Would the project conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Impact HYD-5 TRANSPORTATION IMPROVEMENTS AND FUTURE PROJECTS INCLUDED IN THE LAND USE SCENARIO ENVISIONED IN THE 2050 MTP/SCS WOULD COMPLY WITH ALL APPLICABLE REGULATIONS SUCH THAT OBSTRUCTION OF A WATER QUALITY CONTROL PLAN OR SUSTAINABLE GROUNDWATER MANAGEMENT PLAN WOULD NOT OCCUR. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Implementation of proposed transportation improvements and future projects included in the land use scenario envisioned in the 2050 MTP/SCS would have potential to impact water quality throughout the AMBAG region. The transportation improvements included in the 2050 MTP/SCS would generally not affect the beneficial uses for water identified in the Water Quality Control Plan for the Central Coast Basin (CCRWQCB 2019). For example, transportation improvements would not have substantial operational water demands, would not extract ground water, and would not alter the course of existing waterways. Therefore, the proposed projects would not interfere with the beneficial use of water for municipal and domestic supplies, agricultural supply, or wildlife habitat supply. Likewise, the land use scenario envisioned in the 2050 MTP/SCS would not obstruct or conflict with beneficial uses of water in the water quality control plan. The land use scenario in the 2050 MTP/SCS focuses on infill development and locating people and employment near transit. The infill characteristics of the land use scenario would generally be consistent with the past use of water in these areas. Land uses envisioned in the 2050 MTP/SCS would not be a substantial departure from existing conditions within the region and would therefore remain supportive of the beneficial uses identified in the water quality control plan, such as municipal and domestic supplies. Further, proposed development would be subject to project level environmental assessment, ensuring individual projects as envisioned in the 2050 MTP/SCS would not obstruct the identified beneficial uses in the region.

The water quality control plan also includes water quality objectives for both ocean waters and inland waters and estuaries. Several the identified beneficial uses depend on the water quality of the waterbody in which they occur. For example, uses such as water contact recreation, commercial and sport fishing, various habitat areas, and preservation of biological habitats of special significance are all water quality dependent and all occur within the waterbodies of the AMBAG region. As described above in Impact HWQ-1, implementation of the 2050 MTP/SCS would result in pollutants in stormwater runoff. For example, 2050 MTP/SCS projects with landscaping may require fertilizer/pesticide application, which could enter nearby bodies of water. If enough pesticides reach nearby waters, a violation of the pesticide water quality objective would occur, conflicting with the water quality control plan. Another example is

construction of projects envisioned in the 2050 MTP/SCS, which would result in erosion and violation of coloration, turbidity, and dissolved solids water quality standards in the water quality control plan.

As discussed in Section 4.10.2, *Regulatory Setting*, the Construction Stormwater General Permit requires that an NPDES stormwater permit be obtained for construction projects that would disturb greater than one acre. The Construction Stormwater General Permit requires the preparation of a SWPPP that contains specific BMPs to control the discharge of pollutants. Specific BMPs may include, but are not limited to: silt fencing, fiber rolls, trenching, and slop stabilization techniques. Almost all 2050 MTP/SCS projects, especially new and extended roadways, would disturb more than one acre and would be subject to these regulations.

In addition, CalGreen regulations (Cal. Code Regs. Title 24, Part 11) include mandatory measures for residential and nonresidential development. Section 5.106.1 requires newly constructed non-residential projects and additions of less than one acre to reduce 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. At a local level, the cities and counties within the AMBAG region have their own policies and regulations governing stormwater discharge and erosion contained within their general plans and municipal codes, as discussed in Section 4.10.2, *Regulatory Setting*. These regulations would limit the potential impact of such construction projects to a less than significant level and avoid conflicts with the applicable water quality control plan. For operational water quality control, the CWA NPDES MS4 Phase I and Phase II requirements, as discussed in Section 4.10.2, *Regulatory Setting,* require agencies and developments to implement SWMPs, which in turn require the implementation of source and treatment control measures. NPDES MS4 permittees are also required to develop and enforce ordinances and regulations to reduce the discharge of sediments and other pollutants in runoff and must verify compliance.

The water quality control plan also includes groundwater recharge as a beneficial use. As addressed above, certain transportation improvements would increase overall impervious surface area throughout the AMBAG region. Depending on the location and design specific to projects included in the 2050 MTP/SCS, stormwater runoff may be infiltrated onsite or captured in existing storm drain systems. Roadways, such as state highways are often adjacent to pervious surfaces, such as gravel shoulders, agricultural fields, or other unpaved surfaces. Runoff from the roadway surface can flow overland into these pervious areas and infiltrate the ground, reducing impacts to the local stormwater system, and reducing conflicts with the water quality control plan beneficial use for groundwater recharge. Further, BMPs implemented in compliance with applicable regulations would enhance stormwater capture and infiltration. Infill development projects envisioned under the land use scenario would also introduce impervious surfaces, if the infill site is currently unpaved. However, it is likely that most infill sites are already developed, thus minimizing the increase of impervious surfaces. Still, infill development projects would be subject to applicable regulations including the regional general MS4 permit and would implement relevant LID measures into project design to minimize stormwater runoff and promote

infiltration. Therefore, conflicts with groundwater recharge beneficial use would be generally avoided.

During operation, as discussed above for Impact HWQ-1, all state projects for which Caltrans is the lead agency would comply with the Caltrans Statewide NPDES MS4 permit that regulates all stormwater discharges from Caltrans owned conveyances and maintained facilities. Similarly, all projects involving industrial facilities or processes would comply with the Industrial General Permit, and all other projects would comply with the regulations contained within the applicable Phase I or Phase II MS4 permit. In addition, consistent with the Post-Construction Stormwater Management Requirements for development projects in the Central Coast region (July 2013), post project stormwater flows from a project site are required to be the same or less than pre-project stormwater flows. Based on compliance with these requirements, land use development patterns included in the 2050 MTP/SCS would not result in impacts to the local stormwater system. By ensuring the local stormwater system is maintained and functional, adverse effects to water quality would be avoided. Thus, potential conflicts with the applicable water quality control plan would be less than significant.

As previously described, several groundwater basins in the AMBAG region are designated as either medium or high priority basins and are managed by a GSA. The GSAs prepare GSPs to provide mechanisms to ensure the sustainable use of groundwater, with growth projections considered. By nature, the transportation projects envisioned by the 2050 MTP/SCS would not entail substantial groundwater extraction. Still, compliance with groundwater sustainability plans and SGMA requirements would minimize any potential impacts to groundwater basins. Specific projects, as envisioned by the 2050 MTP/SCS, would comply with applicable policies and regulations contained within their respective governing GSP. Thus, potential conflicts with the applicable sustainable groundwater management plans would be less than significant.

Mitigation Measures

None required.

c. Specific MTP/SCS Projects that May Result in Impacts

Table 4.10-3 identifies transportation projects with the potential to cause or contribute to direct or indirect impacts to hydrology and water quality such as those discussed above. Program-level impact determinations were provided for the overall 2050 MTP/SCS project above. This section is not intended to provide project-specific impact determinations under CEQA. Rather, the transportation projects identified in Table 4.10-3 are representative of those that may result in project-level impacts with or without mitigation and were selected based on their potential scope and likelihood to result in the hydrology and water quality impacts identified above. The intent of this summary is to support potential future streamlining efforts as a screening tool to facilitate early identification of projects likely to result in the impacts identified above. Streamlining opportunities are discussed in Section 1.4, *Implementation Issues and Future Environmental Review*, in Chapter 1, *Introduction.*

Table 4.10-3 2050 MTP/SCS Projects that May Result in a Flooding Impact

AMBAG Project No.	Projects	Location	Impact
MON-GRN016-GR-2026	Elm Avenue Bike Lanes	Monterey County	HWQ-4
MON-KCY039-CK-2026	1st Street Bike Lanes	Monterey County	HWQ-4
MON-MRY040-MY-2026	Del Monte and Casa Verde/Rec Trail Improvements	Monterey County	HWQ-4
MON-MYC246-UM-2026	San Juan Road to Pajaro Levee	Monterey County	HWQ-4
SB-SBC-A65-2026	San Benito River Recreational Trail Phase 1	San Benito County	HWQ-4
SB-SBC-A66-2026	San Benito River Recreational Trail Phase 2	San Benito County	HWQ-4
SC-WAT-O1A-WAT-2026	Highway 1/Harkins Slough Road Interchange: Bicycle/Pedestrian Bridge	Santa Cruz County	HWQ-4
SC-CAP-P05-CAP-2026	Cliff Drive Resiliency Project & Improvements	Santa Cruz County	HWQ-4
SC-CO-P38-USC-2026	Pajaro River Bike Path System	Santa Cruz County	HWQ-4
SC-CO-P50-USC-2026	East Cliff Dr Pedestrian Pathway (7th-12th Ave)	Santa Cruz County	HWQ-4
SC-CO-P103-USC-2026	East Cliff Dr Pedestrian Pathway (17th-Palisades Ave)	Santa Cruz County	HWQ-4
SC-RTC-27b-RTC- 2026	MBSST Rail Trail Corridor Maintenance	Santa Cruz County	HWQ-4
SC-RTC-27c-RTC-2026	MBSST Trail Management Program	Santa Cruz County	HWQ-4
SC-RTC-27d-RTC-2026	MBSST Trail Maintenance	Santa Cruz County	HWQ-4
TRL-05-2026	MBSST Segment 5 (Wilder Ranch to Davenport)	Santa Cruz County	HWQ-4
TRL-07cSC-2026	MBSST Segment 7 Phase 3 (Natural Bridges to Shaffer Rd)	Santa Cruz County	HWQ-4
TRL-18B-2026	MBSST Segment 18 Phase 2 (Watsonville Slough Trailhead to Walker St)	Santa Cruz County	HWQ-4

4.10.4 Cumulative Impacts

a. Methodology

This analysis of cumulative impacts relies on a specific project list detailing the reasonably foreseeable planned future development to occur within the AMBAG region. The 2050 MTP/SCS is assessed within the existing and foreseeable future environmental setting, and a determination is made as to whether the 2050 MTP/SCS would have a cumulatively considerable impact on the surrounding environment given both the specific planned projects and the overall envisioned land use scenario. Refer to Section 6.4, *Cumulative Impacts*, in Chapter 6, *Other CEQA Required Discussions*, for a further description of the cumulative impact methodology.

b. Impact Analysis

The cumulative impact analysis area for hydrology and water quality encompasses the watersheds and groundwater basins affected by the transportation projects and land use pattern envisioned in the 2050 MTP/SCS, including creeks and drainages, floodplains, and aquifers. Therefore, the cumulative impact assessment area consists of the AMBAG region and the adjoining counties, which encompasses the applicable watersheds and basins.

HYD-C-1 CONSTRUCTION OF CUMULATIVE DEVELOPMENT WOULD INCREASE IMPERVIOUS SURFACES AND WOULD HAVE THE POTENTIAL TO INCREASE EROSION POTENTIAL, ALTER DRAINAGE PATTERNS, INCREASE RUNOFF VOLUMES AND VELOCITY, INFILTRATE GROUNDWATER, AND RISK RELEASE OF POLLUTANTS DUE TO INUNDATION. COMPLIANCE WITH EXISTING REGULATIONS, SUCH AS NATIONAL POLLUTANT ELIMINATION SYSTEM AND LOCAL STORMWATER MANAGEMENT REQUIREMENTS WOULD REDUCE CUMULATIVE IMPACTS TO LESS THAN SIGNIFICANT.

Cumulative development would increase erosion and sedimentation resulting from grading and construction, as well as changes in drainage patterns which would degrade surface and ground water quality. In addition, new development would increase the generation of urban pollutants that may adversely affect water quality in the long term. As with the 2050 MTP/SCS, individual construction projects within the cumulative impact area would be required to comply with applicable water quality regulations, as discussed in Section 4.10.2, *Regulatory Setting*. Compliance with these existing requirements would reduce project level impacts throughout the cumulative impact area; as such, cumulative impacts related to water quality would be less than significant.

Development within the cumulative impact development area would increase impervious surfaces and reduce groundwater infiltration. However, counties and cities in the cumulative impact development area have regulatory requirements for stormwater management, effectively requiring minimization of stormwater runoff. Because the volume of runoff would be reduced by these regulations, as well as state and federal regulations, precipitation would be retained on individual project sites and infiltrated, or treated and discharged to swales, creeks, or other drainages. Compliance with groundwater sustainability plans where applicable, pursuant to the Sustainable Groundwater Management Act, would partially limit these cumulative effects. Cumulative impacts would be less than significant.

Development within a flood hazard area would result in incremental modifications over time that can have cumulative adverse effects during a flood event by impeding and displacing flows, and thereby potentially exacerbating flooding overall. Regarding alterations of the drainage pattern of an area, as development in one area contributes incrementally to surface drainage runoff or degrades water quality, and development in another area up- or down-stream does the same, the capacity of a drainage way to carry flood flows and/or the overall quality of the water may be cumulatively affected. New development envisioned under the 2050 MTP/SCS and associated impervious cover, would be potentially significant on a cumulative basis. As discussed in Impact HWQ-3 above, projects envisioned as part of the 2050 MTP/SCS would be required to maintain pre-project hydrology and projects that would disturb more than 1 acre would be subject to Central Coast Regional Water Quality Control Board requirements that prevent increased in runoff flows from new development and redevelopment projects. Developments proposed within the 100-year flood zone would be required to meet local, state, and federal flood control design requirements. Implementing agencies would conduct or require project-specific hydrology studies for projects proposed to be constructed within floodplains to demonstrate compliance with Executive Order 11988 (for federally funded projects), the National Flood Insurance Program, the National Flood Insurance Act, and the Cobey-Alquist Floodplain Management Act, as well as any further FEMA or state requirements that are adopted at the local level. These studies would identify project design features that reduce impacts on either

floodplains or flood flows that would be required through the permitting process. With these floodplain development requirements, continuing flood protection programs, and drainage requirements, cumulative impacts related to flooding and increased runoff would be less than significant.

While there are general plan policies applicable to the AMBAG region that prohibit or limit development in areas subject to development, development would occur in inundation zones given that several cities in the AMBAG region are coastal cities on the Monterey Bay. The types of development that would be most likely to result in release of pollutants during inundation include things such as wastewater treatment plants, chemical manufacturing plants, or hazardous materials landfills. Generally, the 2050 MTP/SCS envisions land development in already urbanized areas where wastewater treatment plants already exist to serve existing development. Accordingly, the land use development envisioned in the 2050 MTP/SCS would not substantially increase the risk of release of pollutants into the environment as a result of inundations.

Overall, cumulative impacts related to water quality would not be significant, and the 2050 MTP/SCS's contribution to cumulative water quality impacts would not be cumulatively considerable.

4.11 Land Use and Planning

This section evaluates impacts of the proposed 2050 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) associated with physically dividing an established community and causing a significant environmental impact due to a conflict with a land use plan, policy, or regulation.

4.11.1 Setting

a. Land Use Patterns

The AMBAG region is comprised of Monterey, San Benito, and Santa Cruz counties. These counties are located along the Central Coast of California and generally surround Monterey Bay. Monterey Bay is located south of the San Francisco Bay area and north of San Luis Obispo County. San Mateo and Santa Clara counties are located to the north; Merced and Fresno counties are located to the east. Monterey County shares a short border segment with Kings County to the southeast.

The combined area encompasses approximately 3.3 million acres, incorporating the Pajaro and Salinas River Valleys, adjacent coastal lowland, and surrounding mountains. Terrain within the region is varied. The Santa Cruz, Gabilan and Santa Lucia mountain ranges and the Diablo range are located along the eastern border of the AMBAG region. The highest elevation is the Junípero Serra Peak (5,865 feet above sea level), located in Monterey County. AMBAG's planning area is predominantly rural with urban development clustered along the Monterey Bay coastline and in agricultural inland valleys. A summary of the land use setting for each county is described below.

Monterey County

Monterey County encompasses 2.1 million acres and is predominantly rural except for 12 incorporated cities; Carmel-by-the-Sea, Del Rey Oaks, Gonzales, Greenfield, Pacific Grove, Marina, Monterey, Salinas, Seaside, Sand City, Soledad, and King City. Agriculture is the largest land use in Monterey County representing approximately 60 percent (1.27 million acres) of the total land area. The second largest land use consists of public and quasi-public land uses such as educational, transportation, parks, military facilities, recreational, religious, and community facilities, which makes up 24 percent (about 508,800 acres) of the total land area. Approximately 5 percent (about 106,000 acres) of Monterey County, including the incorporated cities, is developed with residential, commercial, and industrial land use categories; of the unincorporated county, approximately one percent is developed. The remaining 11 percent (about 233,200 acres) is in resource conservation or other miscellaneous land uses or owned by the federal government. Most of the urban development is concentrated in the northern third of the county, near the incorporated cities of Salinas, Marina, and Monterey (County of Monterey 2010: LU-1, LU-2).

The Monterey County Coastal Zone is depicted in Figure 4.11-1 and includes portions of the cities of Carmel-by-the-Sea, Marina, Monterey, Pacific Grove, Sand City, and Seaside. Tribal land is also included within Monterey County, notably, the Esselen Tribe of Monterey County owns approximately 1,200 acres of land along the Little Sur River in Big Sur (Changing America 2020).

Land is also used for military and university uses within Monterey County. Monterey County is the location for California State University, Monterey Bay, the Naval Postgraduate School, Fort Hunter Liggett, and the Presidio of Monterey. Protected open spaces in Monterey County are shown in Figure 4.11-2.

Santa Cruz County

Santa Cruz County encompasses approximately 285,500 acres and is predominantly rural except for four incorporated cities and the urbanized unincorporated areas surrounding them: Scotts Valley, Santa Cruz, Capitola, and Watsonville. Agriculture represents approximately 14 percent of the total land area (38,711 acres). Approximately 12 percent of the total land area (32,950 acres) is comprised of urban and built-up land which includes residential, commercial, industrial, and other urban land uses. Approximately 75 percent of land area (213,447 acres) is classified as "other land" which includes parks, recreation, and open space (1.4 percent or 4,000 acres), undeveloped land, and other miscellaneous uses (County of Santa Cruz 2022: 4.2-3). Land use within Santa Cruz County is also reserved for university use, notably, the University of California, Santa Cruz. The Santa Cruz Local Coastal Zone is depicted in Figure 4.11-1 and includes portions of the cities of Capitola, Santa Cruz, and Watsonville. Protected open space in Santa Cruz County is shown in Figure 4.11-3.

San Benito County

Unincorporated land within San Benito County accounts for approximately 882,675 acres or 99.5 percent of all land in the County, while incorporated cities (San Juan Bautista and Hollister) account for roughly 4,044 acres or approximately 0.5 percent. The majority of land use variety is concentrated in the incorporated cities. Agriculture, which includes grazing, is the predominant use, totaling approximately 734,826 acres or 83.2 percent of the unincorporated County. The County has a significant amount of land, over 78,931 acres (8.9 percent of the unincorporated County), owned by city, state, and federal governments. Residential land accounts for only approximately 9,668 acres or 1.1 percent of existing land use in the unincorporated County. Remaining lands are undeveloped (County of San Benito 2015). Protected open space in San Benito County is shown in Figure 4.11-4.

Figure 4.11-1 Monterey and Santa Cruz Counties Coastal Zone



Figure 4.11-2 Protected Open Space in Monterey County

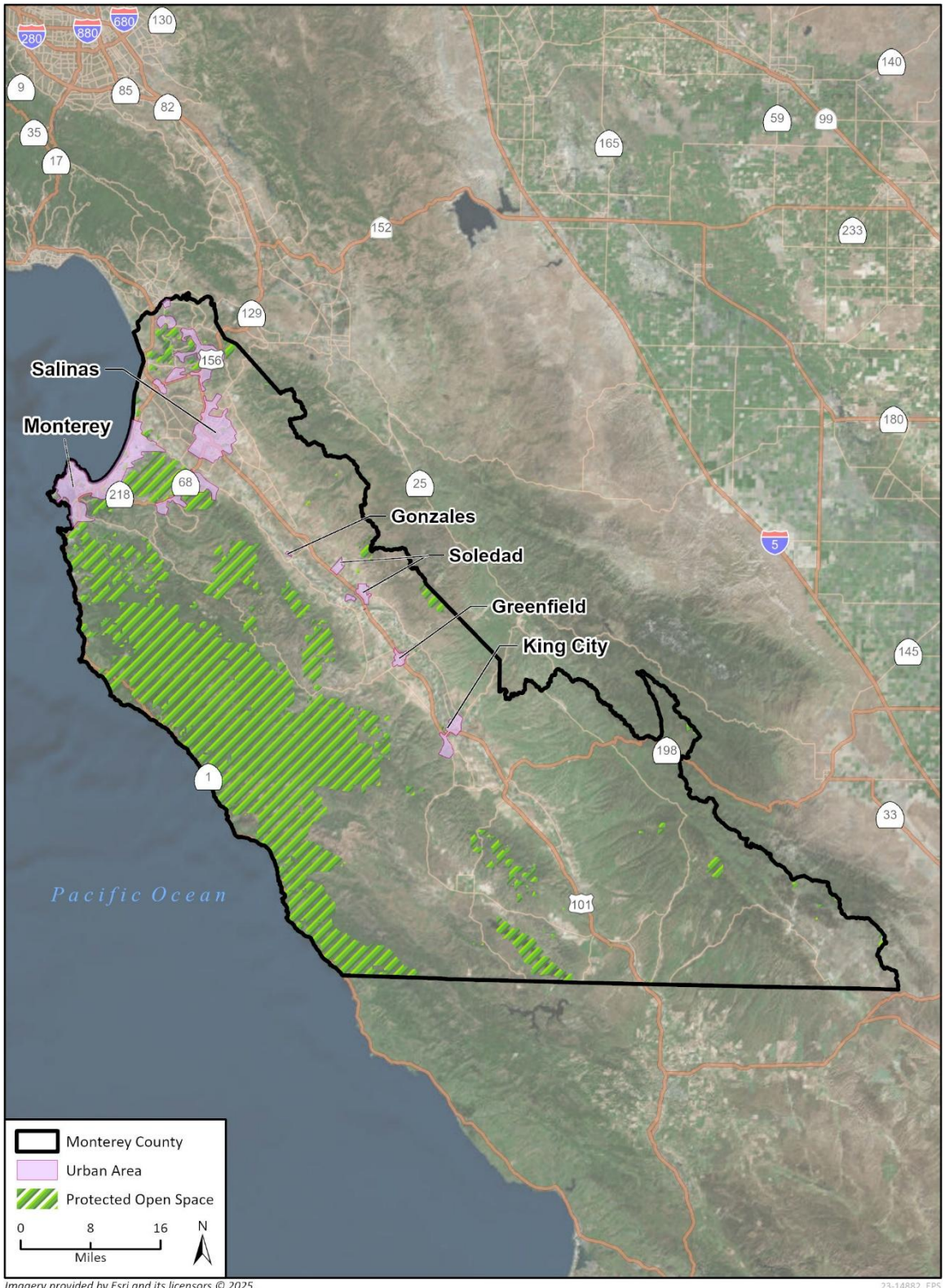


Figure 4.11-3 Protected Open Space in Santa Cruz County

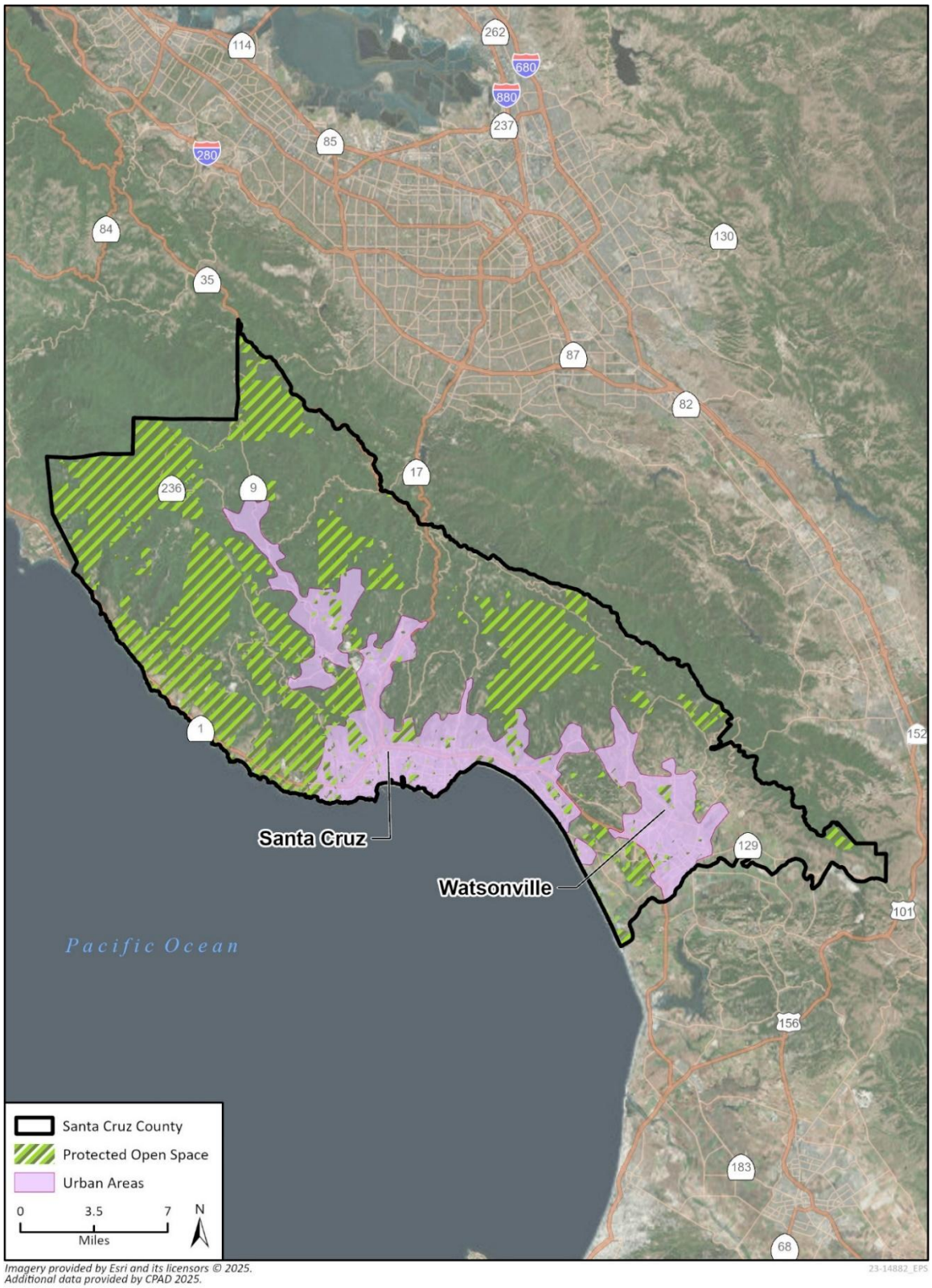
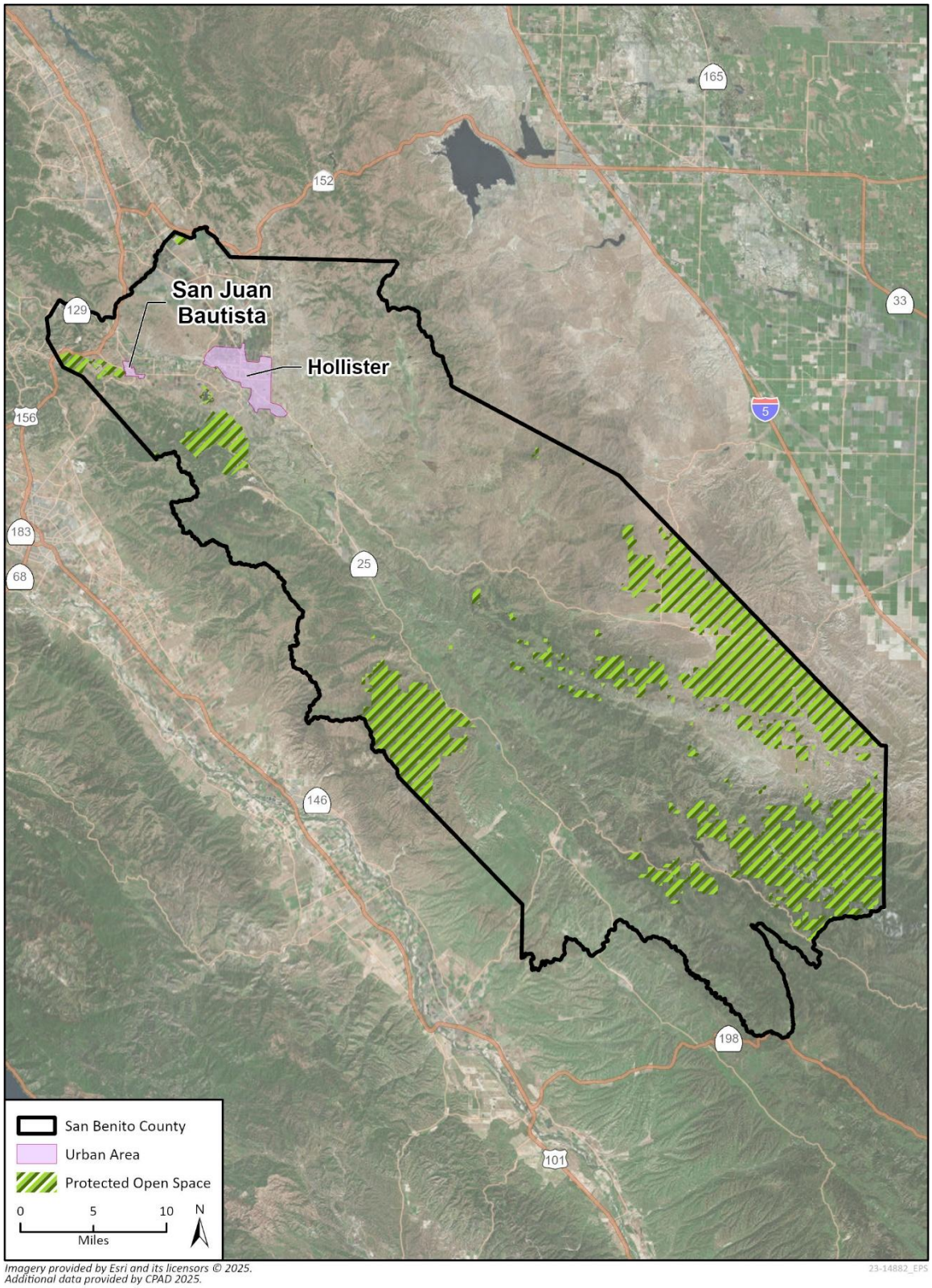


Figure 4.11-4 Protected Open Space in San Benito County



4.11.2 Regulatory Setting

There are numerous state and local laws, regulations, policies, programs, plans, codes, and ordinances that regulate land use in the AMBAG region. Local land use changes are regulated by the general plans, specific plans, and zoning ordinances of the counties of Monterey, San Benito and Santa Cruz, and the cities within each county. City and unincorporated county land which lies within the California Coastal Zone is subject to provisions outlined in each jurisdiction's Local Coastal Program (LCP) as mandated by the California Coastal Act. The Coastal Zone generally consists of all land 1,000 yards inland from the mean high tide line and may extend much farther inland in certain areas to encompass whole watersheds, as shown in Figure 4.11-1. The LCPs consist of coastal land use plans, zoning, and other implementing actions needed to comply with the Coastal Act, and include land use regulations related to housing, coastal access, public works, and all types of transportation infrastructure and facilities.

a. Federal Laws, Regulations, and Policies

Code of Federal Regulations Title 25

Federally recognized Native American tribes are considered domestic dependent nations with tribal sovereignty. "Tribal sovereignty" refers to tribes' right to govern themselves, define their own membership, manage tribal property, and regulate tribal business and domestic relations; it further recognizes the existence of a government-to-government relationship between such tribes and the federal government. In general, state, and local governments do not have "civil regulatory" jurisdiction (i.e., land use) on Indian Land, which is land held in trust or restricted status for a tribe.

Coastal Zone Management Act

The Coastal Zone Management Act was passed by Congress in 1972. It provides for management of coastal resources and aims to protect, restore, and enhance coastal resources through three programs administered by the National Oceanic and Atmospheric Administration in partnership with coastal states. In California, the Coastal Zone Management Act is administered in partnership with the California Coastal Commission (CCC). In partnership with coastal cities and counties, it plans and regulates the use of land and water in the coastal zone. Development activities, which are broadly defined by the Coastal Zone Management Act to include (among other activities) construction of buildings, divisions of land, and activities that change the intensity of use of land or public access to coastal waters, generally require a coastal permit from either the CCC or the local government. The National Coastal Zone Management Program balances competing land and water issues. Programs under the Coastal Zone Management Act include the National Estuarine Research Reserve System, which protects estuaries for use as field laboratories that improve understanding of estuaries, and the Coastal and Estuarine Land Conservation Program, which assists with acquisition of coastal property or easements for conservation purposes.

b. State Laws, Regulations, and Policies

Sustainable Communities Strategy and Climate Protection Act (Senate Bill 375)

Senate Bill (SB) 375 is a California law passed in 2008 that requires each Metropolitan Planning Organization (MPO) to demonstrate, through the development of a SCS, how its region will integrate transportation, housing, and land use planning to meet the greenhouse gas (GHG) reduction targets set by the State.

In addition to creating requirements for MPOs, it also creates requirements for the California Transportation Commission (CTC) and California Air Resources Board (CARB). Some of the requirements include the following:

- CTC must maintain guidelines for the travel demand models that MPOs develop for use in the preparation of their Regional Transportation Plans (RTP)s or MTPs.
- CARB must develop regional GHG emission reduction targets for automobiles and light duty trucks for 2035 by September 30, 2010. These targets were approved on September 23, 2010. CARB is tasked to update the regional targets every eight years, with the option of revising them every four years. The latest targets were approved on March 18, 2018 and went into effect October 1, 2018. Since 2018, AMBAG has a six percent GHG reduction target by 2035. CARB is in the process of updating reduction targets which are expected to be approved in 2026.
- Each MPO must prepare an SCS as part of its RTP or MTP to demonstrate how it will meet the regional GHG targets.
- Each MPO must adopt a public participation plan for development of the SCS that includes informational meetings, workshops, public hearings, consultation, and other outreach efforts.
- If an SCS cannot achieve the regional GHG target, the MPO must prepare an Alternative Planning Strategy showing how it would achieve the targets with alternative development patterns, infrastructure, or transportation measures and policies.
- Each MPO must prepare and circulate a draft SCS at least 55 days before it adopts a final RTP or MTP.
- After adoption, each MPO must submit its SCS to CARB for review.
- CARB must review each SCS to determine whether, if implemented, it would meet the GHG targets. CARB must complete its review within 60 days.

AMBAG reduction targets from CARB are a three percent per capita reduction from 2005 levels by 2020 and a six percent per capita reduction from 2005 levels by 2035 (CARB 2025). These targets apply to the entire AMBAG region for all on-road light duty trucks and passenger vehicles emissions, and not to individual cities or sub-regions. Therefore, AMBAG, through the 2050 MTP/SCS, must reduce these levels to meet 2035 targets. The 2050 MTP/SCS includes the years for which the regional targets are required (2035) and includes the additional scenario year of 2050 to comply with federal law. As discussed in Section 4.8, *Greenhouse Gas Emissions/Climate*

Change, the 2050 MTP/SCS meets the 2035 GHG targets. CARB is in the process of updating regional targets with goals to publish new targets by fall of 2026.

SB 375 specifically states that nothing in the law changes local governments local land use authorities. The 2050 MTP/SCS provides a regional policy foundation that local governments may build upon, if they so choose. The 2050 MTP/SCS includes and accommodates the growth projections for the region. SB 375 also requires that forecasted development patterns for the region be consistent with the eight-year regional housing needs as allocated to member jurisdictions through the Regional Housing Needs Allocation (RHNA) process under state housing law.[1]

In addition, this 2050 MTP/SCS EIR lays the groundwork for the streamlined review of qualifying development projects. Qualifying projects that meet statutory criteria and are consistent with the 2050 MTP/SCS are eligible for streamlined environmental review pursuant to the California Environmental Quality Act (CEQA) under SB 375 and other laws; see the Office of Land Use and Climate Innovation (previously Governor's Office of Planning and Research) 2017 General Plan Guidelines (Office of Land Use and Climate Innovation 2017).

The 2017 General Plan Guidelines (Governor's Office of Land Use and Climate Innovation 2017) is the first comprehensive update to the guidelines since 2003 and addresses numerous new laws, requirements, resources, and research that affect long-range planning in California. The 2017 update includes links to external documents and additional resources. This includes guidance for implementing the following legislation: Environmental Justice (SB 1000), Climate Change (SB 379), Sustainable Communities Strategies (SB 375), Flood Management (SB 5), Vehicle Miles Traveled (SB 743), Island or Fringe Communities (SB 244), Tribal Consultation (Assembly Bill [AB] 52) and Local Hazard Mitigation Plans (AB 2140). Beyond State law requirements, the 2017 General Plan Guidelines also provide direction on topics including healthy communities, equitable and resilient communities, economic development, climate change, and renewable energy. The 2017 General Plan Guidelines are currently being updated, a process anticipated for March 2027 completion.

Planning and Zoning Law

California Government Code Section 65000, et seq., regulates the substantive and topical requirements of general plans. State law requires each city and county 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." The California Supreme Court has called the general plan the, "…constitution for future development." The general plan expresses the community's development goals and embodies public policy relative to the distribution of future land uses, both public and private.

[1] The 6th Cycle RHNA was lasted updated in the 2045 MTP/SCS adopted in 2022. The 7th Cycle RHNA will be updated as part of the next MTP/SCS scheduled to be adopted in 2030.

Zoning authority originates from city and county police power and from the Planning and Zoning Law, which sets minimum requirements for local zoning ordinances. Zoning ordinances must be consistent with the general plan and specific plans. The consistency requirement does not apply to charter cities unless the charter city adopts a consistency rule.

Cortese Knox Hertzberg Local Government Reorganization Act of 2000

The Cortese Knox Hertzberg Local Government Reorganization Act is the most substantial reform to local government reorganization law since the 1963 statute that created a Local Agency Formation Commission (LAFCO) in each county. The law established procedures for local government changes of organization, including city incorporation, annexation to a city or special district, and consolidation of cities or special districts (Section 56000, et seq.). LAFCOs have numerous powers under the Cortese Knox Hertzberg Local Government Reorganization Act, but those of prime concern are the power to act on local agency boundary changes and to adopt spheres of influence for local agencies. The law also states that to update an spheres of influence, LAFCOs are required to first conduct a review of the municipal services provided in the county.

Senate Bill 743

SB 743 changed the way that public agencies evaluate the transportation impacts of projects under CEQA, recognizing that roadway congestion, while an inconvenience to drivers, is not itself an environmental impact (see Public Resource Code, Section 21099, subdivision (b)(2)). SB 743 provides opportunities to streamline CEQA for qualifying urban infill development near major transit stops in metropolitan regions statewide. A transit oriented infill project can be exempt from CEQA if consistent with a specific plan for which an EIR was prepared, and consistent with the use, intensity, and policies of an SCS or Alternative Planning Strategy that is certified by the CARB as meeting its GHG reduction targets. A city or county may designate an “infill opportunity zone” by resolution if it is consistent with the general plan and any applicable specific plan, and is a transit priority area within the adopted SCS or Alternative Planning Strategy. This infill opportunity zone is then exempt from level of service standards in the congestion management plan. Furthermore, SB 743 specifies that parking impacts are not considered significant impacts on the environment under CEQA.

Senate Bill 330

SB 330, the Housing Crisis Act of 2019, was enacted to accelerate housing production in high-need areas by limiting local actions that reduce housing capacity. It prohibits downzoning, housing moratoria, and new development standards that constrain housing. The law streamlines approvals by capping public hearings at five and requiring timely decisions on housing projects. It also locks in zoning and development standards at the time a preliminary application is submitted, providing greater certainty for developers. These provisions aim to reduce delays and regulatory barriers for housing, especially in jurisdictions with severe housing shortages.

Assembly Bill 130

Effective June 30, 2025, AB 130 introduces substantial reforms to streamline housing development under CEQA. The bill establishes a statutory CEQA exemption for qualifying infill housing projects located in urban areas up to 20 acres, provided they meet specific criteria such as adjacency to urban uses and avoidance of historic or environmentally sensitive sites. This exemption is designed to reduce environmental review burdens for projects that align with local zoning and planning standards. AB 130 also makes permanent several provisions of the Permit Streamlining Act, including timelines for application completeness and project approval, and limits the number of public hearings for qualifying housing projects. Additionally, the bill codifies elements of the Housing Accountability Act and SB 330, including protections for vested rights and restrictions on growth control measures. A notable provision is the statewide freeze on residential building code updates from October 1, 2025, through June 1, 2031, which aims to reduce regulatory uncertainty and development costs. AB 130 also enhances the role of the California Department of Housing and Community Development in overseeing RHNA methodologies, further aligning local planning efforts with state housing goals.

Senate Bill 131

SB 131, effective June 30, 2025, complements AB 130 by focusing on CEQA streamlining for infrastructure and public-serving projects. It introduces a new review pathway for "near miss" projects—those that narrowly fail to qualify for a CEQA exemption due to a single disqualifying condition. Under this provision, CEQA review is limited to the environmental effects of that specific condition, and such projects are exempt from analyzing alternatives or growth-inducing impacts. SB 131 also creates or expands CEQA exemptions for a range of project types, including advanced manufacturing facilities on industrial-zoned land, broadband infrastructure in public rights-of-way, updates to climate adaptation plans, High-Speed Rail maintenance facilities, and local rezoning actions that implement Housing Element commitments. Additionally, the bill mandates biennial updates to *CEQA Guidelines* to improve clarity and address ambiguities. These changes reflect a broader policy shift toward facilitating development while maintaining targeted environmental protections, and they are expected to significantly impact the planning and approval processes for both housing and infrastructure projects across California.

California Coastal Act

The CCC is one of California's three designated coastal management agencies that administer the federal Coastal Zone Management Act in California. In partnership with coastal cities and counties, it plans and regulates the use of land and water in the coastal zone. Development activities, which are broadly defined by the Coastal Act to include (among other activities) construction of buildings, divisions of land, and activities that change the intensity of use of land or public access to coastal waters, generally require a coastal permit from either the CCC or the local government. The Coastal Zone Management Act also gives state coastal management agencies regulatory control over all federal activities and federally licensed, permitted, or funded activities that may affect coastal resources, including highway improvement projects that use federal funds.

The mission of the CCC, established by voter initiative in 1972 and later made permanent by the legislature through adoption of the California Coastal Act of 1976, is to protect, conserve, restore, and enhance environmental and human-based resources of the California coast and ocean for environmentally sustainable and prudent use by current and future generations. The California Coastal Act includes specific policies that address issues such as shoreline public access and recreation, lower-cost visitor accommodation, terrestrial and marine habitat protection, visual resources, landform alteration, agricultural lands, commercial fisheries, industrial uses, water quality, offshore oil and gas development, transportation, development design, power plants, ports, and public works. The coastal zone, which was specifically mapped by the legislature, covers an area larger than the State of Rhode Island. On land, the coastal zone varies in width from several hundred feet in highly urbanized areas to up to 5 miles in certain rural areas, and offshore, the coastal zone includes a 3-miles-wide band of ocean.

The CCC regulates land use in the coastal zone through the issuance of Coastal Development Permits (CDPs) for proposed development. "Development" is a broadly defined term that includes, among other things, the construction of physical infrastructure such as roads, highways, bridges, and public transportation systems, as well as their repair and maintenance. Activities that change the intensity of use of land or public access to coastal waters are also considered development under the Coastal Act. For the CCC to approve a CDP, proposed development must be consistent with the policies of Chapter 3 of the Coastal Act (Public Resources Code Section 30200 et seq.).

In areas where the CCC has certified an LCP for a local government, that local government exercises primary CDP authority, with the policies of the LCP serving as the primary standard of review. In all cases, including in a jurisdiction with a certified LCP, the CCC retains CDP permitting jurisdiction on lands below the mean high tide line and on public trust lands (e.g., historic wetlands, marshlands, and tidal channels). In the Monterey Bay region, the CCC's CDP jurisdiction extends relatively far inland in several areas, such as throughout Elkhorn Slough and Moro Cojo Slough, and to just north of Castroville (CCC 2025a). In portions of Santa Cruz County north of the City of Santa Cruz, the CCC's CDP jurisdiction extends approximately 5 miles inland but reduces to less than a mile south of the City of Santa Cruz (CCC 2025b). The CCC also has appeal jurisdiction for CDPs issued by local governments for projects located seaward of the first public road; projects within 100 feet of the edge of a wetland, stream, or other public trust lands; and most types of public works/infrastructure projects (CCC n.d.).

Quimby Act

The 1975 Quimby Act (California Government Code Section 66477) authorized cities and counties to pass ordinances requiring that developers set aside land, donate conservation easements, or pay fees for park improvements. The act states that the dedication requirement of parkland can be a minimum of 3 acres per thousand residents or more, and up to 5 acres per thousand residents if the existing ratio is greater than the minimum standard. Revenues generated through in-lieu fees collected under the Quimby Act cannot be used for the operation and maintenance of park facilities. In 1982, the act was substantially amended. The amendments further defined

acceptable uses of and restrictions on the use of Quimby Act funds, provided acreage/population standards and formulas for determining the exaction, and indicated that the exactions must be closely tied to a project's impacts as identified through studies required by CEQA.

State Open Space Standards

State planning law (Government Code Section 65560) provides a structure for the preservation of open space by requiring every city and county in the state to prepare, adopt, and submit to the Secretary of the Resources Agency a, "…local open-space plan for the comprehensive and long-range preservation and conservation of open-space land within its jurisdiction." The following open space categories are identified for preservation:

- **Open space for public health and safety,** including, but not limited to, areas that require special management or regulation because of hazardous or special conditions;
- **Open space for the preservation of natural resources,** including, but not limited to, natural vegetation, fish and wildlife, and water resources;
- **Open space for resource management and production,** including, but not limited to, agricultural and mineral resources, forests, rangeland, and areas required for the recharge of groundwater basins;
- **Open space for outdoor recreation,** including, but not limited to, parks and recreational facilities, areas that serve as links between major recreation and open space reservations (such as trails, easements, and scenic roadways), and areas of outstanding scenic and cultural value; and
- **Open space for the protection of Native American sites,** including, but not limited to, places, features, and objects of historical, cultural, or sacred significance, such as Native American sanctified cemeteries, places of worship, religious, or ceremonial sites, or sacred shrines located on public property (further defined in PRC Sections 5097.9 and 5097.993 Local Laws, Regulations, and Policies).

Senate Bill 1425 Open Space Element Update

AB 1425 which passed in September of 2022, states that by January 1, 2026, every city and county shall review and update its local open-space plan to address the following components:

- Access to open space for all residents in a manner that considers social, economic, and racial equity, correlated with the environmental justice element or environmental justice policies in the general plan, as applicable.
- Climate resilience and other co-benefits of open space, correlated with the safety element.
- Rewilding opportunities, correlated with the land use element.

c. Local Laws, Regulations, and Policies

The following section focuses on the key plans that regulate land use in the AMBAG region, which are the county and city general plans and LCPs, the Airport Land Use Compatibility Plans, and master plans regulating land dedicated to university campuses. This section outlines the status of those plans.

Monterey County

Monterey County General Plan

The Monterey County General Plan (County of Monterey 2010) includes 12 planning areas. The planning horizon year is 2030, with full buildout of 10,015 new residential units. One of the primary challenges that the Monterey County General Plan addresses is how to plan future growth when high quality farmlands are in the valley and flatlands, and have been forced to compete with urban developments, while foothills along the valley serve as natural and scenic resources unique to Monterey County (County of Monterey 2010).

Monterey County Local Coastal Program

Monterey County's LCP guides development and conservation across the unincorporated coastal zone by establishing policies, land use plans, and detailed implementation procedures for designated areas. It is composed of four main Land Use Plans—Big Sur Coast, Carmel Area, Del Monte Forest, and North County—each of which has a corresponding Coastal Implementation Plan that outlines zoning and regulations specific to that region. The LCP is regularly updated to address evolving challenges such as sea level rise, habitat protection, and community needs. Key functions of the Monterey County LCP include directing land use and development standards, protecting sensitive habitats and scenic resources, preserving agricultural lands, and regulating coastal access (County of Monterey 2025).

City of Carmel-by-the-Sea General Plan

The City of Carmel-by-the-Sea adopted its General Plan in 2003 (City of Carmel-by-the-Sea 2003). The City combined its General Plan with its LCP to ensure coordination of these two documents. This General Plan includes the following elements: Land Use and Community Character, Circulation, Housing, Coastal Access and Recreation, Coastal Resource Management, Public Facilities and Services, Open Space/Conservation, Environmental Safety, and Noise (City of Carmel-by-the-Sea 2003).

City of Carmel-by-the-Sea Local Coastal Program

The City of Carmel-by-the-Sea's LCP was certified by the CCC in 2004. It integrates the City's General Plan elements related to land use, community character, circulation, coastal access, recreation, and resource management specifically within the coastal zone. The LCP includes an implementation plan codified in the Carmel-by-the-Sea Municipal Code and incorporates detailed policies such as the Shoreline Management Plan. Recently, Carmel-by-the-Sea has focused on updating its LCP to address climate change challenges, including sea level rise and coastal hazards, through a multi-phase Coastal Engineering Study and Adaptation Planning Project (City of Carmel-by-the-Sea 2025).

City of Del Rey Oaks General Plan

The City of Del Rey Oaks adopted the update to its General Plan in 1997 (City of Del Rey Oaks 1997). This General Plan includes the following elements: Land Use, Housing, Circulation, Conservation and Open Space, Safety, and Noise. The overarching goal of this General Plan is to enhance the beauty, health, safety, and quality of life for residents (City of Del Rey Oaks 1997).

City of Gonzales General Plan

The City of Gonzales adopted the Gonzales 2010 General Plan in 2011 and revised the plan in 2018 (City of Gonzales 2018). A focus of the 2010 General Plan is providing a long-range plan with an Urban Growth Area that contains approximately 2,150 acres of new land for urbanization. This General Plan includes the following elements: Land Use, Circulation, Housing, Community Health and Safety, Conservation and Open Space, Community Services and Facilities, Community Character, and Sustainability (City of Gonzales 2018).

City of Greenfield General Plan

The City of Greenfield adopted the General Plan in 2005 (City of Greenfield 2005). Greenfield is currently updating its General Plan. In addition to the seven elements that are required by state law, the General Plan also includes the following elements: Growth Management, Economic Development, and Recreation. The goals of the Greenfield General Plan are to promote a high quality physical and social environment with rural character, provide a full range of municipal services, and support a people-oriented environment for all (City of Greenfield 2005).

City of Pacific Grove General Plan

The Pacific Grove 1994 General Plan is the principal policy document for guiding future conservation and development of the City. This General Plan includes the following elements: Land Use, Housing, Transportation, Parks and Recreation, Natural Resources, Historic and Archaeological Resources, Urban Structure and Design, Public Facilities, and Health and Safety (City of Pacific Grove 1994).

City of Pacific Grove Local Coastal Program

Certified in 2020, Pacific Grove’s LCP addresses land use, resource conservation, and coastal access plans for the city's coastal zone. The program governs development and environmental protection to maintain the area's natural and recreational qualities. It integrates modern climate adaptation approaches to address sea level rise and storm impacts (City of Pacific Grove 2020).

City of Marina General Plan

The City of Marina General Plan (City of Marina 2000) was adopted by the City in 2000. The overall goal of the Marina General Plan is the creation of a community: which provides a high quality of life for all its residents; which offers a broad range of housing, transportation, and recreation choices; and which conserves irreplaceable natural resources. This General Plan includes the following elements: Community Land Use, Community Infrastructure, and Community Development and Design (City of Marina 2000).

City of Marina Local Coastal Program

The City of Marina's LCP, certified in 1982 and updated in 2025, sets the policy framework and implementation plans that shape development and resource protection within Marina's coastal zone. The LCP intends to balance coastal development with maximum public access, the preservation of sensitive dune habitats, and protection of rare and endangered species. It outlines zoning measures for areas such as sand mining reclamation and open space, coordinates with state agencies on regional recreation, and plans for sustainable visitor and public facilities. The Marina LCP is currently undergoing a comprehensive update (City of Marina 2025).

City of Monterey General Plan

The City of Monterey adopted the General Plan in 2005 (City of Monterey 2005), with significant updates to the Housing, Land Use, and Safety Elements completed as part of the Monterey 2031 project in July 2024. The General Plan goals and policies focus on preserving and enhancing Monterey's aesthetic environment, developed around Monterey's unique physical setting and town image. The updated General Plan includes elements such as Urban Design, Land Use, Circulation, Housing, Conservation, Open Space, Safety, Noise, Economic Development, Social Equity, Historic Preservation, and Public Facilities, aligning with state mandates for housing and climate resilience (City of Monterey 2005, City of Monterey 2024).

City of Monterey Local Coastal Program

The City of Monterey's LCP provides a framework to guide future growth, protect coastal resources, and address unique land use opportunities and constraints along the city's coastline. Originally, Monterey divided its coastal zone into five subareas—Cannery Row, Harbor, Del Monte Beach, Skyline, and Laguna Grande—with land use plans tailored for each. Currently, the city is working to update and consolidate these into a single land use plan and implementation plan to improve clarity and address issues such as coastal erosion, habitat preservation, and public access (City of Monterey 2025).

City of Salinas General Plan

The City of Salinas General Plan (City of Salinas 2002) was adopted in 2002. The City is currently updating the Plan. Since the last comprehensive update in 1988, the city grew substantially and is now the largest city in Monterey County. The major focus of this General Plan is how to protect valuable agricultural resources while promoting a diversified economy. This General Plan includes the following elements: Land Use, Community Design, Housing, Conservation/Open Space, Circulation, Safety, and Noise (City of Salinas 2002).

City of Seaside General Plan

The City of Seaside adopted a new 2040 General Plan in 2024. This updated General Plan represents a roadmap for the future of Seaside and its residents, and reflects the unique local identity and generation of new land uses, educational, and economic opportunities. The General Plan also seeks to protect the coastal system and preserve the natural habitat that extends

beyond the City's boundaries in balance with Seaside's desire to be developed as a well-rounded mixed-use community. Equity, sustainability, collaboration, and innovation are centrally embedded in the General Plan goals, policies, and actions to achieve a mixed-use community. In addition to the required seven elements, this General Plan also includes Urban Design and Economic Development Elements (City of Seaside 2024).

City of Seaside Local Coastal Program

Seaside's LCP, certified in 2013, covers the city's coastal zone with policies addressing land use, resource protection, and public access. It includes the management of key coastal areas such as the Laguna Grande planning area, which it shares with Monterey. The program supports local permitting authority while complying with state coastal act requirements and integrates strategies for climate adaptation (City of Seaside 2025).

Sand City General Plan

Sand City adopted its General Plan in 2002 (Sand City 2002). The focus of the General Plan is to enhance the features that make the community unique, including that it is walkable, transit oriented, and capable of providing an integration of residential and commercial uses. The themes of the General Plan are economic diversification, active redevelopment, enhanced community appearance and image, organized and well-planned growth, elimination of land use conflicts, and cohesive residential neighborhoods (Sand City 2002).

Sand City Local Coastal Program

Sand City's LCP, certified in 1982, intends to balance coastal development projects with coastal resource protection. The program includes land use policies and development standards, balancing economic development with preservation of coastal habitats and public access (Sand City 1982).

City of Soledad General Plan

The City of Soledad adopted its General Plan in 2005 (City of Soledad 2005) and is currently working on an update. The primary focus of the Plan is to foster a climate conducive for expanded economic development in Soledad, including expanding opportunities for shopping and tourism, providing more and better paying jobs, and ensuring affordable housing. In addition to covering the required seven elements, the General Plan also includes the Front Street Improvement Plan and Downtown Specific Plan (City of Soledad 2005).

King City General Plan

The King City General Plan (King City 1998) was adopted in 1998. The overall goal of the General Plan is to provide for orderly growth and development, and to maintain a balanced community. In addition to including the required seven elements, the General Plan also includes an Economic Development Element (King City 1998). The City adopted a new Open Space, Conservation, and Safety Element in 2025, and a new Housing Element in 2024.

Monterey County Airport Land Use Compatibility Plans

The four airports within Monterey County are: Monterey Regional Airport, Marina Municipal Airport, Mesa Del Rey Airport, and Salinas Municipal Airport. The Monterey County Airport Land Use Commission (ALUC) updated the Airport Land Use Compatibility Plans (ALUCPs) for Monterey Regional Airport and Marina Municipal Airport in 2019 (Monterey County Airport Land Use Commission 2019a). The ALUC published the plan for Salinas Municipal Airport in 1982 and the plan for Mesa Del Rey Airport in 1978. The goals of the ALUCPs are to protect residents from the negative environmental noise, safety, and traffic impacts that can potentially be induced by airports (Monterey County Airport Land Use Commission, 1978, 1982, 2019a, 2019b).

California State University, Monterey Bay Comprehensive Master Plan

The 2022 California State University, Monterey Bay (CSUMB) Comprehensive Master Plan was approved by the CSU Board of Trustees in May 2022. The Master Plan outlines the physical development of the campus through approximately 2035. Key concepts covered by the plan include land use, open space preservation, mobility improvements focused on pedestrian and bicycle access, water and energy systems, and design guidelines that reflect CSUMB's mission and regional context. The plan also prioritizes phased project implementation and incorporates environmental mitigation measures as documented in its Final Environmental Impact Report certified in 2022 (CSUMB 2022).

Santa Cruz County

Santa Cruz County General Plan

The Santa Cruz County Board of Supervisors adopted the 2024 General Plan in November in 2022. The purpose of the Santa Cruz County General Plan/LCP is to guide and regulate land use and development in unincorporated Santa Cruz County. The General Plan is separated into elements including Built Environment; Access and Mobility; Housing; Agriculture, Natural Resources, and Conservation; Public Safety; Parks, Recreation, and Public Facilities; and Noise (County of Santa Cruz 2024).

Santa Cruz County Local Coastal Program

Santa Cruz County's LCP covers unincorporated areas within the coastal zone and is designed to comply with the California Coastal Act. The program consists of a Land Use Plan, adopted as part of the County General Plan, and multiple implementing ordinances that collectively manage land use, development, and natural resource protection. The LCP directs how new development should proceed to balance housing, recreation, agriculture, and resource conservation, while safeguarding sensitive habitats, scenic resources, and coastal access. Recent amendments have addressed new state housing laws, sustainable development, and sea-level rise (County of Santa Cruz 2025).

City of Scotts Valley General Plan

The City of Scotts Valley adopted its General Plan in 2023. The General Plan is separated into elements including Land Use, Economic Development, Housing, Mobility, Open Space & Conservation, Safety & Noise, and Community Services & Facilities (City of Scotts Valley 2023). The City of Scotts Valley is currently updating the Town Center Specific Plan to include new development requirements and zoning (City of Scotts Valley 2025).

City of Santa Cruz General Plan

The City of Santa Cruz 2030 General Plan was adopted in 2012. The General Plan seeks to connect the University of California, Santa Cruz population with the residents of the Santa Cruz community. The 2030 General Plan expresses Santa Cruz community members' desires for the city's physical, economic, social, cultural, and environmental characteristics, and seeks to establish plans for future growth and improvement in the upcoming 25 years (City of Santa Cruz 2012, amended 2019). The City of Santa Cruz is currently developing a Downtown Expansion Specific Plan (City of Santa Cruz 2025a).

City of Santa Cruz Local Coastal Program

The City of Santa Cruz's LCP guides the pattern and character of development in its urban coastal areas. The City's LCP is closely integrated with its General Plan and targets issues including coastal erosion, public access, sustainable growth, and preservation of coastal resources and neighborhoods. Ongoing updates address changing conditions, including climate adaptation and housing. The City's LCP includes a Land Use Plan and Implementation Plan, which are periodically amended and certified by the California Coastal Commission to ensure conformance with state policies. The original LCP was approved in 1992 and is currently being updated (City of Santa Cruz 2025b).

City of Capitola General Plan

The City of Capitola adopted the General Plan in 2014 and updated the Land Use Element in 2019 (City of Capitola 2014). The General Plan guiding principles focus on the following topics: community identity, community connections, neighborhoods and housing, environmental resources, economy, fiscal responsibility, mobility, and health and safety. In addition to the seven mandatory elements, this General Plan also includes an Economic Development Element (City of Capitola 2014).

City of Capitola Local Coastal Program

Capitola's LCP includes a certified Land Use Plan and an Implementation Plan, which governs coastal land use, public access, resource protection, and development within the coastal zone. The City's certified LCP components emphasize balancing coastal development with conservation, recreation, and hazard mitigation consistent with the California Coastal Act (City of Capitola 1981). The City of Capitola is currently undergoing an update of the LCP as part of the Cliff Drive Resiliency Project to update outdated policies and add in resiliency (City of Capitola 2025).

City of Watsonville General Plan

The City adopted the existing Watsonville 2005 General Plan in 1994 (City of Watsonville 1994). This General Plan addresses the following major issues: population growth, housing growth, agricultural preservation, and the provision of adequate and affordable housing. The General Plan includes the following elements: Growth and Conservation, Land Use, Urban Design, Housing, Children, Recreation, Environmental Resources, Circulation, Public Facilities, and Public Safety (City of Watsonville 1994). The Draft Watsonville 2050 General Plan is the subject of ongoing litigation and has not replaced the 2005 General Plan (City of Watsonville 2025). The City of Watsonville adopted its Downtown Watsonville Specific Plan in 2023, which included updates to the Land Use and Circulation elements (City of Watsonville 2023a).

City of Watsonville Local Coastal Program

Watsonville's coastal area, primarily east of Highway 1, is subject to county and city coastal zoning and development policies consistent with the Coastal Act. While not as extensive as other coastal cities, Watsonville's LCP and zoning regulations manage land use and resource protection in its coastal zone. In 2020, the LCP underwent a major amendment (CCC 2020).

Santa Cruz County Airport Land Use Compatibility Plans

The Santa Cruz County Community Development Department is the ALUC with authority in Santa Cruz County. The 2023 Watsonville Municipal Airport Master Plan Update serves as the ALUCP for the Watsonville Municipal Airport, which is the only public airport in the County of Santa Cruz. In addition, in January 2024, the City of Watsonville updated the previous 2017 Watsonville Municipal Airport Regulations to augment the existing ordinances of the City of Watsonville Municipal Code that regulate land use activities within and near the Watsonville Municipal Airport (City of Watsonville 2023b, 2024).

University of California, Santa Cruz Long Range Development Plan

The University of California, Santa Cruz (UCSC) Long Range Development Plan was adopted by the University of California Board of Regents in September 2021. The Long-Range Development Plan provides a comprehensive framework for the physical development of the UC Santa Cruz campus. The Long-Range Development Plan supports UCSC's academic, research, and public service mission while maintaining the campus's strong traditions of environmental stewardship and sustainability (UCSC 2021).

San Benito County

San Benito County General Plan

The San Benito County 2035 General Plan (San Benito County 2015) sets a clear direction for the future of the county and includes goals, policies, and programs necessary to achieve the community's vision and guiding principles. This plan also addresses issues of sustainability, including environmental protection, economic expansion, and diversification and equity. The

plan was shaped over a three-year period by an extensive outreach process that engaged residents, businesses, stakeholders, developers, and decision makers (County of San Benito 2015).

City of Hollister General Plan

The City of Hollister General Plan, adopted in 2005, identifies growth as a major factor in the loss of agricultural land. As a result, the 2005 General Plan reduced the size of the city's planning area. Since adoption of the General Plan, further growth has been constrained by inadequate infrastructure, congestion on Highway 25, insufficient wastewater capacity issues, and a moratorium on major development. The General Plan sets six major goals for the city: encourage pedestrian-friendly mixed use development downtown; provide core services in every neighborhood; encourage multiple modes of transportation; provide a range of housing styles and affordability levels; provide for an environment that encourages healthy living; and promote economic and environmental sustainability (City of Hollister 2005).

City of San Juan Bautista General Plan

The City of San Juan Bautista 2035 General Plan was adopted in 2016. The General Plan's Land Use element sets out a vision for future growth in the city that includes retention of agriculture and open space around the city's perimeter; reinvestment in existing neighborhoods; continued vitality of the downtown and the city's arts and cultural events; and a focus on infill development, community design, and growth management (City of San Juan Bautista 2015).

San Benito County Airport Land Use Compatibility Plans

The San Benito County Airport Land Use Commission reviews development proposed within the Airport Influence Area of the Hollister Municipal Airport and Frazier Lake Airpark. The ALUC reviews applications in compliance with the policies in the Hollister Municipal Airport Land Use Compatibility Plan and the Comprehensive Land Use Plan - Frazier Lake Airpark (Council of San Benito County Governments 2012; 2019).

4.11.3 Impact Analysis

a. Methodology and Significance Thresholds

The 2050 MTP/SCS was assessed to determine whether the transportation projects or the SCS land use scenario or pattern could physically divide an established community or conflict with any applicable land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. This evaluation of land use assumes that construction and development under the 2050 MTP/SCS would adhere to applicable federal, state, and local regulations and would conform to appropriate standards as relevant for individual projects.

Impacts related to conflicts with habitat conservation plans or natural community conservation plans are discussed in Section 4.4, *Biological Resources*. Impacts related to population and housing are discussed in Section 4.13, *Population and Housing*.

Appendix G of the *CEQA Guidelines* identifies the following criteria for determining whether a project's impacts would have a significant impact on land use:

1. Physically divide an established community; and/or
2. Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation (including, but not limited to, the General Plan, Local Coastal Program, or Zoning Ordinance) and result in a physical change to the environment not already addressed in the other resource chapters of this EIR.

b. Project Impacts and Mitigation Measures

The following section describes land use impacts associated with the transportation improvements and future land use scenario in the 2050 MTP/SCS. In general, implementation of proposed transportation improvements and the reasonably foreseeable future development facilitated under the land use scenario envisioned by the 2050 MTP/SCS would result in land use impacts as described in the following sections.

Threshold 1: Would the project physically divide an established community?

Impact LU-1 WHILE CONSTRUCTION OF PROPOSED TRANSPORTATION IMPROVEMENTS AND THE LAND USE SCENARIO ENVISIONED BY THE 2050 MTP/SCS WOULD LEAD TO TEMPORARY DISRUPTIONS, TRAFFIC CONTROL PLANS WOULD ENSURE THAT CONSTRUCTION IMPACTS RELATED TO DIVISION OF AN ESTABLISHED COMMUNITY ARE LESS THAN SIGNIFICANT. DURING OPERATION, PROPOSED TRANSPORTATION IMPROVEMENTS AND THE LAND USE SCENARIO WOULD INCREASE CONNECTIVITY AND LEAD TO ADDITIONAL DEVELOPMENT IN ESTABLISHED COMMUNITIES. OPERATIONAL IMPACTS WOULD BE LESS THAN SIGNIFICANT.

In general, the 2050 MTP/SCS implements roadway projects and transportation improvements that would decrease traffic congestion, increase mobility, and improve alternative transportation infrastructure. Construction of additions to existing facilities and new facilities routinely involve temporary disruptions within established communities such as lane or road closures along roads and highways, and service delays or detours for bus routes and passenger rail. Local jurisdictions routinely require traffic control plans and related measures to ensure that construction activities accommodate vehicular and pedestrian access, such as designating alternate routes or scheduling disruptive activities late at night or on weekends. With these controls, construction activities would result in minimal physical division of established communities.

The 2050 MTP/SCS is intended to improve the system for all modes of transportation so vehicles and non-motorized transportation can use the streets simultaneously and safely. As a result, while roads would be expanded and widened under the 2050 MTP/SCS, these and/or other planned projects would include improvements to bicycle and pedestrian facilities. Improvements to these facilities would help connect established communities, making transportation between and within communities more efficient. Additionally, because the existing roads subject to expansion or widening are already part of the communities in which they are located, such projects would not have the potential to divide those communities. The projects are intended to achieve goals of the 2050 MTP/SCS to increase mobility, reduce congestion, and reduce GHG;

therefore, the projects should improve interconnectivity in communities rather than dividing them. New roads, highway interchanges, bicycle lanes, and Americans with Disabilities Act accessibility projects included in the 2050 MTP/SCS transportation system are long-planned projects that are typically included in local circulation elements and as such, are planned in accordance with local land uses, including established communities. Other future projects under the land use scenario envisioned by the 2050 MTP/SCS including housing, businesses, and other public spaces would be developed in a way that compliments long-planned transportation projects within the 2050 MTP/SCS. Therefore, these projects would increase community connectivity and mobility.

The existing and new road projects contained in the 2050 MTP/SCS originate from either local circulation plans or state projects supported by cities and counties. The projects have therefore been coordinated with and integrated into local plans that support and connect communities consistent with state planning law.

The land use scenario envisioned by the 2050 MTP/SCS would encourage infill, mixed use, and transit-oriented development within existing urbanized areas. The land use scenario accommodates the people, households, and jobs identified in the regional growth forecast, and prioritizes future growth within existing communities. This type of development would not divide a community; rather it would promote the development of existing vacant or underutilized properties. This would locate people closer to existing employment, and goods and services within established communities. Buildout of the SCS land use scenario would result in more compact development in those established communities. Compact development would allow housing, businesses, and other community-oriented public spaces to be located in close proximity to each other, removing the need to construct highways and roads which have historically divided established communities. Buildout of the SCS land use scenario would result in some outlying development that would not divide communities. These areas are generally characterized by lower population densities, dispersed residential patterns, and limited concentrations of community infrastructure. As a result, future land use changes are unlikely to physically or socially fragment cohesive communities, particularly given that development is anticipated to occur in accordance with local plans and adjacent to existing developed areas These outlying projects could be served by existing highways and roads and would not require the construction of additional highways and roads that could divide established communities.

Implementation of the 2050 MTP/SCS land use strategies would integrate future development into existing communities along the existing transportation network and would therefore not physically divide established communities. 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 would, as a result, improve community connectivity. Impacts related to dividing an established community would therefore be less than significant.

Mitigation Measures

None required.

Threshold 2:	Would the project cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation (including, but not limited to, the General Plan, Local Coastal Program, or Zoning Ordinance) and result in a physical change to the environment not already addressed in the other resource chapters of this EIR?

Impact LU-2 THE 2050 MTP/SCS WOULD NOT CAUSE A SIGNIFICANT ENVIRONMENTAL IMPACT DUE TO A CONFLICT WITH ANY LAND USE PLAN, POLICY, OR REGULATION AND RESULT IN A PHYSICAL CHANGE TO THE ENVIRONMENT NOT ALREADY ADDRESSED IN OTHER RESOURCE CHAPTERS. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT AFTER IMPLEMENTATION OF MITIGATION DISCUSSED THROUGHOUT THIS EIR.

In planning for projected growth in the region, the 2050 MTP/SCS represents a voluntary growth strategy that retains local government land use autonomy. Neither SB 375 nor any other law requires local member agency general plans or land use regulation to implement the land use policies in the 2050 MTP/SCS. Thus, implementation of the 2050 MTP/SCS is dependent on local government policy decisions and voluntary action. The proposed 2050 MTP/SCS includes a list of planned and programmed projects including local and regional capital improvements that have been anticipated or accounted for in local general plans and coastal plans. These plans are summarized above in Section 4.11.2, *Regulatory Setting.*

The vision for the 2050 MTP/SCS is built on a set of integrated policies, strategies, and investments to maintain and enhance the transportation system to meet the diverse needs of the region through 2050. The 2050 MTP/SCS encourages a multimodal transportation network with emphasis on non-motorized transportation and land use patterns to reduce the distance between trip destinations. These goals are highlighted throughout all regional and local plans including, but not limited to, General Plans, Local Coastal Programs, or Zoning Ordinances across all jurisdictions within AMBAG.

The 2050 MTP/SCS will help the region reach its GHG emission reduction targets established by CARB under SB 375, as discussed in Section 4.8, *Greenhouse Gas Emissions/Climate Change*. The 2050 MTP/SCS encourages infill and transit oriented development to reduce automobile traffic and commute trip lengths.

At the local level, the 2050 MTP/SCS builds on and incorporates regional and local planning efforts completed by the Regional Transportation Planning Agencies and local agencies through the general plan process. Other key regional and local examples include:

- University of California, Santa Cruz Long Range Development Plan
- California State University, Monterey Bay Master Plan

The land use and transportation scenario envisioned in the 2050 MTP/SCS was developed in close coordination with AMBAG partner agency staff, the LAFCO within each of the three counties, and the 18 cities that comprise the AMBAG region. The envisioned land use scenario would build on the current local general plans of jurisdictions within the AMBAG region. This involved close coordination with each Regional Transportation Planning Agency's Technical Advisory

Committee, and the Planning Director's Forum. AMBAG held more than 60 one-on-one meetings with local jurisdictions to discuss the land use pattern including forecast methodology, assumptions, growth projections, Place Types, Opportunity Areas, and the transportation network included in the 2050 MTP/SCS. While cities and counties are not required by SB 375 to make their plans consistent with the MTP/SCS, every effort was made to avoid inconsistencies (refer to 2050 MTP/SCS Appendix A and Appendix D).

The Transportation Analysis Zone (TAZ) disaggregation process is based on robust information leveraging above mentioned data, consultations with our 21 local jurisdictions before, during, and after the Regional Growth Forecast (RGF) process, and the land use development and monitor tracking tool, CalBuilds. The TAZ distribution is for all years 2022, 2035, and 2050. During the RGF process the local land use assumptions are determined in consultation and coordination with all the local jurisdictions. The GIS Portal is an interactive web-based application that captures local jurisdiction feedback and allows edits for their local land uses using standardized typologies called PlaceTypes and Opportunity Areas for focused growth areas for inclusion into MTP/SCS (refer to 2050 MTP/SCS Appendix F).

Monterey County, Santa Cruz County, and cities within these counties have certified LCPs. In Monterey County, the cities of Carmel-by-the-Sea, Marina, Monterey, Pacific Grove, Sand City, and Seaside have certified LCPs; in Santa Cruz County, the cities of Capitola, Santa Cruz, and Watsonville have certified LCPs. Development that would occur within the coastal zone would be subject to the respective LCP. LCPs contain, generally, a land use plan, development code, and policy and zoning maps. Development in the coastal zone in Monterey and Santa Cruz County coastal cities and unincorporated areas would also be subject to a coastal development permit when there would be a change in the use of land or water. The goal of applying for and receiving a coastal development permit is to ensure that a project is consistent with the Coastal Act, which is enforced and regulated by LCPs in the region. However, future projects under the transportation or land use scenario envisioned by the 2050 MTP/SCS could, in some cases, conflict with a local LCP if they conflict with permitted land use types, locations, and intensities; impact natural, cultural, or scenic resources; impact access to the shoreline or recreational opportunities; or worsen coastal hazards. A project that is not consistent with these policies (e.g., policies that do not allow transportation infrastructure within environmentally sensitive habitat areas or conversion of prime/working agricultural lands) is not approvable. To resolve a project's inconsistency with LCP policies, the applicant must either revise the proposed project or work with the applicable local government to amend the LCP, so long as the proposed project/amendment can demonstrate consistency with the Coastal Act.

Even with this coordination, due to the amount of jurisdictions that are contained within the AMBAG region, future projects under the transportation or land use scenario envisioned by the 2050 MTP/SCS could conflict with key policies or regulations adopted to avoid or mitigate environmental impacts, as presented throughout this EIR. Future projects under the transportation or land use scenario envisioned by the 2050 MTP/SCS would be required to undergo project-level environmental analysis to address potential environmental impacts. The 2050 MTP/SCS would result in significant and unavoidable impacts in several environmental issue areas, including: aesthetics, agriculture and forestry resources, air quality, biological resources, cultural resources, geology soils and minerals, greenhouse gas emissions, hazards and hazardous

materials, noise, public services, recreation, utilities, transportation, tribal cultural resources, and wildfire. The 2050 MTP/SCS would result in significant and unavoidable impacts to these environmental issue areas as disclosed in the respective EIR sections. However, the envisioned land use scenario would not result in additional impacts beyond the findings of significant and unavoidable impacts as already analyzed in respective environmental issue area sections of this EIR. Therefore, the SCS land use and transportation projects envisioned within the 2050 MTP/SCS would result in conflicts with land use plans, policies, or regulations. However, the 2050 MTP/SCS would not result in a physical change to the environment that has not already been addressed in the other resource chapters of this EIR. The impacts of any such conflicts are described throughout respective sections of the EIR.

Mitigation Measures

Mitigation measures are provided for applicable resources throughout their respective environmental issue area sections of the EIR to reduce impacts. No additional mitigation is required for this impact.

Significance After Mitigation

This impact would be less than significant after implementation of the mitigation measures identified in Chapter 4 of this EIR.

c. Specific RTP Projects That May Result in Impacts

All proposed transportation projects listed in Appendix B and summarized in Chapter 2, *Project Description*, would be associated with Impacts LU-1 and LU-2.

4.11.4 Cumulative Impacts

a. Methodology

The cumulative analysis presented below primarily relies on a projections-based approach, using regional land use and growth forecasts for the AMBAG region and adjoining counties to evaluate cumulative conditions. The project is assessed within the existing and foreseeable future environmental setting, and a determination is made as to whether its incremental contribution would be cumulatively considerable when considered alongside both the overall envisioned land use scenario and specific large-scale planned projects. Refer to Section 6.4, *Cumulative Impacts*, in Chapter 6, *Other CEQA Required Discussions*, for a full discussion on cumulative impact methodology.

b. Impact Analysis

Intensified development of cities in the AMBAG region could lead to intensified land uses in adjoining counties through changes in housing, commercial, and transportation infrastructure. Accordingly, the cumulative impact analysis area for land use and planning consists of the AMBAG region and the adjoining counties.

IMPACT LU-C-1 DEVELOPMENT IN THE CUMULATIVE IMPACTS ANALYSIS AREA WOULD NOT PHYSICALLY DIVIDE AN ESTABLISHED COMMUNITY. HOWEVER, IT COULD RESULT IN INCONSISTENCIES OR CONFLICTS WITH LOCAL LAND USE PLANS AND LOCAL COASTAL PLANS, POLICIES, AND REGULATIONS ADOPTED FOR THE PURPOSE OF AVOIDING OR MITIGATING ENVIRONMENTAL EFFECTS. THE 2050 MTP/SCS CONTRIBUTION TO CUMULATIVE IMPACTS WOULD NOT BE CUMULATIVELY CONSIDERABLE.

The AMBAG region is adjacent to seven counties: San Mateo, Santa Clara, Merced, Fresno, Kings, Kern, and San Luis Obispo. The land between each of these counties and the AMBAG region is undeveloped agricultural land, grazing land, or open space. The existing land use scenarios in the AMBAG region would continue to develop the region and could result in expansion of urban areas into undeveloped land, as discussed in Section 4.2, *Agriculture and Forestry Resources*. Additional development in undeveloped areas within the AMBAG region could require construction of roads and infrastructure that could divide existing communities. However, because there are no developed communities or urban growth areas at or near the seven county boundaries adjacent to the AMBAG region, cumulative impacts would be less than significant. Implementation of the 2050 MTP/SCS would concentrate development in infill areas and as such, would not result in the division of established communities.

Each of the seven adjacent counties has adopted general plans that direct new growth to existing developed areas, strongly support agricultural land preservation, and are part of other regional MTP/SCSs. These general plans include goals, policies, and programs adopted for the purpose of avoiding or mitigating environmental effects. San Mateo and San Luis Obispo counties have adopted Local Coastal Plans, each of which includes goals, policies, and programs adopted for the purpose of avoiding or mitigating environmental effects. Development under the existing plans would, therefore, be required to comply with all existing goals, policies, and programs within existing plans, and cumulative impacts would be less than significant.

The implementation of the 2050 MTP/SCS would result in significant and unavoidable impacts in several environmental issue areas including: aesthetics/visual resources, agriculture and forestry resources, air quality, biological resources, cultural resources, geology and soils, greenhouse gas emissions, hazards and hazardous materials, noise, public services, recreation, utilities, transportation, tribal cultural resources, and wildfire. The transportation projects and envisioned land use scenario would not result in additional impacts beyond the findings of significant and unavoidable impacts already analyzed in respective environmental issue area sections within this EIR, and would not result in a physical change to the environment that has not already been addressed in this EIR. Implementation of mitigation as listed throughout resource chapters of this EIR would reduce impacts of the proposed 2050 MTP/SCS.

When considered in combination with the adopted plans of adjacent counties, the cumulative impacts of the 2050 MTP/SCS would not result in a substantial adverse effect on the physical environment. Although the 2050 MTP/SCS would result in significant and unavoidable impacts in certain issue areas, these impacts would occur within a broader regional planning framework that includes mitigation measures, infill development strategies, and resource conservation policies. The adjacent counties' general plans and regional RTP/SCSs similarly emphasize sustainable growth and environmental protection. Furthermore, the physical separation between urban growth areas across county boundaries limits the potential for overlapping or

compounded impacts. Therefore, the combined cumulative impact of regional development, including the 2050 MTP/SCS and adjacent county plans, would be less than significant.

Overall, the cumulative impact related to land use and planning would be less than significant, and the 2050 MTP/SCS's contribution to the cumulative impact related to conflicts with local land use plans and local coastal plans, policies, and regulations would not be cumulatively considerable.

4.12 Noise

This section evaluates noise and vibration impacts of the proposed 2050 MTP/SCS.

4.12.1 Setting

a. Overview of Noise and Vibration

The following discussion describes the characteristics of noise and vibration. These characteristics are used to assess potential impacts at sensitive land uses. Noise- and vibration-sensitive land uses include locations where people reside or where the presence of unwanted sound could adversely affect the use of the land. Residences, senior facilities, schools, hospitals, guest lodging, libraries and some passive recreation areas are examples of typical noise- and vibration-sensitive land uses.

Noise

Sound is a vibration that transmits through a medium (such as a gas, liquid, or solid) created by a moving or vibrating source, which is capable of being detected by the hearing organs. Noise is defined as sound that is loud, unpleasant, unexpected, or undesired, and may therefore be classified as a more specific group of sounds. The effects of noise on people can include general annoyance, interference with speech communication, sleep disturbance, and, in the extreme, hearing impairment (California Department of Transportation [Caltrans] 2013).

Noise levels are commonly measured in decibels (dB) using the A-weighted sound pressure level (dBA). The A-weighting scale is an adjustment to the actual sound pressure levels so that they are consistent with the human hearing response, which is most sensitive to frequencies around 4,000 hertz (Hz) and less sensitive to frequencies around and below 100 Hz. Decibels are measured on a logarithmic scale that quantifies sound intensity in a manner similar to the Richter scale used to measure earthquake magnitudes. A doubling of the energy of a noise source, such as the doubling of vehicle traffic volumes, results in a noise level increase of 3 dB, whereas dividing the energy in half results in a 3 dB decrease (Crocker 2007).

Human perception of noise has no simple correlation with sound energy (i.e., the perception of sound is not linear in terms of dBA or in terms of sound energy). Two sources, each containing the same sound energy, do not “sound twice as loud” as one source. It is widely accepted that the average healthy human ear can detect changes (either increases or decreases) of 3 dBA, which is recognized as being barely perceptible to most people. Similarly, a change of 5 dBA is readily perceptible and a change of 10 dBA sounds twice (or half) as loud (Crocker 2007).

The level and frequency content of sound changes as it travels from the source to a receiver. The most obvious change is the decrease in level as the distance from the source increases. The manner by which sound is reduced with distance depends on factors, such as the type of source (e.g., a point or line source), the path the sound travels, site conditions, and the presence of intervening structures or other obstacles. Noise from a point source (e.g., construction equipment, industrial machinery, ventilation units) typically is reduced at a rate of 6 dBA per each

doubling of distance away from the source. Noise from a line source (e.g., roadway, pipeline, railroad) typically is reduced at a rate of 3 dBA per each doubling of distance away from the source (Caltrans 2013). The propagation of noise is also affected by the absorption characteristics of the ground: a hard site, such as a parking lot or smooth body of water, provides no absorption/attenuation and the changes in noise levels with distance result simply from the geometric spreading of the source (i.e., 3 or 6 dBA reduction per doubling of distance for a point source or line source, respectively). Conversely, a soft site, such as soft dirt, grass, or scattered bushes and trees, may provide additional absorption/attenuation, potentially reducing noise levels an additional 1.5 dBA per doubling of distance away from the source (Caltrans 2013). Noise levels may also be reduced by intervening structures. The amount of reduction provided by the "shielding" of these features depends on the size of the structure/s, the location of the structure/s relative to the noise source and receivers, and the frequency content of the noise levels. Natural terrain features, such as hills and dense woods, and man-made features, such as buildings and walls, can significantly alter noise levels. Generally, any large structure blocking the line of sight between a noise source and receiver will provide at least a 5-dBA reduction in source noise levels at the receiver (Federal Highway Administration [FHWA] 2011). The presence of building structures can substantially reduce noise levels from the exterior to the interior as well. The FHWA's guidelines indicate that modern building construction generally provides an exterior-to-interior noise level reduction of 20 to 35 dBA with closed windows.

The impact of noise is not a function of loudness alone. The time of day at which noise occurs and the duration of the noise are also important factors when considering potential noise impacts. Most noise that lasts for more than a few seconds is variable in its amplitude (i.e., the noise level continuously fluctuates over time). Consequently, a variety of noise descriptors have been developed. One of the most frequently used noise metrics is the equivalent continuous sound level (L_{eq}), which considers both duration and the sound power level of the source. The L_{eq} is defined as the single steady A-weighted level equivalent to the same amount of energy as that contained in the actual fluctuating levels over time. The extent of sound level fluctuations over a period of time is characterized by the minimum (L_{min}) and maximum (L_{max}) sound pressure levels, which represent the lowest and highest sound pressure levels measured during a given period, respectively.

The sound level that is exceeded "n" percent of time during a given sample period in the percentile noise level is represented as L_n. For example, the L_{50} level is the statistical indicator of the time-varying noise signal that is exceeded 50 percent of the time (during each sampling period); that is, half of the sampling time, the changing noise levels are above this value and half of the time they are below it. This is called the "median sound level." The L_{10} level, likewise, is the value that is exceeded 10 percent of the time (i.e., near the maximum), and this is often known as the "intrusive sound level." The L_{90} is the sound level exceeded 90 percent of the time and is often considered the "effective background level" or "residual noise level."

Noise that occurs at night tends to be more disturbing than noise that occurs during the day. Community noise is usually measured using the Day-Night Average Level (L_{dn}), which is the 24-hour average noise level with a +10 dBA penalty for noise occurring during nighttime hours (10:00

p.m. to 7:00 a.m.) hours. It is also measured using the Community Noise Equivalent Level (CNEL), which is the 24-hour average noise level with a +5 dBA penalty for noise occurring during evening hours (7:00 p.m. to 10:00 p.m.) and a +10 dBA penalty for noise occurring during nighttime hours (10:00 p.m. to 7:00 a.m.) (Caltrans 2013). Noise levels described by the L_{dn} and CNEL usually differ by about 1 dBA. The relationship between the peak-hour L_{eq} value and the L_{dn}/CNEL depends on the distribution of traffic during the day, evening, and night. Quiet suburban areas typically have CNEL noise levels in the range of 40 to 50 dBA, while areas near arterial streets are in the 50 to 60-plus CNEL range. Normal conversational levels are in the 60 to 65-dBA L_{eq} range; ambient noise levels greater than 65 dBA L_{eq} can interrupt conversations (Federal Transit Administration [FTA] 2018).

Vibration

Groundborne vibration of concern in environmental analysis consists of the oscillatory waves that move from a source through the ground to adjacent structures. The number of cycles per second of oscillation makes up the vibration frequency, described in terms of Hz. The frequency of a vibrating object describes how rapidly it oscillates. Vibration energy spreads out as it travels through the ground, causing the vibration level to diminish with distance away from the source. High-frequency vibrations diminish much more rapidly than low frequencies, so low frequencies tend to dominate the spectrum at large distances from the source. Discontinuities in the soil strata can also cause diffractions or channeling effects that affect the propagation of vibration over long distances (Caltrans 2020a). When a building is impacted by vibration, a ground-to-foundation coupling loss will usually reduce the overall vibration level. However, under rare circumstances, the ground-to-foundation coupling may actually amplify the vibration level due to structural resonances of the floors and walls.

Vibration amplitudes are usually expressed in inches per second (in/sec) peak particle velocity (PPV). PPV is defined as the maximum instantaneous positive or negative peak of a vibration signal. PPV is often used in monitoring of blasting vibration and other construction activity because it is related to the stresses that are experienced by buildings (Caltrans 2020a).

Noise and Vibration Sources

Many principal noise generators within the AMBAG region are associated with transportation (i.e., airports, freeways, arterial roadways, and railroads). Local collector streets are not considered significant noise sources as traffic volume and speeds are generally much lower than for freeways and arterial roadways. Generally, transportation-related noise is the dominant noise source within urban environments.

Similar to the environmental setting for noise, the vibration environment is typically dominated by traffic from nearby roadways and activity on construction sites. Heavy trucks typically operate on major streets and can generate groundborne vibrations that vary depending on vehicle type, weight, and pavement conditions. Nonetheless, vibration due to roadway traffic is typically not perceptible.

Motor Vehicle Traffic

Motor vehicles, including cars/light trucks, buses, and various types of trucks, are the most substantial source of noise in most of the AMBAG region. This can be attributed to the extensive network of major, primary, and secondary arterials, as well as the large number of vehicle trips that occur each day. Within Monterey County, U.S. 101 and State Route 1 have the largest vehicle volumes and the highest noise levels. In 2023, daily traffic volumes on State Route 1 reached as high as 96,000 vehicles near Aguajito Road. U.S. 101 daily traffic volumes in Monterey County reached as high as 81,000 vehicles near the State Route 183 junction (Caltrans 2023). On a highway such as U.S. 101, the 60 dBA noise contour can extend approximately 0.25-mile from the roadway centerline, with areas several hundred feet from the roadway centerline exposed to noise levels in excess of 70 dBA (County of Monterey 2010). Due to slower speeds and less traffic, noise levels on State Route 1 would be lower, although the 60 dBA noise contour would still extend several hundred feet from the roadway centerline (County of Monterey 2010).

Within Santa Cruz County in 2023, State Route 1 reached up to 93,000 vehicles near Morrissey Boulevard (Caltrans 2023).

The noisiest single road corridor in San Benito County is U.S. 101, although it traverses only seven miles though a relatively undeveloped portion of the County. In 2023, traffic reached as high as 64,000 vehicles near the Santa Clara County border (Caltrans 2023).

The AMBAG region also has many arterial roadways. Typical arterial roadways have one or two lanes of traffic in each direction. Noise from these sources can be a substantial environmental concern where buffers (e.g., buildings, landscaping, etc.) are inadequate to reduce noise levels or where the distance from centerline to sensitive uses is relatively small.

Aircraft Operation

The AMBAG region has six public-use airports:

- Monterey Regional
- Salinas Municipal
- King City Municipal (Mesa del Rey)
- Marina Municipal
- Watsonville Municipal
- Hollister Municipal

Of these, only the Monterey Regional Airport provides scheduled air carrier service.

In addition to the publicly-owned airports, several private airports operate in the region. Of these, the Frazier Lake Airpark is the only one that allows public use. The remaining privately owned airports are used to support the agricultural industry or are used for other business purposes.

There are currently two operational military airfields in the AMBAG region:

- Camp Roberts Army Airfield and Heliport
- Fort Hunter-Liggett Army Heliport

Railroad Operations

Rail lines for goods movement (e.g., agricultural materials) are located throughout the AMBAG region. The only regular rail passenger service currently operating in the region is provided by Amtrak, the most popular long distance passenger train in the U.S. The Coast Starlight, which connects Los Angeles to Seattle, stops in Salinas, is the only Amtrak rail station in the region. The route operates one train in each direction daily.

Railroad operations generate high, relatively brief, intermittent noise events. These noise events are an environmental concern for sensitive uses located along rail lines and near sidings and switching yards. Locomotive engines and the interaction of steel wheels and rails are one primary source of rail noise. The latter creates rolling noise, which is caused by continuous rolling contact, impact noise when a wheel encounters a rail joint, turnout or crossover and squeal generated by wheel/rail friction on tight curves. For very high speed rail vehicles, air turbulence can be a significant source of noise. Air horns and crossing bell gates are another primary source of rail noise.

Rail operations generate varying noise levels depending on the type of rail activity. Heavier commuter or freight trains, which are diesel-powered, generate more noise than electrically-powered light-rail vehicles. According to the FTA, six commuter trains traveling at 50 miles per hour with a horn blowing generate a noise level of 81 dBA L_{eq} at 50 feet. This same activity without a horn generates a noise level of 68 dBA L_{eq} at 50 feet. In comparison, 12 light rail transit trains traveling 40 miles per hour generate a noise level of 65 dBA L_{eq} at 50 feet. These same light rail transit trains generate a noise level of 57 dBA L_{eq} at 20 miles per hour at 50 feet (FTA 2018).

According to the FTA Transit Noise and Vibration Impact Assessment guidance document (2018), vehicle propulsion rail units generate the following noises: (1) whine from electric control systems and traction motors that propel rapid transit cars, (2) diesel-engine exhaust noise from locomotives, (3) air-turbulence noise generated by cooling fans and (4) gear noise. Additional noise of motion is generated by the interaction of wheels/tires with their running surfaces. The interaction of steel wheels and rails generates three types of noise: (1) rolling noise due to continuous rolling contact, (2) impact noise when a wheel encounters a discontinuity in the running surface, such as a rail joint, turnout or crossover and (3) squeal generated by friction on tight curves.

When comparing electric- and diesel-powered trains, speed dependence is strong for electric-powered transit trains because wheel/rail noise dominates, and noise from this source increases strongly with increasing speed. On the other hand, speed dependence is less for diesel-powered commuter rail trains, particularly at low speeds where the locomotive exhaust noise dominates. As speed increases, wheel-rail noise becomes the dominant noise source and diesel- and electric-powered trains will generate similar noise levels. For transit vehicles in motion, close-by sound levels also depend upon other parameters, such as vehicle acceleration and vehicle length, plus

the type/condition of the running surfaces. For very high-speed rail vehicles, air turbulence can also be a significant source of noise. In addition, the guideway structure can also radiate noise as it vibrates in response to the dynamic loading of the moving vehicle.

Industrial and Manufacturing

Noise from industrial complexes and manufacturing plants are characterized as stationary or point sources even though they may include mobile sources like heavy equipment. Local governments typically regulate noise from industrial, manufacturing and construction equipment and activities through enforcement of noise ordinance standards, implementation of general plan policies and imposition of conditions of approval for building or grading permits.

In general, in the AMBAG region and throughout California, industrial complexes and manufacturing plants are located away from sensitive land uses and, as such, noise generated from these sources has less of an effect on surrounding properties. In contrast to industrial and manufacturing facilities, construction sites are located throughout the AMBAG region and often within, or adjacent to, residential areas.

Construction Noise and Vibration

Noise and vibration from construction sites are characterized as stationary or point sources even though heavy construction equipment is often mobile. Construction activities typically generate high, intermittent noise and vibration on and adjacent to construction sites and related noise and vibration impacts are short-term, occurring primarily on weekdays and during daylight hours. The dominant source of noise from most construction equipment is their diesel engine. During pile driving or pavement breaking events, impact noise is the dominant source and equipment produces the highest vibration levels. Construction equipment operates in two modes, stationary and mobile. Stationary equipment operates in one location for one or more days at a time and can generate a constant noise level (e.g., pumps, generators, and air compressors) or variable noise levels (e.g., pile drivers and pavement breakers). Mobile equipment moves around the construction site (e.g., dozers, tractors). Noise levels vary depending on the power cycle being used. Mobile equipment such as trucks, move to and from the site using adjacent streets/roads.

4.12.2 Regulatory Setting

a. Federal Laws, Regulations, and Policies

Relevant federal regulations include those established by the FHWA, FTA, Federal Aviation Administration, and Department of Housing and Urban Development (HUD).

Federal Highway Administration

Title 23, Part 772 of the Code of Federal Regulations - Traffic Noise

The FHWA regulations for noise abatement must be considered for federal or federally-funded projects involving the construction of a new highway or significant modification of an existing

freeway when the project would result in a substantial noise increase or when the predicted noise levels approach or exceed the Noise Abatement Criteria (NAC). Traffic noise impacts, as defined in 23 CFR Section 772.5, occur when the predicted noise level in the design year approach or exceed the NAC specified in 23 CFR Section 772, or a predicted noise level substantially exceeds the existing noise level (a "substantial" noise increase). A "substantial increase" is defined as an increase of 12 dB L_{eq} during the peak hour of traffic. For sensitive uses, such as residences, schools, churches, parks and playgrounds, the NAC for interior and exterior spaces is L_{eq} 57 and 66 dB, respectively, during the peak hour of traffic noise. Table 4.12-1 summarizes NAC corresponding to various land use activity categories. Activity categories and related traffic noise impacts are determined based on the actual land use in a given area.

Table 4.12-1 Noise Abatement Criteria

Activity Category	Hourly L_{eq}	Hourly L_{10}[1]	Analysis Location	Description of Activity Category
A	57	60	Exterior	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose
B	67	70	Exterior	Residential
C	67	70	Exterior	Active sport areas, amphitheaters, auditoriums, campgrounds, cemeteries, day care centers, hospitals, libraries, medical facilities, parks, picnic areas, places of worship, playgrounds, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, recreation areas, Section 4(f) sites, schools, television studios, trails and trail crossings
D	52	55	Interior	Auditoriums, day care centers, hospitals, libraries, medical facilities, places of worship, public meeting rooms, public or nonprofit institutional structures, radio studios, recording studios, schools and television studios
E	72	75	Exterior	Hotels, motels, offices, restaurants/bars and other developed lands, properties or activities not included in A-D or F
F	–	–	–	Agriculture, airports, bus yards, emergency services, industrial, logging, maintenance facilities, manufacturing, mining, rail yards, retail facilities, shipyards, utilities (water resources, water treatment, electrical) and warehousing
G	–	–	–	Undeveloped lands that are not permitted

[1] L_{10} is the level of noise exceeded for 10% of the time.

Source: FHWA 2017

Title 40, Part 201 and Title 49, Part 210 of the Code of Federal Regulations - Railroad Noise

Federal regulations for railroad noise are contained in 40 CFR Part 201 and 49 CFR Part 210. The regulations set noise limits for locomotives and are implemented through regulatory controls on locomotive manufacturers. Federal regulations also establish noise limits for medium and heavy trucks (more than 4.5 tons, gross vehicle weight rating) under 40 CFR Part 205, Subpart B. The

federal truck pass-by noise standard is 80 dB at 15 meters from the vehicle pathway centerline. These controls are implemented through regulatory controls on truck manufacturers.

Title 14, Part 36 of the Code of Federal Regulations - Aircraft Noise

Aircraft operated in the U.S. are subject to federal requirements regarding noise emissions levels. These requirements are set forth in Title 14 CFR, Part 36. Part 36 establishes maximum acceptable noise levels for specific aircraft types, taking into account the model year, aircraft weight and number of engines.

Title 23, Part 772 of the Code of Federal Regulations – Federal and Federal-Aid Highway Projects

Title 23 of the Code of Federal Regulations (23 CFR Section 772) provides procedures for preparing operational and construction noise studies and evaluating noise abatement for federal and federal-aid highway projects. Under 23 CFR Section 772.7, projects are categorized as Type I or Type II projects. FHWA defines a Type I project as a proposed federal or federal-aid highway project for the construction of a highway on a new location or the physical alteration of an existing highway which significantly changes either the horizontal or vertical alignment, or increases the number of through-traffic lanes. A Type II project is a noise barrier retrofit project that involves no changes to highway capacity or alignment.

Type I projects include those that create a completely new noise source, increase the volume or speed of traffic, or move the traffic closer to a receiver. Type I projects include the addition of an interchange, ramp, auxiliary lane, or truck-climbing lane to an existing highway, or the widening an existing ramp by a full lane width for its entire length. Projects unrelated to increased noise levels, such as striping, lighting, signing and landscaping projects, are not considered Type I projects.

Under 23 CFR Section 772.11, noise abatement must be considered for Type I projects if the project is predicted to result in a traffic noise impact. In such cases, 23 CFR Section 772 requires that the project sponsor "consider" noise abatement before adoption of the environmental document. This process involves identification of noise abatement measures that are reasonable, feasible and likely to be incorporated into the project as well as noise impacts for which no apparent solution is available.

Federal Transit Administration

Noise and Vibration Impact Criteria

FTA has developed guidance to evaluate noise impacts from operation of surface transportation modes (i.e., passenger cars, trucks, buses, and rail) in the 2018 FTA *Transit Noise Impact and Vibration Assessment* (FTA 2018). All mass transit projects receiving federal funding must use these guidelines to predict and assess potential noise and vibration impacts. As ambient levels increase, smaller increments of change are allowed to minimize community annoyance related to transit operations.

Groundborne vibration levels produced during construction activities could induce potential architectural damage to buildings as identified by the FTA are included in Table 4.12-2. Based on FTA recommendations, limiting vibration levels to below 0.2 in/sec PPV at non-engineered timber and masonry buildings (which would apply to a typical residential structure) would prevent excessive vibration levels that cause architectural damage.

Table 4.12-2 FTA Groundborne Vibration Architectural Damage Criteria - Construction

Building Category	PPV (in/sec)
I. Reinforced concrete, steel, or timber (no plaster)	0.5
II. Engineered concrete and masonry (no plaster)	0.3
III. Nonengineered timber and masonry buildings	0.2
IV. Buildings extremely susceptible to vibration damage	0.12

in/sec = inches per second; PPV = peak particle velocity

Source: FTA 2018

For groundborne vibration created during operation of a roadway or railway, the FTA provides the vibration criteria contained in Table 4.12-3 “for a detailed analysis”

Table 4.12-3 FTA Groundborne Vibration Criteria - Operation

Land Use	Max VdB	Description of Use
Workshop	90	Vibration that is distinctly felt. Appropriate for workshops and similar areas not as sensitive to vibration.
Office	84	Vibration that can be felt. Appropriate for offices and similar areas not as sensitive to vibration
Residential, Day	78	Vibration that is barely felt. Adequate for computer equipment and low-power optical microscopes (up to 20X).
Residential, Night Operating Rooms	72	Vibration is not felt, but ground-borne noise may be audible inside quiet rooms. Suitable for medium-power optical microscopes (100X) and other equipment of low sensitivity.

VdB = vibration decibels

Source: FTA 2018

FTA also provides reasonable criteria for assessing construction noise impacts based on the potential for adverse community reaction in their *Transit and Noise Vibration Impact Assessment Manual* (FTA 2018). For residential uses, the daytime noise threshold is 80 dBA L_{eq} for an 8-hour period.

The FTA has developed a screening procedure to identify locations where a rail project may cause a noise impact. The screening distances for requiring noise assessments for various types of projects are presented in Table 4.12-4.

Table 4.12-4 Screening Distances for Noise Assessments – Rail Transit Projects (in feet)

Type of Project		Unobstructed	Intervening Buildings
Commuter Rail Mainline		750	375
Commuter Rail Station	With Horn Blowing	1,600	1,200
Commuter Rail Station	Without Horn Blowing	250	200
Commuter Rail -Highway Crossing with Horns and Bells		1,600	1,200
Railroad Transit		700	350
Railroad Transit Station		200	100
Light Rail Transit		350	175
Streetcar		200	100
Access Roads to Stations		100	50
Low and Intermediate Capacity Transit	Steel Wheel	125	50
Low and Intermediate Capacity Transit	Rubber Tire	90	40
Low and Intermediate Capacity Transit	Monorail	175	70
Yards and Shops		1,000	650
Parking Facilities		125	75
Access Roads to Parking		100	50
Ventilation Shafts		200	100
Power Substations		250	125

Source: FTA 2018

The FTA has developed a screening procedure to identify locations where a bus project may cause a noise impact. The screening distances for requiring noise assessments for various types of projects is presented in Table 4.12-5.

Table 4.12-5 Screening Distances for Noise Assessments – Bus Transit Projects (in feet)

Type of Project		Unobstructed	Intervening Buildings
Busway		500	250
BRT on Exclusive Roadway		200	100
Bus Facilities	Access Roads	100	50
Bus Facilities	Transit Mall	225	150
Bus Facilities	Transit Center	225	150
Bus Facilities	Storage and Maintenance	350	225
Bus Facilities	Park and Ride Lots with Buses	225	150

Source: FTA 2018

Department of Housing and Urban Development

Title 24, Part 51, Subpart B of the Code of Federal Regulations – Noise Abatement and Control

The mission of HUD includes fostering "a decent, safe and sanitary home and suitable living environment for every American." Accounting for acoustics is intrinsic to this mission as safety and comfort can be compromised by excessive noise. To facilitate the creation of suitable living environments, HUD has developed a standard for noise criteria. The basic foundation of the HUD noise program is set out in the noise regulation 24 CFR Part 51 Subpart B, Noise Abatement and Control.

HUD's noise policy clearly requires that noise attenuation measures be provided when proposed projects are to be located in high noise areas. Within the HUD Noise Assessment Guidelines, potential noise sources are examined for projects located within 15 miles of a military or civilian airport, 1,000 feet from a road or 3,000 feet from a railroad.

HUD exterior noise regulations state that 65 dBA L_{dn} noise levels or less are acceptable for residential land uses and noise levels exceeding 75 dBA L_{dn} are unacceptable. A goal of 45 dB is set by HUD for interior noise forth and the attenuation requirements are focused on achieving that goal. It is assumed that with standard construction methods and materials, any building will provide sufficient attenuation so that if the exterior level is 65 dBA L_{dn} or less, the interior level will be 45 dBA L_{dn} or less.

b. State Laws, Regulations, and Policies

Land Use Compatibility Guidelines

The Governor's Office of Land Use and Climate Innovation (formerly the Office of Planning and Research) is required to adopt and periodically revise guidelines for the preparation and content of local general plans. The 2017 General Plan Guidelines (Governor's Office of Land Use and Climate Innovation 2017) establish land use compatibility guidelines. Where a noise level range is denoted as "normally acceptable" for the given land use, the highest noise level in that range should be considered the maximum desirable for conventional construction that does not incorporate any special acoustic treatment. The acceptability of noise environments classified as "conditionally acceptable" or "normally unacceptable" will also depend on the anticipated amount of time that will normally be spent outside the structure and the acoustic treatment to be incorporated in structural design.

Regarding noise-sensitive residential uses, the recommended exterior noise limits are 60 dBA CNEL for single-family residences and 65 dBA CNEL for multi-family residences. The recommended maximum interior noise level is 45 dBA CNEL, which could normally be achieved using standard construction techniques if exterior noise levels are within the levels described above.

California Department of Transportation

Caltrans establishes noise limits for vehicles licensed to operate on public roads (Caltrans 2013). For heavy trucks, the State pass-by standard is consistent with the federal limit of 80 dB. The State pass-by standard for light trucks and passenger cars (less than 4.5 tons gross vehicle rating) is also 80 dB at 15 meters from the centerline. For new roadway projects, Caltrans uses the NAC discussed above in connection with FHWA. In addition, Caltrans has published the *Traffic Noise Analysis Protocol* guidelines for assessing noise levels associated with roadway projects (Caltrans 2020b).

Caltrans' *Transportation and Construction Induced Vibration Manual* provides general guidance on vibration issues associated with construction and operation of projects in relation to human perception and structural damage (Caltrans 2020a).

California Streets and Highways Code, Section 216

Section 216 of the California Streets and Highways Code relates to the noise effects of a proposed freeway project on public and private elementary and secondary schools. Under this code, a noise impact occurs if, as a result of a proposed freeway project, noise levels exceed 52 dBA L_{eq} in the interior of public or private elementary or secondary classrooms, libraries, multipurpose rooms, or spaces. If a project results in a noise impact under this code, noise abatement must be provided to reduce classroom noise to a level that is at or below 52 dBA L_{eq}. If the noise levels generated from roadway sources exceed 52 dBA L_{eq} prior to the construction of the proposed freeway project, then noise abatement must be provided to reduce the noise to the level that existed prior to construction of the project.

California Noise Insulation Standards

The California Noise Insulation Standards found in Title 24 of the California Code of Regulations set requirements for new multi-family residential units, hotels, and motels that may be subject to relatively high levels of transportation-related noise. For exterior noise, the noise insulation standard is 45 dB L_{dn} in any habitable room and requires an acoustical analysis demonstrating how dwelling units have been designed to meet this interior standard where such units are proposed in areas subject to noise levels greater than 60 dB L_{dn}.

California Aeronautics Act

The State Aeronautics Act (Public Utilities Code, Section 21670 et seq.) requires the establishment of Airport Land Use Commissions (ALUCs), which are responsible for developing airport land use compatibility plans (ALUCPs) for noise-compatible land uses in the immediate proximity of a commercial or public airport (Section 21675). ALUCs have two major roles: preparation and adoption of airport land use compatibility plans, which address policies for both noise and safety and review of certain local government land use actions and airport plans for consistency with the land use compatibility plan

The ALUCP is the major tool for ALUC land use regulation. The intent of the ALUCP is to encourage compatibility between airports and the various land uses that surround them. ALUCPs typically include the development of noise contours to identify excessive airport-related noise levels and measures to reduce noise levels. For example, Monterey Regional Airport encourages noise abatement procedures related to quiet departure techniques.

Airport Noise Standards and Compatibility Planning

The State of California has the authority to establish regulations requiring airports to address aircraft noise impacts near airports. The State of California's Airport Noise Standards, found in Title 21 of the California Code of Regulations, identify a noise exposure level of 65 dB CNEL as the noise impact boundary around airports. Within the noise impact boundary, airport proprietors are required to ensure that all land uses are compatible with the aircraft noise environment or the airport proprietor must secure a variance from the California Department of Transportation.

c. Local Laws, Regulations, and Policies

Each county and city in the AMBAG region is required to adopt a noise element as part of its General Plan. Local governments use the Governor's Office of Planning and Research's General Plan Guidelines (2017), including land use compatibility guidelines, to prepare General Plan noise elements.

Each noise element is required to analyze and quantify current and projected noise levels associated with local noise sources, including, but not limited to: highways and freeways, primary arterials and major local streets, rail operations, air traffic associated with the airports; local industrial plants; and other ground stationary sources that contribute to the community noise environment. Beyond statutory requirements, local jurisdictions are free to adopt their own goals and policies in their noise elements, although most jurisdictions have chosen to adopt noise/land use compatibility guidelines that are similar to those recommended by the State. Land use compatibility considers both existing noise levels in a community, as well as community attitudes toward dominant noise sources.

In addition to regulating noise through noise element policies, local jurisdictions regulate noise through enforcement of local ordinance standards. These standards generally relate to noisy activities (e.g., use of loudspeakers and construction) and stationary noise sources and facilities (e.g., air conditioning units and industrial activities).

As discussed above, the State Aeronautics Act (Public Utilities Code, Section 21670 et seq.) requires the preparation of an ALUCP for nearly all public-use airports in the State (Section 21675). An ALUC is responsible for preparing the ALUCPs and ensuring compatible land uses in the vicinity of airports within their jurisdiction (Section 21676). Monterey County and San Benito counties each have an ALUC and ALUCPs. The San Benito County ALUC most recently adopted an updated ALUCP for the Hollister Municipal Airport in 2012 and the Frazier Lake Airpark ALUP in 2019 (San Benito County ALUC 2012; San Benito County ALUC 2019). The Monterey County ALUC adopted the Monterey Regional Airport ALUCP in February 2019 and Marina Municipal Airport ALUCP in May 2019 (Monterey County 2019a and 2019b). Santa Cruz County, however, is exempt from having an ALUC or preparing an ALUCP because it has only one public use airport owned by

a single city (Watsonville) (Caltrans 2011). Instead, the City of Watsonville is required to submit its general and specific plans to the Caltrans Division of Aeronautics for review.

4.12.3 Impact Analysis

a. Methodology and Significance Thresholds

The analysis of noise impacts considers the effects of both temporary construction-related noise and long-term noise associated with proposed transportation system improvements. Temporary construction noise was estimated based upon levels presented in the FTA *Transit Noise and Vibration Impact Assessment*.

Appendix G of the *CEQA Guidelines* identifies the following criteria for determining whether a project's impacts would have a significant impact related to noise; AMBAG has added a threshold related to absolute noise increases:

1. Generation of a substantial temporary or permanent increase in ambient 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;
2. Generation of a substantial absolute noise increase over existing noise levels;
3. Generation of excessive ground-borne vibration or ground-borne noise levels; or
4. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels.

The analysis of impacts includes an assessment of all applicable standards, including those established by local jurisdictions, counties, the State of California, and federal agencies, where appropriate.

b. Project Impacts and Mitigation Measures

The following section describes noise impacts associated with the transportation improvements and future land use scenario in the 2050 MTP/SCS. Table 4.12-9 included in Section 4.12.3(c), below, summarizes the specific transportation projects that may result in noise impacts. In general, implementation of proposed transportation improvements and the reasonably foreseeable future development facilitated under the land use scenario envisioned by the 2050 MTP/SCS would result in noise impacts as described in the following sections.

Threshold 1:	Would the project result in the generation of a substantial temporary increase in ambient 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?
Threshold 2:	Would the project result in the generation of a substantial absolute noise increase over existing noise levels?

Impact N-1 CONSTRUCTION ACTIVITIES ASSOCIATED WITH TRANSPORTATION PROJECTS AND LAND USE PROJECTS UNDER THE 2050 MTP/SCS WOULD GENERATE A SUBSTANTIAL TEMPORARY INCREASE IN AMBIENT NOISE LEVELS IN EXCESS OF STANDARDS OR OVER EXISTING NOISE LEVELS, AND WOULD GENERATE A SUBSTANTIAL ABSOLUTE NOISE INCREASE OVER EXISTING NOISE LEVELS. IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

The operation of equipment during the construction of roadway infrastructure, as well as infill development projects near transit and other land use development envisioned in the 2050 MTP/SCS, would result in temporary increases in noise in the immediate vicinity of individual construction sites. As shown in Table 4.12-6, average noise levels associated with the use of typical heavy equipment at construction sites can range from about 76 to 101 dBA at 50 feet from the source, depending upon the types of equipment in operation at any given time and the phase of construction. The highest noise levels generally occur during excavation and foundation development, which involve the use of equipment such as backhoes, bulldozers, shovels, and front-end loaders.

Table 4.12-6 Typical Construction Noise Levels (dBA)

Equipment	Typical Level 25 Feet from the Source	Typical Level 50 Feet from the Source	Typical Level 100 Feet from the Source	Typical Level 200 feet from the Source	Typical Level 800 Feet from the Source
Air Compressor	86	80	74	68	56
Backhoe	86	80	74	68	56
Concrete Mixer	91	85	79	73	61
Grader	91	85	79	73	61
Pile driver (Impact)	107	101	95	89	77
Pile driver (Sonic)	101	95	89	83	71
Jack Hammer	94	88	82	76	64
Paver	91	85	79	73	61
Saw	82	76	70	64	52
Scraper	91	85	79	73	61
Truck	90	84	78	72	60

Source: FTA 2018

Noise generated by construction activity would be variable depending on the project and intensity of equipment used. Roadway widening and new roadway projects would likely require the operation of many pieces of heavy-duty equipment that generate high noise levels. Alternatively, pedestrian trail improvements would typically be less intense requiring minimal, if any, use of heavy equipment. There are instances where activities that typically generate lower noise levels would generate relatively high noise levels. For example, a pedestrian trail improvement may include bridge pilings or require heavy equipment to clear vegetation. This conservative analysis assesses construction noise based on the operation of heavy-duty equipment. Noise levels from point sources such as construction sites typically attenuate at a rate of about 6 dBA per doubling of distance. Therefore, areas within 200 feet of construction site with typical heavy-duty equipment may be exposed to noise levels exceeding the FTA's residential daytime noise standard of 80 dBA (8-hour). Areas within 800 feet of impact pile drivers may be exposed to noise levels exceeding the FTA's residential daytime noise standard of 80 dBA (8-hour).

Some of the cities and counties in the AMBAG region include specific regulations in their municipal code to reduce construction noise impacts. In most cases, these regulations restrict construction activities to specific times and days (e.g., Seaside, Marina, Pacific Grove, and Hollister). Such local policies serve to reduce the impacts of noise on surrounding communities by prohibiting construction during the night when people are engaged in noise-sensitive activities like sleeping.

Nevertheless, noise impacts related to construction activities would be significant because applicable noise standards would be exceeded, and/or because a substantial temporary increase in ambient noise levels[1] in the vicinity of construction activities would occur. Operational noise impacts are discussed under Impact N-3.

Mitigation Measures

For transportation projects under their jurisdiction, TAMC, SBtCOG, and SCCRTC shall implement, and transportation project sponsor agencies can and should implement, the following mitigation measures developed for the 2050 MTP/SCS program where applicable for transportation projects that result in construction noise impacts, and where feasible and necessary based on project and site specific considerations. Cities and counties in the AMBAG region can and should implement these measures, where relevant to land use projects implementing the 2050 MTP/SCS. Project specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

[1] There is no adopted threshold for what constitutes a substantial temporary increase. The most common threshold used for a substantial temporary increase in ambient noise levels is 10 dBA.

N-1 Construction Noise Reduction

To reduce construction noise levels to achieve applicable standards and prevent a substantial increase in ambient noise levels, implementing agencies for transportation and land use projects shall implement the measures identified below where feasible and necessary.

- Implementing agencies of 2050 MTP/SCS projects shall ensure that, where residences or other noise sensitive uses are located within 200 feet of construction sites, appropriate measures shall be implemented to ensure compliance with local ordinance requirements relating to construction noise. Specific techniques may include, but are not limited to: restrictions on construction timing, use of sound blankets on construction equipment, and the use of temporary walls and noise barriers to block and deflect noise.
- Designate an on-site construction complaint and enforcement manager for projects within 200 feet of sensitive receivers.
- Implementing agencies of the 2050 MTP/SCS shall post phone numbers for the on-site enforcement manager at construction sites along with complaint procedures and who to notify in the event of a problem.
- For any project within 800 feet of sensitive receptors that requires pilings, the implementing agencies shall require caisson drilling or sonic pile driving as opposed to impact pile driving, where feasible. This shall be accomplished through the placement of conditions on the project during its individual environmental review.
- Implementing agencies of 2050 MTP/SCS projects shall ensure that equipment and trucks used for project construction utilize the best available noise and vibration control techniques, including mufflers, intake silencers, ducts, engine enclosures, and acoustically attenuating shields or shrouds.
- Implementing agencies of 2050 MTP/SCS projects shall ensure that impact equipment (e.g., jack hammers, pavement breakers and rock drills) used for project construction be hydraulically or electrically powered wherever feasible to avoid noise associated with compressed air exhaust from pneumatically powered tools. Where use of pneumatically powered tools is unavoidable, use of an exhaust muffler on the compressed air exhaust can lower noise levels from the exhaust by up to about 10 dBA. When feasible, external jackets on the impact equipment can achieve a reduction of 5 dBA. Whenever feasible, use quieter procedures, such as drilling rather than impact equipment operation.
- The following timing restrictions shall apply to MTP/SCS project construction activities located within 200 feet of a dwelling unit, or 800 feet if impact pile driving is involved, except where timing restrictions are already established in local codes or policies. Construction activities shall be limited to:
  - Monday through Friday: 7 a.m. to 6 p.m.
  - Saturday: 9 a.m. to 5 p.m.
- Implementing agencies of 2050 MTP/SCS projects shall locate stationary noise and vibration sources as far from sensitive receptors as feasible. Stationary noise sources that must be located near existing receptors will be adequately muffled.

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for transportation projects are RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects are cities and counties. This mitigation measure shall, or can and should, be applied during permitting and environmental review and implemented during construction, as applicable.

Significance After Mitigation

Implementation of required mitigation would reduce impacts from construction noise. However, even with application of Mitigation Measures N-1 construction noise from all 2050 MTP/SCS projects may not be reduced below applicable thresholds and impacts would remain significant and unavoidable. No additional mitigation measures to reduce this impact to less than significant levels are feasible.

Threshold 3: Would the project result in the generation of excessive groundborne vibration or ground-borne noise levels during construction?

Impact N-2 CONSTRUCTION ACTIVITIES ASSOCIATED WITH TRANSPORTATION PROJECTS AND LAND USE PROJECTS UNDER THE 2050 MTP/SCS WOULD GENERATE EXCESSIVE GROUNDBORNE VIBRATION LEVELS. IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

Construction-related vibration has the potential to damage structures, cause cosmetic damage (e.g., crack plaster), or disrupt the operation of vibration sensitive equipment. Vibration can also be a source of annoyance to individuals who live or work close to vibration-generating activities. Heavy construction operations can cause substantial vibration near the source. As shown in Table 4.12-7, the highest impact caused by equipment such as pile drivers or large bulldozers can generate vibrations of 1.518 to 0.089 in/sec PPV at 25 feet. Like construction noise, vibration levels would be variable depending on the type of construction project and related equipment use.

Table 4.12-7 Construction Equipment Vibration Levels

Equipment		PPV at 25 feet (inches per second)	RMS at 25 feet (VdB)
Pile Driver (Impact)	Upper Range	1.518	112
Pile Driver (Impact)	Typical	0.644	104
Pile Driver (Sonic)	Upper Range	0.734	105
Pile Driver (Sonic)	Typical	0.170	93
Vibratory Roller		0.210	95
Clam Shovel Drop (Slurry Wall)		0.202	94
Hydromill (Slurry Wall)	In Soil	0.008	66
Hydromill (Slurry Wall)	In Rock	0.017	75
Large Bulldozer		0.089	87
Caisson Drilling		0.089	87
Loaded Trucks		0.076	86
Jackhammer		0.035	79
Small Bulldozer		0.003	58

Source: FTA 2018

With scheduling controls, typical construction activities would be restricted to hours with least potential to affect nearby properties. However, typical project construction activities, such as the use of jackhammers, other high-power or vibratory tools, compactors and tracked equipment, may also generate substantial vibration (i.e., greater than 0.2 inches per second PPV, which would exceed the FTA's nonengineered timber and masonry building damage threshold) in the immediate vicinity, typically within 15 feet of the equipment..

Some specific construction activities result in higher levels of vibration. Pile driving has the potential to generate the highest vibration levels and is the primary concern for structural damage when it occurs within 50 feet of structures. Vibration levels generated by pile driving activities would vary depending on project conditions, such as soil conditions, construction methods and equipment used. Depending on the proximity of existing structures to each construction site, the structural soundness of the affected buildings and construction methods, vibration caused by pile driving or other foundation work with a substantial impact component such as blasting, rock or caisson drilling and site excavation or compaction may be high enough to be perceptible within 100 feet and damage existing structures within 50 feet.

Some of the cities and counties in the AMBAG region include specific regulations in their municipal code to reduce construction vibration impacts. In most cases, these regulations restrict construction activities to specific times and days (e.g., Seaside, Marina, Pacific Grove, and Hollister). Such local policies serve to reduce the impacts of vibration on surrounding communities by prohibiting construction during the night when people are engaged in vibration-sensitive activities like sleeping.

Nevertheless, as 2050 MTP/SCS projects may exceed the FTA's vibration thresholds, such as 0.2 inches per second PPV for nonengineered timber and masonry building (i.e., a typical residential building) damage, construction vibration levels are potentially significant.

Mitigation Measures

For transportation projects under their jurisdiction, TAMC, SBtCOG, and SCCRTC shall implement, and transportation project sponsor agencies can and should implement, the following mitigation measures developed for the 2050 MTP/SCS program where applicable for transportation projects that result in construction noise impacts, and where feasible and necessary based on project and site specific considerations. Cities and counties in the AMBAG region can and should implement Mitigation Measures N-1, listed under Impact N-1, and N-2, where relevant to land use projects implementing the 2050 MTP/SCS. Project specific environmental documents may adjust these mitigation measures as necessary to respond to site specific conditions.

N-1 Construction Noise Reduction

See Impact N-1 for Mitigation Measure N-1.

N-2 Construction Vibration Reduction

If construction equipment would generate vibration levels exceeding acceptable levels as established by FTA (as shown in Table 4.12-2), implementing agencies of the 2050 MTP/SCS shall, or can and should, complete the following tasks:

- Prior to construction, survey the project site for vulnerable buildings, and complete geotechnical testing (preconstruction assessment of the existing subsurface conditions and structural integrity), for any older or historic buildings within 50 feet of pile driving. The testing shall be completed by a qualified geotechnical engineer and qualified historic preservation professional and/or structural engineer.
- Prepare and submit a report to the lead agency that contains the results of the geological testing. If recommended by the preconstruction report, implementing agencies shall require ground vibration monitoring of nearby historic structures. Methods and technologies shall be based on the specific conditions at the construction site. 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.
- To minimize disturbance withing 550 feet of 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 duration of pile driving), where feasible, in consideration of geotechnical and structural requirements and conditions as defined as part of the geotechnical testing, if testing was feasible.

- Use cushion blocks to dampen noise from pile driving.
- Phase operations of construction equipment to avoid simultaneous vibration sources

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for transportation projects are RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects are cities and counties. This mitigation measure shall, or can and should, be applied during permitting and environmental review and implemented during construction, as applicable.

Significance After Mitigation

Implementation of required mitigation would reduce impacts from construction vibration. However, even with application of Mitigation Measures N-1 and N-2, construction vibration from all 2050 MTP/SCS projects may not be reduced below applicable thresholds and impacts would remain significant and unavoidable. No additional mitigation measures to reduce this impact to less than significant levels are feasible.

Threshold 1:	Would the project result in the generation of a substantial permanent increase in ambient 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?
Threshold 2:	Would the project result in the generation of a substantial absolute noise increase over existing noise levels?

Impact N-3 IMPLEMENTATION OF THE 2050 MTP/SCS WOULD GENERATE A SUBSTANTIAL PERMANENT INCREASE IN AMBIENT NOISE LEVELS IN EXCESS OF STANDARDS OR OVER EXISTING NOISE LEVELS AND GENERATE A SUBSTANTIAL ABSOLUTE NOISE INCREASE OVER EXISTING NOISE LEVELS. IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

Traffic

Overall traffic levels on highways and roadways in the AMBAG region are projected to increase as a result of regional growth through the year 2050 (refer to Section 4.15, *Transportation*). The 2050 MTP/SCS includes projects that would potentially increase traffic noise by increasing traffic levels along and in the vicinity of affected facilities. Such projects include: construction of new interchanges, roadway widening, roadway extensions, new roadways and improvements to roads that would allow increased traffic volumes. Widening projects, roadway extension and new roadways would accommodate additional traffic volumes and/or relocate noise sources closer to receivers. In addition, the anticipated number of annual vehicle miles traveled (VMT) in 2050 would increase from 16,011,425 under baseline conditions (2022) to 18,203,962 with the 2050 MTP/SCS, an increase of approximately 2,192,537 VMT, or approximately 12 percent. Although many areas along freeway and roadway corridors are at least partially shielded from traffic noise by topography, buildings, walls and other barriers, an increase in VMT and new and extended roadways would result in higher traffic noise levels as compared to baseline conditions that could

exceed applicable noise standards. Therefore, this impact is significant because applicable noise standards would be exceeded and because a substantial permanent absolute increase in ambient noise levels[2] in the project vicinity would occur.

Rail Operations

The 2050 MTP/SCS includes investments in passenger rail and train service, such as adding new stations along Amtrak's Coast Starlight route in Soledad and King City and extending existing rail service from Gilroy to Salinas, with future stations planned for Pajaro/Watsonville and Castroville. Rail transit projects included in the 2050 MTP/SCS would be located in urban areas to facilitate ridership. Sensitive land uses would be located within proximity to new and expanded rail corridors, and would potentially be exposed to noise levels that exceed acceptable standards or experience a substantial permanent absolute increase in ambient noise levels, a significant impact. The screening distances for requiring noise assessments for various types of projects are presented in Table 4.12-4.

The 2050 MTP/SCS also includes new facilities that encourage more efficient intermodal transport using rail. The number of freight trains currently operating each day is dependent upon the demands of the industries using rail services and can vary greatly from day to day. While increases in freight rail transport would increase the number of freight trains, these trains would likely operate as-needed rather than on a fixed schedule. Thus, noise levels and frequency of pass-by trips would continue to vary daily.

Overall, an increase in train volumes would cause an increase in noise levels adjacent to rail corridors. In addition, these rail lines may be located within the screening distances presented in Table 4.12-4. Therefore, sensitive land uses would be located within proximity to new and expanded rail corridors, and would potentially be exposed to noise levels that exceed applicable local standards, or be exposed to a substantial permanent absolute increase in ambient noise levels. Thus, there would be a significant impact.

Bus Operations

The 2050 MTP/SCS includes projects to expand transit bus service, such as bus rapid transit projects in Monterey County, Bus on Shoulder projects on State Route 1 between interchanges and on the outside shoulder through interchanges, the Santa Cruz METRO Rapid Corridors improvements that include dedicated bus-only lanes in Santa Cruz County, and bus connections to the Capital Corridor route between San Jose and Sacramento and to the Pacific Surfliner from San Luis Obispo to San Diego. Transit services along new routes may expose sensitive receptors to bus noise. Increased frequency of bus service along existing corridors would also increase noise exposure. The addition of local buses and shuttles is unlikely to increase noise by significant levels as bus routes would be in urban areas with high ambient noise levels. However, these bus projects may be located within the screening distances presented in Table 4.12-5. Overall, sensitive land uses would be located within close proximity to new bus activity, and would

[2] There is no adopted threshold for what constitutes a substantial permanent increase. The most common threshold used for a substantial permanent increase in ambient noise levels is 5 dBA.

potentially be exposed to noise levels that exceed applicable local standards, or be exposed to a substantial permanent absolute increase in ambient noise levels. Therefore, there would be a significant impact.

Mitigation Measures

For transportation projects under their jurisdiction, TAMC, SBtCOG, and SCCRTC shall implement, and transportation project sponsor agencies can and should implement, the following mitigation measure developed for the 2050 MTP/SCS program where applicable for transportation projects that result in significant transportation noise levels, and where feasible and necessary based on project and site specific considerations. The measure below does not apply to land use projects. Project specific environmental documents may adjust this mitigation measure as necessary to respond to site specific conditions.

N-3 Noise Assessment and Control for Transportation Noise Sources

Sponsor agencies of 2050 MTP/SCS transportation projects shall complete detailed noise assessments using applicable guidelines (e.g., FTA Transit Noise and Vibration Impact Assessment for rail and bus projects and the Caltrans Traffic Noise Analysis Protocol) for transportation projects that may impact noise sensitive receivers. The implementing agency shall ensure that a noise survey is conducted that, at minimum:

- Determines existing and projected noise levels
- Determines the amount of attenuation needed to reduce potential noise impacts to applicable State and local standards
- Identifies potential alternate alignments that allow greater distance from, or greater buffering of, noise-sensitive areas
- If warranted, recommends methods for mitigating noise impacts, including:
  - Appropriate setbacks
  - Sound attenuating building design, including retrofit of existing structures with sound attenuating building materials
  - Use of sound barriers (earthen berms, sound walls, or some combination of the two)

Where new or expanded roadways, rail, or transit projects are found to expose receivers to noise that exceed acceptable standards or to a substantial permanent absolute increase in ambient noise levels, the implementing agency shall implement techniques as recommended in the project specific noise assessment. The preferred methods for mitigating noise impacts will be the use of appropriate setbacks (design adjustments) and sound attenuating building design, including retrofit of existing structures with sound attenuating building materials where feasible. In instances where use of these techniques is not feasible, the use of sound barriers (earthen berms, sound walls, or some combination of the two) shall be considered. Long expanses of walls or fences shall be interrupted with offsets and provided with accents to prevent monotony. Landscape pockets and pedestrian access through walls should be provided. Whenever possible, a combination of elements shall be used, including solid fences, walls, and landscaped berms. Other techniques such as rubberized asphalt or “quiet pavement” can be used where feasible to

reduce road noise for new roadway segments or modifications requiring repaving. The effectiveness of noise reduction measures shall be monitored by taking noise measurements and installing adaptive mitigation measures to achieve applicable standards.

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for transportation projects are RTPAs and transportation project sponsor agencies. This mitigation measure shall, or can and should, be applied during permitting and environmental review and implemented during construction and operation, as applicable.

Significance After Mitigation

Implementation of the above mitigation measure would reduce noise from transportation sources. However, even with implementation of Mitigation Measure N-3, transportation noise from buildout of the 2050 MTP/SCS may continue to impact nearby noise sensitive receivers and exceed acceptable standards. Impacts would remain significant and unavoidable. No additional mitigation measures to reduce this impact to less than significant levels are feasible.

Threshold 1:	Would the project result in the generation of a substantial permanent increase in ambient 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?
Threshold 2:	Would the project result in the generation of a substantial absolute noise increase over existing noise levels?

Impact N-4 THE PROPOSED 2050 MTP/SCS LAND USE SCENARIO WOULD ENCOURAGE INFILL DEVELOPMENT NEAR TRANSIT AND OTHER TRANSPORTATION FACILITIES, WHICH WOULD GENERATE A SUBSTANTIAL INCREASE IN AMBIENT NOISE LEVELS IN EXCESS OF STANDARDS OR OVER EXISTING NOISE LEVELS. IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

The 2050 MTP/SCS is based on a land use and transportation scenario which defines a pattern of future growth and transportation system investment for the region emphasizing an infill approach near transit and other transportation facilities such as bicycle networks. Population and job growth is allocated principally within existing urban areas near public transit and existing transit corridors. New noise-sensitive development in infill areas could be exposed to noise levels exceeding the recommended exterior noise standards of 60 dBA CNEL for single-family residences, 65 dBA CNEL for multi-family residences and lodging, and 70 dBA CNEL for commercial uses. Potential sources of noise exposure include traffic, rail and/or bus operations, commercial activity, and industrial activity. New development in infill areas near transit may also expose existing noise-sensitive uses to noise levels exceeding local noise standards. Impacts

would be significant because applicable noise standards would be exceeded, or because infill project residents would be exposed to a substantial permanent increase in ambient noise levels.[3]

Mitigation Measures

Cities and counties in the AMBAG region can and should implement the following measures, where relevant to land use projects implementing the 2050 MTP/SCS, and where feasible and necessary based on project and site-specific considerations. The mitigation measure outlined below does not apply to transportation projects. Project specific environmental documents may adjust this mitigation measure as necessary to respond to site specific conditions.

N-4 Noise Mitigation for Land Uses

If a 2050 MTP/SCS land use project is located in an area with exterior ambient noise levels above local noise standards, or where it could be exposed to substantial permanent increases in noise levels, the implementing agency can and should ensure that a noise study is conducted to determine the existing exterior noise levels in the vicinity of the project. If the project would be impacted by ambient noise levels, feasible attenuation measures shall be used to reduce operational noise to meet acceptable standards. In addition, noise insulation techniques shall be utilized to reduce indoor noise levels to thresholds set inapplicable State and/or local standards. Such measures may include, but are not limited to: dual-paned windows, solid core exterior doors with perimeter weather stripping, air conditioning system so that windows and doors may remain closed, and situating exterior doors away from roads. The noise study and determination of appropriate mitigation measures shall be completed during the project's individual environmental review.

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for land use projects are cities and counties. This mitigation measure shall, or can and should, be applied during permitting and environmental review and implemented during construction and operation, as applicable.

Significance After Mitigation

Implementation of the above mitigation measure would reduce noise for sensitive land uses in areas that exceed noise standards. However, even with implementation of Mitigation Measure N-4 noise from buildout of the 2050 MTP/SCS, projects may continue to impact nearby noise sensitive receptors and exceed acceptable standards. Impacts would remain significant and unavoidable. No additional mitigation measures to reduce this impact to less than significant levels are feasible.

[3] There is no adopted threshold for what constitutes a substantial permanent increase. The most common threshold used for a substantial permanent increase in ambient noise levels is 5 dBA.

Threshold 3: Would the project result in the generation of excessive groundborne vibration or ground-borne noise levels during operation?

Impact N-5 THE PROPOSED 2050 MTP/SCS WOULD RESULT IN NEW TRUCK, BUS, AND TRAIN TRAFFIC THAT WOULD GENERATE EXCESSIVE VIBRATION LEVELS. IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

The primary vibration sources associated with transportation system operations include heavy truck and bus traffic along roadways and train traffic along rail lines. However, vehicle traffic, including heavy trucks traveling on a highway, rarely generate vibration amplitudes high enough to cause structural or cosmetic damage, except in rare cases (e.g., where heavy truck traffic passes near fragile older buildings). Heavy trucks traveling over potholes or other pavement irregularities can cause vibration high enough to result in complaints from nearby residents. These conditions are commonly addressed by smoothing the roadway surface. Based on vibration measurements throughout California by Caltrans, worst-case traffic vibrations were shown to drop below the threshold of perception at distances of 150 feet or greater (Caltrans 2020a). Roadway vibration levels may exceed FTA thresholds shown in 4.12-3. Given that sensitive receivers are located within 150 feet of transportation facilities within the AMBAG region, and that 2050 MTP/SCS transportation projects include roadway expansion and construction of new highways, significant impacts related to vibration associated with truck traffic would occur because vehicle traffic would generate excessive vibration or groundborne noise levels.

Rail activity is also a source of vibration. Caltrans conducted measurements of vibration levels associated with train activity throughout the State and found a peak vibration level of 0.36 inches per second PPV at ten feet from the track (Caltrans 2002). Based on this reference vibration level, vibrations from train activity drop below the threshold of perception at distances greater than 250 feet. The 2050 MTP/SCS includes the development of additional railway facilities along existing tracks, extension of existing railways and construction of new rail lines. This would potentially increase rail activity along existing lines and also introduce rail activity to new areas. In addition, vibration levels from rail activity may exceed FTA thresholds shown in 4.12-3. These changes may expose nearby sensitive receptors and fragile buildings to a substantial increase in vibration levels relative to the existing condition. Impacts would be significant because excessive groundborne vibration or groundborne noise levels would be generated.

Mitigation Measures

For transportation projects under their jurisdiction, TAMC, SBtCOG, and SCCRTC shall implement, and transportation project sponsor agencies can and should implement, the following mitigation measures developed for the 2050 MTP/SCS program where applicable for transportation projects that could generate excessive vibration impacts, and where feasible and necessary based on project and site specific considerations. These measures can and should also be implemented for future infill projects near transit pursuant to the 2050 MTP/SCS that would result in vibration impacts. Project specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

N-5 Vibration Mitigation for Transportation Projects

Where local vibration and groundborne noise standards do not apply, implementing agencies of 2050 MTP/SCS projects shall comply with guidance provided by the FTA in the most recent version of the *Transit Noise and Vibration Impact Assessment* to assess impacts to buildings and sensitive receptors and reduce vibration and groundborne noise. FTA thresholds, as shown in Table 4.12-3, shall be used except in areas where local standards for groundborne noise and vibration have been established. Methods that would be considered to reduce vibration and groundborne noise impacts include, but are not limited to:

- **Rail Traffic**
  - Maximizing the distance between tracks and sensitive uses
  - Conducting rail grinding on a regular basis to keep tracks smooth
  - 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;
  - Implementing operational changes such as limiting train speed and reducing nighttime operations.
- **Bus and Truck Traffic**
  - Constructing noise barriers
  - Use noise reducing tires and wheel construction on bus wheels
  - Use vehicle skirts (i.e., a partial enclosure around each wheel with absorptive treatment) on freight vehicle wheels

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for AMBAG transportation projects are RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects are cities and counties. This mitigation measure shall, or can and should, be applied during permitting and environmental review and implemented during construction and operation, as applicable.

Significance After Mitigation

Implementation of the above mitigation measure would reduce potential impacts to a less than significant level. However, even with implementation of Mitigation Measure N-5, vibration from buildout of the 2050 MTP/SCS may continue to be excessive. Impacts would remain significant and unavoidable. No additional mitigation measures to reduce this impact to less than significant levels are feasible.

Threshold 4: For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

Impact N-6 PROPOSED TRANSPORTATION IMPROVEMENTS AND FUTURE PROJECTS INCLUDED IN THE LAND USE SCENARIO ENVISIONED IN THE 2050 MTP/SCS WOULD BE LOCATED IN CLOSE PROXIMITY TO EXISTING AIRPORTS SUCH THAT APPLICABLE EXTERIOR AND INTERIOR NOISE THRESHOLDS WOULD BE EXCEEDED. IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

The 2050 MTP/SCS emphasizes infill development near transit and other transportation facilities. Public airports typically service entire regions, whereas smaller private-use airports (including private airstrips) tend to serve local users. However, like other noise sources, noise from airports and aircraft flight events have the greatest effect on nearby land uses. As shown in Table 4.12-8, there are five public use and four private use airports in the AMBAG region that serve commercial and general aviation users.

Table 4.12-8 Public and Private Airports within the AMBAG Region

Airport	Public/Private Use	Airport Land Use Compatibility Plan (YES/NO)
Monterey County		
Monterey Regional Airport	Public	Yes
Marina Municipal Airport	Public	Yes
King City Municipal Airport	Public	No
Salinas Municipal Airport	Private	Yes
San Benito County		
Hollister Municipal Airport	Public	Yes
Frazier Lake Airpark	Private	Yes
Santa Cruz County		
Watsonville Municipal Airport	Public	No
Bonny Doon Private Airport	Private	No
Monterey Bay Academy Airport, Watsonville	Private	No
AMBAG Total	**9**	

Most of these airports have an active Airport Land Use Compatibility Plan (ALUCP) (or the equivalent) to discourage incompatible land uses within the vicinity of the airport. For example, the ALUCP for Monterey Regional Airport includes information on the types of compatible land use developments within the 70-CNEL contour for airport operations which include noise and height restrictions (Monterey County 2019a). However, even with ALUCPs, or for projects within two miles of an airport that does not have an ALUCP, the potential still exists for forecasted development consistent with the proposed 2050 MTP/SCS to occur in areas of 70 dBA CNEL,

exceeding recommended airport noise thresholds of 65 dBA CNEL for multi-family residential land uses.

In addition to consideration of exterior CNEL noise levels, increases in interior noise levels near airports have the potential to result in sleep disturbance at nearby sensitive land uses. In accordance with the Federal Interagency Committee on Noise guidance, aircraft-generated interior single-event noise levels of 65 dBA could result in a 5 percent or less chance of awakening someone (Federal Interagency Committee on Noise 1992). Local land use compatibility standards contained in city and county general plans would typically dictate whether specific site review was required for construction of sensitive land uses in areas potentially affected by aircraft noise. However, given the regional scale of the proposed 2050 MTP/SCS, it is possible that the plan's forecasted land use development pattern could result in exposure to exterior and interior noise levels from existing airports or airstrips that exceed applicable thresholds. There would be a potentially significant impact resulting from excessive airport noise levels if projected development were to occur in close proximity to existing airports or airstrips. Because implementation of the proposed 2050 MTP/SCS land use development pattern could potentially result in land use projects being located in close proximity to existing airports such that applicable exterior and interior noise thresholds would be exceeded, thereby exposing people residing or working in the area to excessive noise levels. This is a significant impact.

Some transportation projects in the 2050 MTP/SCS would be within the vicinity of a private airstrip or an airport land use plan or within two miles of an airport does not have an ALUCP. Individuals would not be exposed to excessive airport-related noise during operation of these projects, as they would not entail habitable structures or other facilities in which people would work or visit. However, during construction of these projects, construction personnel would be exposed to higher noise levels. Such exposure would be temporary, and therefore considered less than significant.

Mitigation Measures

These measures can and should also be implemented for future land use development projects near existing public or public use airports. Project specific environmental documents may adjust these mitigation measures as necessary to respond to site-specific conditions.

N-6 Noise Mitigation Near Airports

Local lead agencies for all new development proposed to be located within the vicinity of an existing airport influence zone, as defined by the locally ALUCP or local general plan, or within two miles of a an airport that does not have an ALUCP or a private airstrip, shall require a site specific noise compatibility study. The study shall consider and evaluate existing aircraft noise, based on specific aircraft activity data for the airport in question, and shall include recommendations for site design and building construction to assure that people residing in the project area are not exposed to excessive noise levels. Such measures may include, but are not limited to: dual-paned windows, solid core exterior doors with perimeter weather stripping, air conditioning system so that windows and doors may remain closed, and situating exterior doors

away from roads, such as dual paned windows. The noise study and determination of appropriate mitigation measures shall be completed during the project's individual environmental review.

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for land use projects are cities and counties. This mitigation measure shall, or can and should, be applied during permitting and environmental review and implemented during construction and operation, as applicable.

Significance After Mitigation

To the extent that a local agency requires an individual project to implement the feasible mitigation measure described above, the appropriate design and building construction would ensure compliance with relevant plans or codes, and this impact would be reduced to a less than significant level. However, even with implementation of Mitigation Measure N-6, noise from buildout of the 2050 MTP/SCS may continue to impact nearby noise sensitive receptors and exceed acceptable standards. Impacts would remain significant and unavoidable. No additional mitigation measures to reduce this impact to less than significant levels are feasible.

c. Specific MTP/SCS Projects That May Result in Impacts

Table 4.12-9 identifies transportation projects with the potential to cause or contribute to direct or indirect noise impacts such as those discussed above. Program-level impact determinations were provided for the overall 2050 MTP/SCS Project above. This section is not intended to provide project-specific impact determinations under CEQA. Rather, the projects identified in Table 4.12-9 are representative of projects that may result in project-level impacts with or without mitigation and were selected based on their potential scope and likelihood to result in the noise impacts identified above. The intent of this summary is to support potential future streamlining efforts as a screening tool to facilitate early identification of projects likely to result in the impacts identified above. Streamlining opportunities are discussed in Section 1.4, *Implementation Issues and Future Environmental Review,* in Chapter 1, *Introduction.*

Table 4.12-9 2050 MTP/SCS Projects that May Result in Noise/Vibration Impacts

AMBAG Project No.	Project	Location	Impact
MON-CT011-CT-2026	Scenic Route 68 Corridor Improvements	Monterey County	N-1, N-2, N-4
MON-SOLO14-SO-2026	SR 146 Bypass (Pinnacles Parkway)	Monterey County	N-1, N-2, N-4
MON-CT030-SL-2026	US 101 - Salinas Corridor	Monterey County	N-1, N-2, N-4
MON-CT031-CT-2026	U.S. 101 – South of Salinas Improvements	Monterey County	N-1, N-2, N-4
MON-MST011-MST-2026	Salinas Bus Rapid Transit	Monterey County	N-1, N-2, N-4
MON-TAMC003-TAMC-2026	Monterey County Rail Extension Kick Start	Monterey County	N-1, N-2, N-4
MON-KCY016-CK-2026	Bypass (South San Antonio Extension)	Monterey County	N-1, N-2, N-4
MON-KCY017-CK-2026	South San Antonio Extension - Lonoak Connection	Monterey County	N-1, N-2, N-4

AMBAG Project No.	Project	Location	Impact
MON-MAR077-MA-2026	Salinas Ave. Improvement Project	Monterey County	N-1, N-2, N-4
MON-MAR150-MA-2026	Del Monte Blvd Extension	Monterey County	N-1, N-2, N-4
MON-MAR154-MA-2026	Imjin Pkwy Widening Project	Monterey County	N-1, N-2, N-4
MON-MAR165-MA-2026	Imjin Road Widening Project	Monterey County	N-1, N-2, N-4
MON-MYC192-UM-2026	Harris Road Widening	Monterey County	N-1, N-2, N-4
MON-MYC238-UM-2026	G12 Salinas Road Improvements - Project Area 5	Monterey County	N-1, N-2, N-4
MON-MYC245-UM-2026	San Juan Road Improvements	Monterey County	N-1, N-2, N-4
MON-MYC307-UM-2026	Davis Road Bridge Replacement and Road Widening	Monterey County	N-1, N-2, N-4
MON-SNS006-SL-2026	US 101 - Alvin Drive overpass/underpass and Bypass	Monterey County	N-1, N-2, N-4
MON-SNS035-SL-2026	Lincoln Avenue Widening	Monterey County	N-1, N-2, N-4
MON-SNS044-SL-2026	Natividad Road Widening	Monterey County	N-1, N-2, N-4
MON-SNS050-SL-2026	Russell Rd Widening	Monterey County	N-1, N-2, N-4
MON-SNS052-SL-2026	Sanborn Road Widening/Reconstruction	Monterey County	N-1, N-2, N-4
MON-SNS059-SL-2026	Williams Road Widening	Monterey County	N-1, N-2, N-4
MON-SNS090-SL-2026	Russell Road Extension	Monterey County	N-1, N-2, N-4
MON-SNS092-SL-2026	San Juan - Natividad Collector	Monterey County	N-1, N-2, N-4
MON-SNS093-SL-2026	Independence Boulevard Extension	Monterey County	N-1, N-2, N-4
MON-SNS094-SL-2026	Hemingway Drive Extension	Monterey County	N-1, N-2, N-4
MON-SNS095-SL-2026	Constitution Boulevard Extension	Monterey County	N-1, N-2, N-4
MON-SNS096-SL-2026	Sanborn Road Extension	Monterey County	N-1, N-2, N-4
MON-SNS097-SL-2026	Williams Russell Collector	Monterey County	N-1, N-2, N-4
MON-SNS098-SL-2026	Sconberg Parkway Extension	Monterey County	N-1, N-2, N-4
MON-SNS104-SL-2026	Alisal Street Widening	Monterey County	N-1, N-2, N-4
MON-SNS108-SL-2026	Laurel Drive Widening	Monterey County	N-1, N-2, N-4
MON-SNS121-SL-2026	McKinnon Street Extension	Monterey County	N-1, N-2, N-4
MON-SNS279-SL-2026	Rossi Rd Extensions	Monterey County	N-1, N-2, N-4
MON-SNS281-SL-2026	El Dorado Drive Extension	Monterey County	N-1, N-2, N-4
MON-SNS282-SL-2026	Abbott Street Widening	Monterey County	N-1, N-2, N-4
SB-CT-A44-2026	State Route 25 Corridor Improvement Project, Phase I	San Benito County	N-1, N-2, N-4
SB-CT-A45-2026	State Route 25 Corridor Improvement Project, Phase II	San Benito County	N-1, N-2, N-4
SB-COH-A18-2026	Westside Boulevard Extension	San Benito County	N-1, N-2, N-4
SB-COH-A55-2026	Memorial Drive North Extension	San Benito County	N-1, N-2, N-4
SB-COH-A57-2026	Pacific Way (New Road): San Felipe Road to Memorial Drive	San Benito County	N-1, N-2, N-4

AMBAG Project No.	Project	Location	Impact
SB-COH-A77-2026	Gateway Drive & San Felipe Road Intersection	San Benito County	N-1, N-2, N-4
SB-SBC-A04-2026	Union Road Widening (East): San Benito Street to Highway 25	San Benito County	N-1, N-2, N-4
SB-SBC-A05-2026	Union Road Widening (West) San Benito Street to Highway 156	San Benito County	N-1, N-2, N-4
SB-SBC-A09-2026	Fairview Road Widening: McCloskey to SR 25	San Benito County	N-1, N-2, N-4
SB-SBC-A57-2026	Limekiln Road Bridge	San Benito County	N-1, N-2, N-4
SB-SBC-A58-2026	Rocks Road Bridge	San Benito County	N-1, N-2, N-4
SB-SBC-A67-2026	Shore Road Extension	San Benito County	N-1, N-2, N-4
SB-SJB-A07-2026	Third Street Extension	San Benito County	N-1, N-2, N-4
SB-SBC-A82-2026	Flynn Road Extension	San Benito County	N-1, N-2, N-4
SB-SJB-A09-2026	Lang Street to Lang Street	San Benito County	N-1, N-2, N-4
SC-RTC-24e-RTC-2026	3 - Hwy 1 Auxiliary Lanes & Bus on Shoulders (State Park to Bay/Porter) & Mar Vista Bike/Ped Xing	Santa Cruz County	N-1, N-2, N-4
SC-RTC-24f-RTC-2026	2 - Hwy 1 Auxiliary Lanes & Bus on Shoulders (41st Ave to Soquel Ave) & Chanticleer Bike/Ped Bridge	Santa Cruz County	N-1, N-2, N-4
SC-RTC-24g-RTC-2026	4 - Hwy 1 Auxiliary Lanes & Bus on Shoulders (Freedom Blvd to State Park Dr) & Trail Segment 12	Santa Cruz County	N-1, N-2, N-4
SC-MTD-P12-MTD-2026	Highway 17 Express Service Restoration and Expansion	Santa Cruz County	N-1, N-2, N-4
SC-MTD-P14-MTD-2026	Local Transit Service Restoration and Expansion	Santa Cruz County	N-1, N-2, N-4

4.12.4 Cumulative Impacts

a. Methodology

The cumulative analysis presented below primarily relies on a projections-based approach, using regional land use and growth forecasts for the AMBAG region and adjoining counties to evaluate cumulative conditions. The project is assessed within the existing and foreseeable future environmental setting, and a determination is made as to whether its incremental contribution would be cumulatively considerable when considered alongside both the overall envisioned land use scenario and specific large-scale planned projects. Refer to Section 6.4, *Cumulative Impacts*, in Chapter 6, *Other CEQA Required Discussions*, for a description of the cumulative impact methodology.

b. Impact Analysis

Noise resulting from roadway improvement projects envisioned in the 2050 MTP/SCS could influence ambient noise levels in adjoining counties, if and where the projects are located in proximity to adjoining counties. Therefore, the cumulative impact analysis area for noise consists of the AMBAG region and the adjoining counties.

Impact N-C-1 DEVELOPMENT IN THE CUMULATIVE IMPACT ANALYSIS AREA WOULD RESULT IN CUMULATIVE SIGNIFICANT IMPACTS RELATED TO CONSTRUCTION AND OPERATIONAL NOISE AND EXCESSIVE NOISE IN PROXIMITY TO AIRPORTS. THE 2050 MTP/SCS CONTRIBUTION TO CUMULATIVE IMPACTS WOULD BE CUMULATIVELY CONSIDERABLE.

As discussed throughout this section, construction of the transportation projects and the land use scenario envisioned in the 2050 MTP/SCS would generate temporary noise and vibration impacts. The transportation projects are generally far enough away from adjoining counties that construction noise and vibration would generally not combine with ambient noise and vibration levels in these counties. The 2050 MTP/SCS concentrates development in urban areas of the AMBAG region, which is also generally far enough from adjoining counties that construction noise and vibration would not affect these counties. However, construction noise and vibration resulting from either the transportation projects or the land use scenario could combine with other ongoing noise and vibration or additional construction noise and vibration within the AMBAG region, resulting in localized construction noise and vibration levels exceeding local standards. Cumulative impacts of construction noise and vibration would be significant. Implementation of Mitigation Measure N-1 and N-2 would reduce some construction noise and vibration impacts; however, the 2050 MTP/SCS contribution to the cumulative impact would be cumulatively considerable even after implementation of Mitigation Measure N-1 and N-2.

Impacts associated with operational vibration related to implementation of the 2050 MTP/SCS would be generally experienced locally and are not cumulative in nature. These effects occur independently of one another, related to site-specific and project-specific characteristics and conditions. However, even with implementation of Mitigation Measure N-5, the 2050 MTP/SCS contribution to this cumulative impact would be cumulatively considerable.

Operation of the transportation projects would generate noise. Noise would predominantly be from vehicles, such as the noise of engines or the noise generate from the friction between tires and the roadway surface. Generally, these noises affect ambient noise levels near the roadways. However, some of the 2050 MTP/SCS transportation projects would increase inter-regional travel, because the 2050 MTP/SCS addresses accommodating projected growth and because some projects are on regional roadways, such as State Route 1 or U.S. 101. Therefore, the 2050 MTP/SCS would contribute to traffic noise outside the region. The cumulative impact would be significant, and the contribution of the 2050 MTP/SCS to significant cumulative traffic noise impacts, despite implementation of Mitigation Measures N-3 and N-4, would be cumulatively considerable.

The 2050 MTP/SCS's forecasted land use development pattern could result in exposure to exterior and interior noise levels from existing airports or airstrips that exceed applicable thresholds throughout the cumulative impact analysis area, which consists of the AMBAG region

and the adjoining counties. People residing or working in close proximity to existing airports could be exposed to excessive noise levels. Therefore, cumulative impacts related to airport noise would be significant. The 2050 MTP/SCS would contribute to the exposure of people residing or working throughout the AMBAG region and the adjoining counties to excessive noise levels. Despite implementation of Mitigation Measure N-6, this impact remains significant and unavoidable. As such, the contribution of the 2050 MTP/SCS would be cumulatively considerable even with implementation of Mitigation Measure N-6.

Overall, the cumulative impacts related to noise would be potentially significant, and the proposed Plan's contribution to the cumulative noise impacts would be cumulatively considerable.

4.13 Population and Housing

This section evaluates impacts of the proposed 2050 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) associated with directly or indirectly inducing substantial unplanned population growth in an area or displacing substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

4.13.1 Setting

The information presented in this section was compiled from multiple sources, including U.S. Department of Housing and Urban Development (HUD), Association of Monterey Bay Area Governments (AMBAG)'s 2026 Regional Growth Forecast, and general plans and associated Environmental Impact Reports (EIRs) for jurisdictions in the AMBAG region.

a. Growth Forecasting

The 2026 Regional Growth Forecast (AMBAG 2024a) projects the region's population, housing, and employment to 2050 based on annual tracking of this data (AMBAG 2024b). The 2026 Regional Growth Forecast is used to support regional planning efforts such as the Regional Travel Demand Model and the 2050 MTP/SCS, as well as local planning such as the development of general plans and project review.

Developing population, housing, and employment forecast estimates for the AMBAG region consists of two distinct stages. The first stage is the identification of regional and county level forecast figures using the AMBAG Board approved forecast methodology. The second stage is the disaggregation of county level forecast numbers to the jurisdictional level and subsequently to the Traffic Analysis Zones (TAZ), using data gathered from jurisdictions (AMBAG 2025).

b. Existing Population, Housing, and Employment

Existing population, housing units, and employment for unincorporated Monterey, San Benito, and Santa Cruz Counties and the 18 cities in the AMBAG region are shown in Table 4.13-1. As of 2022, the region contains 766,170 residents, 273,274 housing units, and 398,536 jobs, with a jobs to housing ratio of 1.46. From 2020 to 2022, the number of housing units in the region increased by approximately 1.1 percent.

Monterey County's housing stock increased approximately one percent from 2020 to 2022 (AMBAG 2024b). According to the Department of Finance (DOF), there were an estimated 3.08 persons per household in Monterey County as of January 1, 2025 (DOF 2025). The median housing price in Monterey County was $870,000 and home values increased 1.1 percent from 2022 to 2023 (California Employment Development Department 2022).

San Benito County's housing stock increased by approximately 4.6 percent from 2020 to 2022 (AMBAG 2024b). Persons per household in San Benito County is estimated to be 3.11 as of January 2025 (DOF 2025). The median housing price in San Benito County was $830,000 and home values decreased by 1.5 percent between 2022 to 2023 (California Employment Development Department 2022b).

Santa Cruz County housing stock increased approximately 0.5 percent from 2020 to 2022 (AMBAG 2024b). As of January 2025, Santa Cruz County has an estimated 2.52 persons per household (DOF 2025). Of all three counties in the AMBAG region, Santa Cruz County would have the least amount of growth in housing stock and the lowest estimated persons per household. The median housing price in Santa Cruz County was $1,306,000 and home values decreased 1.4 percent from 2022 to 2023 (California Employment Development Department 2022c). Santa Cruz County median home values are the highest in the AMBAG region.

Table 4.13-1 2022 Population, Housing, and Employment for the AMBAG Region

Jurisdiction	Population	Housing Units	Jobs
Monterey County	**436,033**	**145,125**	**236,857**
Carmel-by-the-Sea	3,115	3,063	3,507
Del Rey Oaks	1,560	744	735
Gonzales	8,404	2,091	6,312
Greenfield	19,853	4,642	7,759
King City	13,419	3,535	7,933
Marina	21,646	8,208	6,406
Monterey	28,332	13,806	37,609
Pacific Grove	14,846	8,195	7,773
Salinas	160,587	44,749	77,743
Sand City	375	194	2,079
Seaside	32,390	10,818	9,993
Soledad	26,730	4,587	9,127
Unincorporated County Territory	104,776	40,493	59,881
San Benito County	**65,642**	**21,298**	**23,276**
Hollister	42,681	12,781	15,422
San Juan Bautista	2,068	907	545
Unincorporated County Territory	20,893	7,610	7,309
Santa Cruz County	**264,495**	**106,851**	**138,403**
Capitola	9,609	5,496	12,131
Santa Cruz	62,809	24,250	42,900
Scotts Valley	11,943	4,982	10,164
Watsonville	51,096	14,655	27,956
Unincorporated County Territory	129,038	57,468	45,252
AMBAG Total	**766,170**	**273,274**	**398,536**

Source: AMBAG's 2026 Regional Growth Forecast (AMBAG 2024b).

4.13.2 Regulatory Setting

a. Federal Laws, Regulations, and Policies

Federal Uniform Relocation and Real Property Acquisition Policies Act of 1970

The Federal Uniform Relocation and Real Property Acquisition Policies Act, 42 U.S.C. Section 4601 et seq., passed by Congress in 1970, is a federal law that establishes minimum standards for federally funded programs and projects that require the acquisition of real property (real estate) or displace persons from their homes, businesses, or farms. The Act's protections and assistance apply to the acquisition, rehabilitation, or demolition of real property for federal or federally funded projects (HUD 2025).

Title 23 CFR 450.322(f)

The Code of Federal Regulations, Title 23 CFR 450.322(f) requires that the metropolitan planning organization (MPO) update the regional transportation plan using the latest available estimates and assumptions for population, land use, travel, employment, congestion, and economic activity.

b. State Laws, Regulations, and Policies

California Relocation Assistance Act

The California Relocation Assistance Act of 1971 (Government Code Section 7260 et seq.) is like the Federal Uniform Relocation and Real Property Acquisition Policies Act. However, it applies to state and local programs and projects that receive state funding, regardless of whether they receive federal funding. The Act requires notification, counseling, social services, and financial assistance for persons displaced by transportation and land redevelopment projects. 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.

Homeowners and Private Property Protection Act of 2008

Proposition 99, the Homeowners and Private Property Protection Act, was approved by voters in 2008. Proposition 99 amended the State Constitution and prohibits local agencies from using eminent domain to acquire owner-occupied residences and transferring it to private entities.

California Government Code Section 65583

California Government Code Section 65583 specifies the State Housing Element requirements. The Housing Element is one of the state-mandated elements of the General Plan and is updated every eight years. The State Department of Housing and Community Development (HCD) is responsible for reviewing Housing Elements to ensure compliance with state law.

Regional Housing Needs Allocation

California Government Code Sections 65583(a)(1) and 65584 require that each Council of Government (COG) consult with the HCD, who determine each region's existing and projected housing need through preparation of a Regional Housing Needs Determination (RHND). The COG is then responsible for allocating a share of the regional housing need to each city and county based on a COG-approved methodology. The Regional Housing Needs Allocation (RHNA) Plan documents the preparation of the RHNA methodology and each jurisdiction's housing allocation. The existing and future need for housing is determined primarily by the forecasted growth in households in a community, based on historical growth patterns, job creation, household formation rates, and other factors to estimate how many households will be added to each community over the projection period. The housing need for new households is then adjusted to account for an ideal level of vacancy needed to promote housing choice, maintain price competition, and encourage acceptable levels of housing upkeep and repair. The RHNA also accounts for units expected to be lost because of demolition, natural disaster, or conversion to non-housing uses. The sum of these factors—household growth, vacancy need, overcrowding, cost burden, and replacement need—form the "determination" assigned to each region. Finally, RHNA considers how each jurisdiction might grow in ways that will decrease the concentration of low income households in certain communities. The need for new housing is distributed among income groups so that each community moves closer to the regional average income distribution. AMBAG prepares the RHNA Plan for Monterey and Santa Cruz counties while the Council of San Benito County Governments (SBtCOG) prepares the RHNA for San Benito County.

Housing Element Law

California's Housing Element Law (Government Code Sections 65580–65589.8), enacted in 1969, requires local governments to adequately plan to meet the housing needs of all economic segments of their communities. It mandates adoption of land use plans and regulatory systems that provide feasible opportunities for housing development without undue constraints. HCD plays a central role in reviewing local housing elements for compliance and issuing written findings. The law was strengthened in 2007 by SB 2, which requires jurisdictions to identify sites for emergency shelters and limits local discretion to deny emergency, transitional, and supportive housing developments.

Since then, multiple reforms have further enhanced housing element law and related regulations. Notably, SB 7 (2025) expanded participation requirements to include households with special housing needs (e.g., elderly, disabled, and farmworkers) and required HCD to review and report on allocation methodologies in shorter time frames. Several 2024-2025 laws, including AB 1886, clarify and expand provisions of the Housing Accountability Act and the "Builder's Remedy," closing loopholes local governments used to resist housing approvals and clarifying the conditions under which housing elements are "substantially compliant" with state law.

Additional recent legislation has also introduced new penalties for jurisdictions that persistently violate housing element law and increased enforcement authority for HCD. These reforms facilitate more transparent public participation, require governmental constraints disclosures

during housing element updates (as under AB 610, 2025), and continue to support CEQA streamlining for housing projects. Laws like SB 450 (2024) and SB 9 amendments further increase housing production feasibility by limiting local restrictions on subdivision and duplex developments.

Together, these ongoing legislative updates reinforce California's commitment to accelerating housing production, improving compliance with state housing goals, expanding protections for affordable housing developers, and ensuring that local plans comprehensively address a broad spectrum of housing needs.

Senate Bill 375

Senate Bill (SB) 375 (Chapter 728, Statutes of 2008) focuses on aligning transportation, housing, and other land uses to achieve regional greenhouse gas (GHG) emission reduction targets established under the California Global Warming Solutions Act, also known as Assembly Bill (AB) 32 (AB 32). SB 375 requires California Metropolitan Planning Organizations (MPOs) to develop an SCS as part of the RTP, with the purpose of identifying policies and strategies to reduce per capita automobile and light duty truck generated GHG emissions. The SCS must:

- Identify the general location of land uses, residential densities, and building intensities within the region;
- Identify areas within the region sufficient to house all the population of the region;
- Identify areas within the region sufficient to house an 8-year projection of the regional housing need;
- Identify a transportation network to service the regional transportation needs;
- Gather and consider the best practically available scientific information regarding resources areas and farmland in the region; and
- Consider the state housing goals; set forth a forecasted development pattern for the region; and allow the RTP to comply with the federal Clean Air Act of 1970 (42 U.S. Code Section 7401 et seq.).

SB 375 synchronizes the schedules of the RHNA and RTP processes. The RHNA, which is adopted concurrently with the RTP, must also allocate housing units within the region consistent with the development pattern included in the SCS.

Existing law requires local governments to adopt a housing element as part of their general plan. Unlike the rest of the general plan, where updates sometimes occur at intervals of 20 years or longer, under previous law the housing element was required to be updated at least every five years. SB 375 extended both the frequency intervals for updating the housing element, and the time period for achieving the goals and objectives therein, from at least every five years to at least every eight years. Under SB 375, this period is timed so that the housing element period begins no less than 18 months after adoption of the RTP to encourage closer coordination between the housing and transportation planning completed by local governments and MPOs.

Senate Bill 330

The Housing Crisis Act of 2019 (SB 330) seeks to speed up housing production in the next half decade by eliminating some of the most common entitlement impediments to the creation of new housing, including delays in the local permitting process, and cities enacting new requirements after a housing development application is complete and undergoing local review—both of which can exacerbate the cost and uncertainty that sponsors of housing projects face. In addition to speeding up the timeline to obtain building permits, the bill prohibits local governments from reducing the number of homes that can be built through down-planning or down-zoning, or the introduction of new discretionary design guidelines.

Assembly Bill 130

Effective June 30, 2025, AB 130 introduces substantial reforms to streamline housing development under CEQA. The bill establishes a statutory CEQA exemption for qualifying infill housing projects located in urban areas up to 20 acres, provided they meet specific criteria such as adjacency to urban uses and avoidance of historic or environmentally sensitive sites. This exemption is designed to reduce environmental review burdens for projects that align with local zoning and planning standards. AB 130 also makes permanent several provisions of the Permit Streamlining Act, including timelines for application completeness and project approval, and limits the number of public hearings for qualifying housing projects. In addition, the bill codifies elements of the Housing Accountability Act and SB 330, including protections for vested rights and restrictions on growth control measures. A notable provision is the statewide freeze on residential building code updates from October 1, 2025, through June 1, 2031, which aims to reduce regulatory uncertainty and development costs. AB 130 also enhances the role of the California Department of Housing and Community Development in overseeing RHNA methodologies, further aligning local planning efforts with state housing goals.

Senate Bill 131

SB 131 complements AB 130 by focusing on CEQA streamlining for infrastructure and public-serving projects. It introduces a new review pathway for "near miss" projects—those that narrowly fail to qualify for a CEQA exemption due to a single disqualifying condition. Under this provision, CEQA review is limited to the environmental effects of that specific condition, and such projects are exempt from analyzing alternatives or growth-inducing impacts. SB 131 also creates or expands CEQA exemptions for a range of project types, including advanced manufacturing facilities on industrial-zoned land, broadband infrastructure in public rights-of-way (ROW), updates to climate adaptation plans, High-Speed Rail maintenance facilities, and local rezoning actions that implement Housing Element commitments. In addition, the bill mandates biennial updates to *CEQA Guidelines* to ensure regulations are current, mitigate litigation, and streamline housing and infrastructure development. These changes reflect a broader policy shift toward facilitating development while maintaining targeted environmental protections, and they are expected to significantly impact the planning and approval processes for both housing and infrastructure projects across California.

California Government Code Section 7261(a)

Section 7261(a) of the California Government Code requires that programs or projects undertaken by a public entity must be planned in a manner that (1) recognizes, at an early stage in the planning of the programs or projects and before the commencement of any actions which will cause displacements, the problems associated with the displacement of individuals, families, businesses, and farm operations, and (2) provides for the resolution of these problems in order to minimize adverse impacts on displaced persons, and to expedite program or project advancement and completion. The displacing agency must ensure the relocation assistance advisory services are made available to all persons displaced by the public entity. If the agency determines that any person occupying property immediately adjacent to the property where the displacing activity occurs is caused substantial economic injury as a result of the displacement, the agency may also make the advisory services available to that person.

c. Local Laws, Regulations, and Policies

Monterey County Housing Element

The County of Monterey is updating its General Plan to include the 6th Cycle Housing Element for the 2023–2031 planning period. This update is required by state law and identifies the County's strategies for meeting the RHNA of 3,326 units for the unincorporated area. The Housing Element includes an assessment of housing needs, an inventory of available sites, and a set of goals, policies, and programs to facilitate the development, improvement, and preservation of housing. The project also involves amendments to other General Plan elements and area plans to ensure consistency and compliance with state requirements. The County's housing element is currently out of compliance with HCD and requires subsequent edits or review. A second draft of the updated housing element was provided to HCD for review in June 2025 (County of Monterey 2025). Until the County's 6th cycle housing element is approved, the County is relying on its 5th cycle housing element (County of Monterey 2016).

City of Carmel-by-the-Sea Housing Element

The City of Carmel-by-the-Sea's 6th Cycle Housing Element (2023–2031) outlines the City's strategy to address state housing mandates within the unique context of a nearly built-out, coastal community with limited land availability and high housing costs. The Housing Element sets forth goals, policies, and programs to facilitate housing production for all income levels, examines local needs, including those of special populations, and identifies adequate sites to meet the City's RHNA of 349 units (City of Carmel-by-the-Sea 2024).

City of Del Rey Oaks Housing Element

The City of Del Rey Oaks' 6th Cycle Housing Element (2023–2031) addresses the City's housing needs in accordance with state law, identifying strategies and sites to accommodate its RHNA of 184 units, and planning for housing across all income levels. The Element includes policies to support affordable housing, remove barriers to development, and ensure fair housing opportunities for all residents (City of Del Rey Oaks 2025).

City of Gonzales Housing Element

The City of Gonzales' 6th Cycle Housing Element (2023–2031) provides a comprehensive plan to meet the City's assigned RHNA of 1,266 units by identifying suitable sites, promoting a variety of housing types, and implementing programs to address the needs of lower-income and special needs households. The Housing Element ensures compliance with state requirements and supports the City's ongoing efforts to provide safe and affordable housing. The City's Housing Element is currently out of compliance with HCD and requires subsequent edits or review (City of Gonzales 2024). Until the City's 6th cycle housing element is approved, the City is relying on its 5th cycle housing element (City of Gonzales 2015).

City of Greenfield Housing Element

The City of Greenfield's 6th Cycle Housing Element (2023–2031) establishes policies and programs to facilitate the development, improvement, and preservation of housing for all income groups. The Element identifies adequate sites to meet the City's RHNA of 730 units and includes measures to address housing constraints and promote fair housing. The City's Housing Element is currently out of compliance with HCD and requires subsequent edits or review (City of Greenfield 2025).

King City Housing Element

King City's 6th Cycle Housing Element (2023–2031) outlines the City's approach to meeting its RHNA of 702 units by planning for a range of housing types and affordability levels. The Element includes policies to encourage housing production, address constraints, and ensure adequate sites for future development (King City 2024).

City of Marina Housing Element

The City of Marina's 6th Cycle Housing Element (2023–2031) details the City's plan to meet its RHNA of 685 units by identifying housing sites, supporting affordable housing, and addressing barriers to development. The Element includes programs to promote housing for all residents and ensure consistency with state housing law (City of Marina 2024).

City of Monterey Housing Element

The City of Monterey's 6th Cycle Housing Element identifies sites for future housing development for all income levels and outlines goals, policies, and programs to address the city's Regional Housing Needs Allocation of 3,654 units. The plan includes measures to remove barriers to housing development and ensure equal access to housing opportunities (City of Monterey 2024).

City of Pacific Grove Housing Element

Pacific Grove's 6th Cycle Housing Element (2023–2031) sets forth the City's plan to accommodate its RHNA of 1,125 units by identifying adequate sites, supporting affordable and special needs housing, and implementing programs to address local housing challenges and comply with state requirements. The City is currently in the process of updating its Housing Element as it is out of

compliance (City of Pacific Grove 2025). Until the City's 6th cycle housing element is approved, the City is relying on its 5th cycle housing element (City of Pacific Grove 2016).

City of Salinas Housing Element

The City of Salinas has prepared a comprehensive update to its Housing Element for the 2023–2031 period. This document guides residential development in the city, identifies current and projected housing needs, and sets forth goals, policies, and programs to meet those needs. The Housing Element also details the City's RHNA of 6,674 housing units across various income levels, and outlines strategies to address barriers to housing production and support affordable housing opportunities (City of Salinas 2023).

Sand City Housing Element

Sand City's 6th Cycle Housing Element (2023–2031) provides a roadmap for meeting the City's RHNA of 260 units by identifying suitable sites, supporting a range of housing types, and implementing policies to facilitate housing development and address local housing needs (Sand City 2024).

City of Seaside Housing Element

The City of Seaside's 6th Cycle Housing Element (2023–2031) outlines the City's strategy to meet its RHNA of 616 units by identifying housing sites, supporting affordable and special needs housing, and implementing programs to address barriers and promote fair housing (City of Seaside 2023).

City of Soledad Housing Element

The City of Soledad's 6th Cycle Housing Element (2023–2031) details the City's approach to meeting its RHNA of 724 units by planning for a variety of housing types and affordability levels, identifying adequate sites, and implementing policies to support housing production and address local housing needs (City of Soledad 2024).

San Benito County Housing Element

San Benito County's 6th Cycle Housing Element (2023–2031) outlines the County's strategies to meet state housing requirements (RHNA of 754 units for unincorporated area) by identifying programs and policies that promote affordable housing, a variety of housing types, and adequate housing for all residents, including those with special needs. The Element addresses the removal of governmental and non-governmental constraints, preservation and improvement of existing housing, and the provision of housing opportunities for all income levels. The County's Housing Element was adopted in May 2025 and is under review by HCD (County of San Benito 2025). Until the County's 6th cycle housing element is approved, the County is relying on its 5th cycle housing element (County of San Benito 2016).

City of Hollister Housing Element

The City of Hollister's 6th Cycle Housing Element (2023–2031) identifies and plans for the City's existing and projected housing needs across all economic segments. The Element sets forth goals, policies, and programs to preserve, improve, and develop housing, and to meet the City's RHNA of 4,163 units. The Housing Element emphasizes community engagement, affordable housing, and sustainable development. The City is currently in the process of updating its Housing Element. (City of Hollister 2024). Until the City's 6th cycle housing element is approved, the City is relying on its 5th cycle housing element (City of Hollister 2016).

City of San Juan Bautista Housing Element

The City of San Juan Bautista's 6th Cycle Housing Element (2023–2031) addresses the City's housing goals (RHNA of 88 units) and challenges by providing strategies for a diverse range of housing types and prices, improving and rehabilitating existing housing, and meeting the needs of special populations. The Element also emphasizes maintaining the community's rural character and historic resources while planning for future growth. The City is currently in the process of updating its Housing Element (City of San Juan Bautista 2023). Until the City's 6th cycle housing element is approved, the City is relying on its 5th cycle housing element (City of San Juan Bautista 2019).

Santa Cruz County Housing Element

Santa Cruz County's 6th Cycle Housing Element (2023–2031) guides land use planning and development to meet the County's housing needs (RHNA of 4,634 units for unincorporated area). The Element identifies strategies to address the housing crisis, including rezoning parcels to increase housing capacity, and sets forth policies and programs to ensure adequate housing for all income levels and special needs populations (County of Santa Cruz 2023).

City of Capitola Housing Element

The City of Capitola's 6th Cycle Housing Element (2023–2031) details the City's plan to accommodate its RHNA of 1,336 units by identifying adequate sites, supporting affordable housing development, and removing constraints to housing production. The Element also emphasizes the conservation of existing affordable housing and the promotion of equal housing opportunities (City of Capitola 2024).

City of Santa Cruz Housing Element

The City of Santa Cruz's 6th Cycle Housing Element (2023–2031) establishes goals and programs to meet RHNA of 3,736 units, provide a diversity of housing types and affordability levels, preserve and increase the supply of affordable housing, and address the needs of all economic segments and special populations within the community (City of Santa Cruz 2024).

City of Scotts Valley Housing Element

The City of Scotts Valley's 6th Cycle Housing Element (2023–2031) sets forth policies to meet RHNA of 1,220 units, promote a balanced mix of housing types, increase housing units to accommodate growth, and foster high-quality, safe, and livable residential neighborhoods through the improvement and preservation of housing (City of Scotts Valley 2023).

City of Watsonville Housing Element

The City of Watsonville's 6th Cycle Housing Element (2023–2031) focuses on improving, conserving, and preserving affordable housing, and expanding housing opportunities for all economic segments and special needs groups. The Element includes policies and programs to meet the City's RHNA of 2,053 and address local housing challenges (City of Watsonville 2024).

4.13.3 Impact Analysis

a. Methodology and Significance Thresholds

The methodology for determining the significance of population and housing impacts compares the existing conditions to projected future horizon year 2050 conditions, as required in CEQA Section 15126.2(a). The 2050 MTP/SCS includes transportation projects and a land use growth pattern that may influence population, housing, and employment growth. The analysis herein analyzes the potential impacts of transportation projects and the land use pattern proposed in the 2050 MTP/SCS.

Appendix G of the *CEQA Guidelines* identifies the following criteria for determining whether a project's impacts would have a significant impact to population and housing:

1. Induce substantial unplanned population growth (growth that exceeds what was anticipated or provided for in a jurisdiction's regional planning document) 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
2. Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

b. Project Impacts and Mitigation Measures

The following section describes population and housing impacts associated with the transportation improvements and future land use scenario in the 2050 MTP/SCS. In general, implementation of proposed transportation improvements and the reasonably foreseeable future development facilitated under the land use scenario envisioned by the 2050 MTP/SCS would result in population and housing impacts as described in the following sections

Threshold 1: Would the project 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)?

Impact POP-1 THE 2050 MTP/SCS WOULD ACCOMMODATE FORECASTED GROWTH THROUGH IMPLEMENTATION OF THE ENVISIONED 2050 MTP/SCS LAND USE STRATEGY TO INTENSIFY DENSITY IN DEVELOPED AREAS, RATHER THAN INDUCE UNPLANNED GROWTH. TRANSPORTATION PROJECTS INCLUDED IN THE 2050 MTP/SCS WOULD NOT INDUCE POPULATION GROWTH AS THESE PROJECTS WOULD BE GROWTH ACCOMMODATING AND ARE GENERALLY INTENDED TO IMPROVE EXISTING TRANSPORTATION NETWORKS. THE 2050 MTP/SCS WOULD NOT INDUCE SUBSTANTIAL UNPLANNED POPULATION GROWTH, EITHER DIRECTLY OR INDIRECTLY. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

From 2022 to 2050, the region's total population is forecasted to increase by 47,538 residents to 813,708 total residents. Table 4.13-2 shows the forecasted population growth for the region as a whole and by jurisdiction.

Table 4.13-2 Forecasted AMBAG Population Growth 2022-2050

Jurisdiction	2022	2035	2050	Percent Change
Monterey County	**436,033**	**451,331**	**461,279**	**6%**
Carmel-by-the-Sea	3,115	2,961	3,082	-1%
Del Rey Oaks	1,560	1,782	1,958	26%
Gonzales	8,404	11,489	11,647	39%
Greenfield	19,853	21,371	21,633	9%
King City	13,419	14,938	15,158	13%
Marina	21,646	29,100	34,305	58%
Monterey	28,332	29,428	30,859	9%
Pacific Grove	14,846	15,404	15,894	7%
Salinas	160,587	162,791	164,615	3%
Sand City	375	1,068	1,121	199%
Seaside	32,390	30,906	32,626	1%
Soledad	26,730	26,174	25,292	-5%
Unincorporated County Territory	104,776	103,919	103,089	-2%
San Benito County	**65,642**	**69,294**	**71,030**	**8%**
Hollister	42,681	45,691	45,884	8%
San Juan Bautista	2,068	2,049	2,098	1%
Unincorporated County Territory	20,893	21,554	23,048	10%

Jurisdiction	2022	2035	2050	Percent Change
Santa Cruz County	**264,495**	**274,095**	**281,399**	**6%**
Capitola	9,609	10,635	11,395	19%
Santa Cruz	62,809	71,343	75,950	21%
Scotts Valley	11,943	12,603	13,235	11%
Watsonville	51,096	51,835	52,251	2%
Unincorporated County Territory	129,038	127,679	128,568	0%
AMBAG Total	**766,170**	**794,720**	**813,708**	**6%**

Source: AMBAG's 2026 Regional Growth Forecast (AMBAG 2024b).

Regional population is forecasted to increase by 6 percent from 2022 to 2050. As shown above, population growth in the cities of Del Rey Oaks, Gonzales, Greenfield, King City, Marina, Monterey, Sand City, Hollister, Capitola, Santa Cruz, Scotts Valley, and the remaining unincorporated territory of San Benito County, would increase at a faster rate than the overall AMBAG region. In contrast, population growth in the cities of Carmel-by-the-Sea, Salinas, Seaside, Soledad, San Juan Bautista, and Watsonville, and the remaining unincorporated portions of Monterey and Santa Cruz counties would increase at a slower rate than the region. The population of the City of Pacific Grove is forecasted to increase at a similar rate to the region overall.

The 2050 MTP/SCS would induce planned population growth directly through the development of the SCS land use scenario and indirectly as a result of the transportation projects included in the 2050 MTP/SCS. Between 2022 and 2050, the AMBAG region would grow by 47,538 people; 43,716 housing units; and 27,799 jobs. As shown in Figure 2-2 through Figure 2-8 in Chapter 2, *Project Description*, growth would be concentrated within existing communities, including the coastal plain that extends from the Santa Cruz/Capitola area in the north, south along the Monterey Peninsula, as well as some communities along major transportation corridors such as Hollister and Gonzales. The land use scenario envisioned by the 2050 MTP/SCS would encourage infill, mixed use, and transit oriented development within existing urbanized areas. This type of development would promote the development of existing vacant or underutilized properties and would locate people closer to existing employment, goods, and services within established communities. In addition, investments in alternative modes of transportation and an emphasis on infill and transit oriented development would result in land use developments with higher densities, mixed use land uses, and an emphasis on transit use, biking, and walking over single occupancy vehicle use, while investments in capacity increasing roadway improvements may indirectly lead to land use developments that have been historically typical for suburban development with low densities.

As mentioned above, population growth in the cities of Del Rey Oaks, Gonzales, Greenfield, King City, Marina, Monterey, Sand City, Hollister, Capitola, Santa Cruz, Scotts Valley, and the remaining unincorporated territory of San Benito County, would increase at a faster rate than the AMBAG region as a whole. Consistent with the goals of the 2050 MTP/SCS, the denser growth within existing urban centers with high accessibility to transit options allows for the creation of communities that are more sustainable, walkable, transit oriented, and compact. However,

communities with minimal development at present would also see substantial population growth through 2050. For example, Sand City would see a population increase of 746 people or 199 percent, and the cities of Gonzales, Marina, Del Rey Oaks, and Santa Cruz would see substantial population growth (over 20 percent), as shown in Table 4.13-2. Transportation improvements associated with the 2050 MTP/SCS would not result in direct population growth beyond anticipated growth in the region, and projects under the proposed 2050 MTP/SCS are designed to fully support the transportation needs of the growing population while implementing the infill development approach outlined in Chapter 4, *Sustainable Community Strategy,* of the MTP/SCS.

Government Code Section 65080(b)(2)(B)(ii) requires that an RTP/SCS must accommodate 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. In compliance with the requirements, the 2050 MTP/SCS includes strategies to accommodate new housing units through 2050. The housing strategies would continue the AMBAG region's commitment to growth in infill areas but are also intended to protect current residents from displacement, preserve existing affordable housing, and produce new housing to secure long-term affordability for lower income populations. As mandated by state housing law as part of the periodic (every eight years) process of updating local General Plan Housing Elements, the California Department of Housing and Community Development provides a regional housing need determination (RHND) to both AMBAG and SBtCOG. AMBAG is responsible for developing a methodology for the allocation of the RHNA regional to jurisdictions in Monterey and Santa Cruz counties and SBtCOG is responsible for developing a methodology for the allocations for jurisdictions in San Benito County. The 2050 MTP/SCS must have enough housing capacity to accommodate the current (6th Cycle) RHNA allocations, and local governments are responsible for accommodating and are currently implementing their 6th Cycle RHNA allocations in their housing element updates.

Implementation of the proposed 2050 MTP/SCS land use development pattern would in some cases encourage greater density/intensity of growth than included in current adopted local general plans. This is because the 2050 MTP/SCS is designed to meet long-term sustainability and climate goals, such as reducing greenhouse gas emissions, by promoting compact, transit oriented development, which may exceed the density levels currently permitted by local jurisdictions. The 2050 MTP/SCS would not change local land use policies; individual jurisdictions retain land use authority. As such, implementation of the 2050 MTP/SCS would require the local jurisdiction to consider and resolve those differences through appropriate amendments to local planning documents, including Housing Element updates, and appropriate environmental review, thus avoiding impacts related to unplanned growth at the local level.

The 2050 MTP/SCS would accommodate forecasted growth through implementation of the envisioned 2050 MTP/SCS land use strategies which intensify density in developed areas and reduce unplanned growth.

Transportation projects included in the 2050 MTP/SCS would not induce population growth as these projects would be growth accommodating and are generally intended to improve existing transportation networks. The transportation projects included in the 2050 MTP/SCS would result in increased transit use and reduced vehicle miles traveled per capita (compared to 2022 baseline

conditions) as a result of expanded public transit fleets; see Section 4.15, *Transportation,* for additional information. By improving community connectivity, expanded transit fleets 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.

The land use and transportation projects in the 2050 MTP/SCS would therefore not result in substantial unplanned population growth. Impacts from implementation of the 2050 MTP/SCS would be less than significant.

Mitigation Measures

None required.

Threshold 2: Would the project displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

Impact POP-2 LAND USE AND TRANSPORTATION PROJECTS INCLUDED IN THE 2050 MTP/SCS WOULD TEMPORARILY DISPLACE EXISTING HOUSING AND PEOPLE DURING CONSTRUCTION, BUT WOULD NOT NECESSITATE THE CONSTRUCTION OF REPLACEMENT HOUSING ELSEWHERE. NEW DEVELOPMENT WOULD GENERALLY BE MORE DENSE THAN EXISTING HOUSING, AND THEREFORE, REPLACEMENT HOUSING IS INCORPORATED INTO THE 2050 MTP/SCS ITSELF. AS A RESULT, IMPACTS RELATED TO HOUSING AND POPULATION DISPLACEMENT WOULD BE LESS THAN SIGNIFICANT.

From 2022 to 2050, the region's total number of housing units is forecasted to increase by 43,716 units to 316,990 total units. Table 4.13-3 shows the forecasted increase in housing units for the region as a whole and by jurisdiction.

Table 4.13-3 Forecasted AMBAG Increase in Housing Units 2022-2050

Jurisdiction	2022	2035	2050	Percent Change
Monterey County	**145,125**	**162,788**	**170,605**	**18%**
Carmel-by-the-Sea	3,063	3,232	3,374	10%
Del Rey Oaks	744	893	998	34%
Gonzales	2,091	3,188	3,293	57%
Greenfield	4,642	5,133	5,436	17%
King City	3,535	3,990	4,219	19%
Marina	8,208	11,637	11,833	44%
Monterey	13,806	16,204	17,406	26%
Pacific Grove	8,195	8,804	9,234	13%
Salinas	44,749	50,082	52,717	18%
Sand City	194	585	623	221%
Seaside	10,818	11,415	12,261	13%
Soledad	4,587	5,663	6,210	35%
Unincorporated County Territory	40,493	41,962	43,001	6%

Jurisdiction	2022	2035	2050	Percent Change
San Benito County	**21,298**	**24,861**	**26,293**	**23%**
Hollister	12,781	15,636	16,164	26%
San Juan Bautista	907	955	992	9%
Unincorporated County Territory	7,610	8,270	9,137	20%
Santa Cruz County	**106,851**	**115,389**	**120,092**	**12%**
Capitola	5,496	6,242	6,715	22%
Santa Cruz	24,250	27,499	29,267	21%
Scotts Valley	4,982	5,643	6,088	22%
Watsonville	14,655	16,000	16,642	14%
Unincorporated County Territory	57,468	60,005	61,380	7%
AMBAG Total	**273,274**	**303,038**	**316,990**	**16%**

Source: AMBAG's 2026 Regional Growth Forecast (AMBAG 2024b).

Land use development included in the 2050 MTP/SCS would likely displace existing housing and people, primarily low and medium density single family, multi-family, or mobile home dwelling units, as existing housing units are demolished to make way for new development. In order to promote higher density development, jurisdictions would need to prioritize infill development, which could involve the redevelopment of existing lower-density housing into new, higher-density housing. During construction of individual projects, residents may be displaced. However, as cities become denser, the addition of more housing supply within cities and counties would help absorb displaced residents. In addition, existing laws and regulations require public agencies to provide relocation assistance to displaced households. As described in Section 4.13.2, *Regulatory Setting,* the Federal Uniform Relocation and Real Property Acquisition Policies Act requires public agencies receiving federal funding to provide relocation assistance when an action by the agency displaces residences. Due to the programmatic nature of the 2050 MTP/SCS EIR, it is not possible and would be speculative to quantify the number of future projects that may be subject to the Federal Uniform Relocation and Real Property Acquisition Policies Act, and speculative impacts are not required to be discussed per *CEQA Guidelines* Section 15145. Nonetheless, impacts from short-term displacement would be reduced through both existing regulation and additional housing supply as created by regional RHNA allocations.

The 2050 MTP/SCS would result in a net increase in housing units by 2050. Between 2022 and 2050, the projected increase in housing capacity in the region would be 43,716 units, or an increase of 16 percent. The most dramatic increases (over 20 percent) would occur in the cities of Del Rey Oaks, Gonzales, Marina, Monterey, Sand City, Soledad, Hollister, Capitola, Santa Cruz, Scotts Valley, and the remaining unincorporated county territory of San Benito as shown in Table 4.13-3. The MTP/SCS would result in a net increase in housing units, but would displace existing housing or people temporarily, as some residential structures are demolished to make way for new development. However, displacement for each redevelopment project would only affect a minimal number of residents living in low-density housing, with projects spread over the

course of the 2050 MPT/SCS. Therefore, displacement would not be substantial, and would be minimized through existing programs within the AMBAG region. Displacement would not necessitate the construction of replacement housing because redeveloped housing would be developed at a higher density, effectively including the construction of replacement housing within the redevelopment itself. Therefore, the MTP/SCS includes the replacement housing that would be necessitated by individual projects.

Some transportation network improvements, such as road widening or extension projects, would require acquisition of ROW in areas with high density housing or business along transportation corridors, and may displace residential or commercial units. Due to the programmatic nature of the 2050 MTP/SCS EIR, it is not known when or where specific residential developments would take place. However, specific projects would be required to undergo separate environmental review under CEQA. The corresponding project specific environmental documentation would identify potentially significant impacts regarding displacement of private property, if any, and provide the appropriate mitigation measures. Impacts from transportation improvements would consider relocation assistance in accordance with the Federal Uniform Relocation and Real Property Acquisition Policies Act. In addition, as noted above, the 2050 MTP/SCS would result in a net increase of 43,716 housing units in the region. Therefore, in effect, the MTP/SCS includes the replacement housing that would be necessitated by individual projects. As a result, impacts related to housing and population displacement would be less than significant.

Mitigation Measures

None required.

c. Specific MTP/SCS Projects That May Result in Impacts

Although some transportation network improvements, such as road widening or extension projects, would require acquisition of right-of-way in areas with high density housing or business along transportation corridors, it cannot feasibly be determined whether such widening or right-of-way acquisition would displace housing units or residents without project specific design details. Therefore, it can be assumed that all proposed transportation projects listed in Appendix B and summarized in Chapter 2, *Project Description* have the potential to cause or contribute to direct or indirect impacts to population and housing such as those discussed above. This section is not intended to provide project-specific impact determinations under CEQA. The intent of this summary is to support potential future streamlining efforts as a screening tool to facilitate early identification of projects likely to result in the impacts identified above. Streamlining opportunities are discussed in Section 1.5, *Implementation Issues and Future Environmental Review*, in Chapter 1, *Introduction.*

4.13.4 Cumulative Impacts

a. Methodology

The cumulative analysis presented below primarily relies on a projections-based approach, using regional land use and growth forecasts for the AMBAG region and adjoining counties to evaluate cumulative conditions. The project is assessed within the existing and foreseeable future

environmental setting, and a determination is made as to whether its incremental contribution would be cumulatively considerable when considered alongside both the overall envisioned land use scenario and specific large-scale planned projects. Refer to Section 6.4, *Cumulative Impacts*, in Chapter 6, *Other CEQA Required Discussions*, for full a description of the cumulative impact methodology.

b. Impact Analysis

The cumulative impacts analysis area for population and housing consists of the AMBAG region and adjoining counties. This is an acceptable extent for the cumulative impacts analysis area because the 2050 MTP/SCS would not influence population and housing trends in more distant counties in northern and southern California since housing forecasts, targets, and planned development as highlighted in the 2050 MPT/SCS and adjoining counties' RTP/SCSs are based on regional needs and region-specific growth forecasts. For example, it is not reasonable to assume that land use development envisioned in the 2050 MTP/SCS would affect or influence population growth or housing development in Santa Barbara County, more than 75 miles away from the AMBAG region.

Impact POP-C-1 POPULATION GROWTH IN THE CUMULATIVE IMPACTS ANALYSIS AREA IS GENERALLY PLANNED, AND CUMULATIVE IMPACTS TO UNPLANNED GROWTH WOULD BE LESS THAN SIGNIFICANT. DEVELOPMENT IN THE CUMULATIVE IMPACT ANALYSIS AREA WOULD RESULT IN THE TEMPORARY OR PERMANENT DISPLACEMENT OF HOUSING, BUT DISPLACEMENT WOULD BE LOCALIZED AND WOULD NOT RESULT IN DISPLACEMENT AT THE REGIONAL SCALE. CUMULATIVE POPULATION AND HOUSING DISPLACEMENT IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Development in the cumulative impacts analysis area would result in population growth. Generally, the population growth in the cumulative impacts analysis area is planned for in general plans developed and adopted by counties and cities in the area which plan for and accommodate long-term growth expected to occur typically within 15 to 25 years. While most jurisdictions have already adopted and approved 6th cycle housing elements, several cities and counties in the region are still updating their general plans if they are out of compliance. General plan housing element growth projections are based on RHNA mandates from the state to meet housing needs targets distributed among jurisdictions by income level, based on the region's growth forecasts, housing need, and statutory factors. In contrast, the 2050 MTP/SCS uses demographic, economic, and travel modeling to forecast where and how regional population, housing, and jobs will grow over a long-term horizon. These forecasts guide regional land use patterns, transportation investments, and policies to meet climate and mobility goals. Because population growth would be planned for in both jurisdiction general plan housing elements and regional RTP/SCS's for adjoining counties, cumulative impacts related to inducing substantial unplanned population growth would be less than significant.

The general plans and zoning ordinances of counties and cities also designate areas for housing development to accommodate planned population growth. While some development would require the demolition of existing housing, each county and city in the cumulative impacts assessment area is required to demonstrate it can meet housing requirements established

through the RHNA program, enacted throughout the state. Cumulative impacts related to displacement are potentially significant, however, additional population, housing, and employment, as forecasted, would occur with or without implementation of the 2050 MTP/SCS. The 2050 MTP/SCS provides a strategy to accommodate growth in such a way as to achieve a more balanced jobs/housing ration and to optimize transportation projects that support those land uses. The land use growth footprint assumes several residential units adequate to meet the forecasted demand, taking into account localized displacement of some households within the region. Therefore, implementation of the 2050 MTP/SCS would not result in displacement at the regional scale, and localized displacement would not be expected to increase development in areas surrounding the AMBAG region. Thus , while the cumulative impact related to displacement would be potentially significant, the 2050 MTP/SCS's contribution to the cumulative impacts related to population and housing would not be cumulatively considerable.

This page intentionally left blank.

4.14 Public Services and Recreation

This section evaluates the public services and recreation impacts of the proposed 2050 MTP/SCS.

4.14.1 Setting

a. Fire Protection

Fire protection services are provided by the local and state agencies across Monterey Bay, San Benito, and Santa Cruz counties (Table 4.14-1). According to the California Department of Forestry and Fire Protection (CAL FIRE), fire threat in the region ranges from low to extreme depending on factors such as fuel rank, topography, presence of urban development, and expected fire frequency (CAL FIRE 2024). For a detailed discussion of wildfire hazard risk in the region, see Section 4.17, *Wildfire.*

Table 4.14-1 Fire Service Providers in the AMBAG Region

County/City/Town	Fire Service Provider[1]	Number of Stations[2]
Monterey County		
Big Sur	Big Sur Fire	2
Carmel Valley	Monterey County Regional Fire District	6
City of Carmel-by-the-Sea	Carmel-by-the-Sea Fire Department	1
City of Del Rey Oaks	Seaside Fire Department	1
City of Gonzales	Gonzales Fire Department	1
City of Greenfield	Greenfield Fire Department	1
City of King	King City Fire Department	1
City of Marina	Marina Fire Department	2
City of Monterey	Monterey Fire Department	6
City of Pacific Grove	Pacific Grove Fire Department	1
City of Salinas	Salinas Fire Department	6
City of Sand City	Monterey Fire Department	6
City of Seaside	Seaside Fire Department	1
City of Soledad	Soledad Fire Department	1
San Ardo	San Ardo Volunteer Fire Company	1
Spreckels	Spreckels Volunteer Fire Department	1
Monterey County (remaining unincorporated)	CAL FIRE, Monterey County Regional Fire District, North County Fire Protection District of Monterey County	11, 7, 3
San Benito County		
City of Hollister	Hollister Fire Department	3
City of San Juan Bautista	San Juan Bautista Fire Department	1
San Benito County (unincorporated)	CAL FIRE	5

County/City/Town	Fire Service Provider[1]	Number of Stations[2]
Santa Cruz County		
Aptos	Central Fire District	2
City of Capitola	Central Fire District	1
City of Santa Cruz	Central Fire District, Santa Cruz Fire Department	4
City of Scotts Valley	Scotts Valley Fire District	2
City of Watsonville	Watsonville Fire Department	2
Ben Lomond	Ben Lomond Fire Protection District	1
Boulder Creek	Boulder Creek Fire Protection District	1
Felton	Felton Fire Protection District	1
La Selva	Central Fire District	1
Live Oak	Central Fire District	1
Rio Del Mar	Central Fire District	1
Santa Cruz County (remaining unincorporated)	CAL FIRE, Santa Cruz County Fire Department	13
Soquel	Central Fire District	1

[1] Table is an estimation of fire service providers within the AMBAG region and does not include private fire protection departments

[2] As shown in the table, some fire service providers serve multiple cities or towns. The number of stations in this column reflect the number of stations operated by the provider; not the number of stations within each city or town.

Fire protection services are managed at the local level, typically by municipalities, counties, fire protection districts, or volunteer fire companies. California Government Code Section 38611 states that general law cities must establish a fire department unless it is included within the boundaries of an established fire protection district. State and federal lands are generally served by State and federal fire agencies (e.g., CAL FIRE, National Park Service), and in some cases, businesses and native tribes manage their own fire departments. Each fire protection agency is responsible for serving its own prescribed area, but mutual aid agreements are in wide use across the region such that agencies can rely on assistance from neighboring agencies in the case of overwhelming demand.

Fire departments are assigned a Public Protection Classification from the International Organization for Standardization, a private company that provides information about insurance risk. To assess fire protection agencies, the International Organization for Standardization uses information about emergency dispatch; the number and location of engine companies; the amount of water needed to fight a fire; and local water supply, pressure, and flow. Local fire departments receive a classification from 1 to 10; a classification of 1 is the highest, and a classification of 10 indicates that fire suppression capabilities do not meet International Organization for Standardization minimum standard.

b. Police Services

Police services are provided on the State, county, and local levels within the AMBAG region (Table 4.14-2). The California Highway Patrol is responsible for police services along the sections of the interstate highway system within Monterey, San Benito, and Santa Cruz counties. It provides services for the management of traffic, emergency accident response, and protection of the highway system through safety enforcement on interstate roads. Through collaboration with local, State, and federal public safety agencies, its purpose is to minimize exposure of the public to unsafe conditions resulting from emergency accidents and highway impediments (California Highway Patrol 2025).

Table 4.14-2 Police Service Providers in the AMBAG Region

County/City/Town	Department[1]
Monterey County	
City of Carmel-by-the-Sea	Carmel Police Department
City of Del Rey Oaks	Del Rey Oaks Police Department
City of Gonzales	Gonzales Police Department
City of Greenfield	Greenfield Police Department
City of King	King City Police Department
City of Marina	Marina Police Department
City of Monterey	Monterey Police Department
City of Pacific Grove	Pacific Grove Police Department
City of Salinas	Salinas Police Department
City of Sand City	Sand City Police Department
City of Seaside	Seaside Police Department
City of Soledad	Soledad Police Department
Monterey County (unincorporated)	Monterey County Sheriff's Department
Monterey Regional Airport	Monterey Peninsula Airport Police
San Benito County	
City of Hollister	Hollister Police Department
City of San Juan Bautista	San Benito County Sheriff's Department
San Benito County (unincorporated)	San Benito County Sheriff's Department
Santa Cruz County	
City of Capitola	Capitola Police Department
City of Santa Cruz	Santa Cruz Police Department
City of Scotts Valley	Scotts Valley Police Department
City of Watsonville	Watsonville Police Department
Santa Cruz County (unincorporated)	Santa Cruz County Sheriff's Department

[1] Table is an estimation of police service providers within the AMBAG region and does not include private security or University police services

Each of the three counties in the AMBAG region has its own sheriff's department responsible for police services in unincorporated areas of each county. Additionally, many incorporated cities and towns have a police department responsible for police services within their own jurisdiction. Unincorporated areas or areas such as transit districts, and some smaller cities, may also contract with county sheriff departments for police services instead of providing their own. Police service performances vary by jurisdiction but are typically measured in terms of response times, calculated in the number of minutes it takes a police officer to respond to an incident.

c. Schools

Although the California public school system is under the policy direction of the State Legislature, the California Department of Education relies on local control for the management of school districts. School district governing boards and district administrators allocate resources among the schools of the district and set educational priorities for their schools. Monterey, San Benito, and Santa Cruz counties all provide residents with local public education facilities and services, including elementary, middle, secondary, and postsecondary schools, as well as special and adult education.

As of the 2022-2023 school year, there were 241 public and charter schools in the AMBAG region, with 123,569 enrolled students. There were 6,142 teachers in public and charter schools in the AMBAG region during the 2022-2023 school year. Table 4.14-3 lists the total number of elementary, junior high, middle, high, and K-12 schools within each county.

Table 4.14-3 AMBAG Region Public Schools and Enrollment by County

County	Total Schools[1]	Total Enrollment[1]	Total Teachers[2]
Monterey County	135	73,643	3,966
San Benito County	27	11,901	512
Santa Cruz County	80	38,025	1,664
Total	**241**	**123,569**	**6,142**

[1] Total includes elementary schools, junior high, middle schools, high schools, and K-12 schools for the years 2022-2023

[2] Total includes number of teachers in classrooms in county for the years 2022-2023. This count includes full-time teachers for all K-12 schools, but not adult education, Regional Occupation Programs, childcare, and preschool teachers.

Sources: Education Data Partnership 2022-2023, California Department of Education 2022-2023

d. Emergency Medical Services

Each of the counties in the AMBAG region, including incorporated cities and towns within those counties, provides emergency medical services to its residents through the training and certification of paramedics and emergency medical technicians. The various departments charged with administering emergency medical services contract with private ambulance services and local fire departments to deploy emergency medical services within their service areas.

e. Libraries

The AMBAG region is served by 39 public libraries across all three counties, including branch libraries and mobile bookmobiles. Publicly funded libraries in California are required to maintain a certain amount of local funding depending on the population of a library's service area; however, there are no established standards with which California public libraries must comply (California State Library 2022).

f. Parks and Recreational Facilities

Of the 3.3 million acres of land within the AMBAG region, approximately 21 percent is conserved as parks or open space and are included in the SCS land use pattern. These lands range from public use parks to rural open space and U.S. Forest Service Lands (AMBAG 2025).

Parks and open space are generally categorized according to their size and amenities. Smaller parks, such as pocket parks, neighborhood parks, community parks, urban forests, and community gardens, serve local communities, are typically located in urbanized areas, and often include a wide range of improvements from playing fields and picnic areas to playgrounds and fitness trails. Examples of these types of parks within the AMBAG region include San Lorenzo Park in Monterey County, Aromas Community Park in San Benito County, and Chanticleer Avenue Park in Santa Cruz County. These parks are most often managed by local park districts or municipalities, which typically set minimum standards for park acreage based on their population. Larger open space areas, such as regional parks, greenbelts, trails and pathways, natural and wildlife preserves, some private farmlands, some public rangelands, State parks, and federal parks, serve a broader geographic range, are typically located outside of major urbanized areas, and generally include fewer improvements. Examples of these within the AMBAG region include Jacks Peak Park in Monterey County, Fremont Peak State Park in San Benito County, and Wilder Ranch State Park in Santa Cruz County. Management of these parks is divided among a range of organizations and agencies, including regional park districts, State and federal government, private individuals, and nonprofit land trusts.

4.14.2 Regulatory Setting

a. Federal Laws, Regulations, and Policies

Federal Fire Prevention and Control Act

The National Fire Incident Reporting System is a system established by the National Fire Data Center of the United States Fire Administration to carry out the intentions of the Federal Fire Prevention and Control Act of 1974. The Act authorizes the United States Fire Administration to gather and analyze information on the magnitude of the Nation's fire problem, as well as its detailed characteristics and trends. The Act further authorizes the United States Fire Administration to develop uniform data reporting methods, and to encourage and assist State agencies in developing and reporting data.

National Fire Protection Association, Standard 901

The National Fire Protection Association Standard 901 provides the latest guidelines to help fire departments and other fire protection organizations effectively share data with other agencies. This standard provides common language and definitions that define and describe elements and classifications used by many fire departments in the United States and other countries to describe fire damage potential and experience during incidents.

California Building Standards Code (California Code of Regulations Title 24)

Title 24 applies to all buildings throughout the State of California, and includes requirements for structural, mechanical, electrical, and plumbing systems, and requires measures for energy conservation, green design, construction and maintenance, fire and life safety and accessibility. Cities and counties are required by state law to enforce Title 24. More restrictive ordinances can also be adopted by cities and counties due to specific geographical conditions. Included among the twelve parts of Title 24 are Part 9, which includes the California Fire Code, and is based on the International Fire Code, and Part 11, which includes the California Green Building Standards Code that includes measures for incorporating energy efficiency into buildings.

Department of Transportation Act Section 4f

Passed in 1966, the Department of Transportation Act includes Section 4(f), which states that the Federal Highway Administration and other United States Department of Transportation agencies cannot approve the use of land from public state parks, recreational areas, wildlife and waterfowl refuges, or public and private historical sites unless certain conditions apply. These exceptions are as follows: If there is no feasible and prudent avoidance alternative to the use of land, and if the action includes all possible planning to minimize harm to the property resulting from such use; or if the Administration determines that the use of the property will have a de minimis impact (49 USC Section 303).

b. State Laws, Regulations, and Policies

California Building Standards Code (Title 24, CCR)

Title 24 applies to all buildings throughout the State of California, and includes requirements for structural, mechanical, electrical, and plumbing systems, and requires measures for energy conservation, green design, construction and maintenance, fire and life safety and accessibility. Cities and counties are required by state law to enforce Title 24. More restrictive ordinances can also be adopted by cities and counties due to specific geographical conditions. Included among the twelve parts of Title 24 are Part 9, which includes the California Fire Code, and is based on the International Fire Code, and Part 11, which includes the California Green Building Standards Code that includes measures for incorporating energy efficiency into buildings.

Quimby Act

As a condition of approval of a final tract or parcel map, the California Quimby Act allows a city or town to require dedication of land, the payment of in-lieu fees, or a combination of both to be used for the provision of parks and recreational services. Under the act, cities and towns can require land or in-lieu fees for a minimum of three acres per 1,000 residents, with the possibility of increasing the requirement to a maximum of five acres per 1,000 residents if the city or town already provides more than three acres per 1,000 residents.

California Coastal Act, Coastal Recreation Policies

California Coastal Act policies related to coastal recreation include Public Resources Code Section 30210, which requires that maximum access and recreational opportunities shall be provided for all people,; and Section 30213, which protects lower cost visitor and recreational facilities, and encourages the provision of public recreational opportunities; Section 30221, which protects oceanfront land that is suitable for recreational use and development unless present and foreseeable future demand for public or commercial recreational activities that could be accommodated on the property is already adequately provided for in the area; and Section 30223 which reserves upland areas to support coastal recreational uses.

Senate Bill 50

Senate Bill (SB) 50, or the Leroy F. Greene School Facilities Act of 1998, restricts the ability of local agencies to deny project approvals on the basis that public school facilities (classrooms, auditoriums, etc.) are inadequate. School impact fees are collected at the time when building permits are issued. Payment of school fees are also collected at the time when building permits are issued. Payment of school fees is required by SB 50 for all new residential development projects and is considered "full and complete mitigation" of any school impacts. School impact fees are payments to offset capital cost impacts associated with new developments, which result primarily from costs of additional facilities, related furnishings and equipment, and projected capital maintenance requirements. As such, agencies cannot require additional mitigation for any school impacts (Chapter 407, Statutes of 1998).

c. Local Laws, Regulations, and Policies

City and County General Plans

State law requires every city and county to adopt a general plan that expresses the community's development goals and embodies public policy relative to the distribution of future land uses, both public and private (California Governor's Office of Planning and Research 2017). Included in the general plan are potential hazards, policies, and mitigation measures related to recreation, as well as public services and safety. The elements contained in the general plan are intended to promote the highest quality of life in a given jurisdiction.

Each general plan is required to have an open space element that guides the comprehensive and long range preservation and conservation of "open space land." A wide range of topics are addressed in the open space element, including open space for the preservation of natural

resources, open space used for the managed production of resources, open space for outdoor recreation, open space for public health and safety, demands for trail oriented recreational use, the retention of all publicly owned corridors for future use, and the feasibility of integrating city and county trail routes with appropriate segments of the California Recreational Trails System. Policies and strategies for parks and recreation may include standards for park acreage and requirements for the provision of parks in new residential developments.

Each general plan is also required to have a safety element, which describes plans to promote safety within the jurisdiction, as well as the services available to maintain safety. The purpose of the safety element is to reduce the possible risks related to death, injuries, property damage, and economic and social dislocation resulting from fires, floods, earthquakes, landslides, and other hazards. Included in the safety element is the emergency response section, which describes the service areas of emergency services, including fire, police, and medical, and an evaluation of the adequacy of the existing service and the demand for additional emergency services.

In addition, CCR Section 65302(g) states that a city may adopt a county's safety element "to the extent that the county's safety element is sufficiently detailed and contains appropriate programs and policies for adoption by a city."

General plan policies relating to library services may involve the library level of service, 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.

Monterey County

Monterey County General Plan

The Monterey County General Plan (Monterey County 2010, PS-3:25, C/OS-3) includes 12 planning areas. Example policies within the General Plan that are relevant to public services and recreation and open space are listed below:

- **Policy PS-1.1.** Adequate Public Facilities and Services (APFS) requirements shall:
  a. Ensure that APFS needed to support new development are available to meet or exceed the level of service of "Infrastructure and Service Standards" (Table PS-1) concurrent with the impacts of such development;
  b. Encourage development in infill areas where APFS are available, while acknowledging the rights of property owners to economically viable use of existing legal lots of record throughout the county; and
  c. Seek to achieve acceptable level of service (LOS) standards through improvements funded by fair share impact fees and planned capital improvements (CIFPs).
- **Policy OS-1.2.** Development in designated visually sensitive areas shall be subordinate to the natural features of the area.

City of Carmel-by-the-Sea General Plan

The City of Carmel-by-the-Sea adopted its General Plan in 2003 (City of Carmel-by-the-Sea 2003, 6-3:6:4, 7-2). Example policies within the General Plan that are relevant to public services and recreation and open space are listed below:

- **Policy P6-15.** Based on identified housing, parking, recreation public and cultural facilities, parks and open space needs, develop, maintain, and periodically review a list of property within the City and its Sphere of Influence suitable for acquisition and/or disposition by the City-and establish priorities for potential actions.
- **Policy P7-2.** Encourage the full utilization and opportunities within permanent open space areas for such uses as pedestrian paths and scenic viewpoints that would provide for public enjoyment of these areas.

City of Gonzales General Plan

The City of Gonzales adopted the Gonzales 2010 General Plan in 2011 and revised in 2018 (City of Gonzales 2018, VI-48:VI-51). Example policies within the General Plan that are relevant to public services and recreation and open space are listed below:

- **Policy HS-4.1.** Establish and maintain levels of service for police and fire that meet national and/or regional standards. Proposals for new development shall be evaluated against these service levels to determine the extent of improvements needed.
- **Policy COS-4.3.** Maintain agricultural open space around Gonzales as a means of giving form and definition to the City. To this end, permit urban development only within the areas designated for urban uses on the Land Use Diagram. Land immediately beyond this boundary should remain in agricultural use utilizing agricultural easement funds outlines in Implementing Action COS-4.3.3 (Agricultural Impact Fund), other mitigation measures that may arise as a result of project level CEQA review, and any other feasible methods to preserve agricultural lands and define the limits of urban expansion for the City.
- **Policy COS-6.2.** Provide a sufficient mix of park environments to meet both passive and active recreational needs, including: community parks, neighborhood parks, mini parks, and bicycle and pedestrian facilities.

City of Marina General Plan

The City of Marina General Plan (City of Marina 2000, 75:78, 114) was adopted by the City in 2000 and is currently being updated. Example policies within the General Plan that are relevant to public services and recreation and open space are listed below:

- **Policy 2.106.** As the population of Marina grows, the police force should be sufficiently staffed and deployed to maintain an average emergency response time of four minutes. Similarly, a maximum response time for fire protection of three to four minutes should be maintained. Where new development would be located beyond a three-to-four-minute response time, consideration should be given to the need for Class A fire-resistant roofing.

- **Policy 4.17.1.** Within built-up areas, existing topography shall be retained to make natural landforms more evident. This requirement of the General Plan may be fulfilled by minimizing grading and cutting filling for roadways, by providing public space with outlooks at the higher elevations, and by locating taller structures on the upper slopes of hills.

City of Monterey General Plan

The City of Monterey adopted the General Plan in 2005 (City of Monterey 2005), with significant updates to the Housing, Land Use, and Safety Elements completed as part of the Monterey 2031 project in July 2024. Example policies within the General Plan that are relevant to public services and recreation and open space are listed below:

- **Policy f.6.** Provide ongoing efficient and effective design, development, renovation, and management of visually aesthetic and functional park areas and facilities.
- **Policy f.3.** Continue to cooperate and coordinate with county and state agencies in providing police services within the community.
- **Policy a.3.** Encourage infill development within the City where it can efficiently be provided with public facilities and utilities.

City of Salinas General Plan

The City of Salinas General Plan (City of Salinas 2002, LU-14, COS-12:COS-13, H-20) was adopted in 2002. The City is currently updating its General Plan. Since the last comprehensive update in 1988, the city grew substantially and is now the largest city in Monterey County. The major focus of this General Plan is how to protect valuable agricultural resources while promoting a diversified economy. This General Plan includes the following elements: Land Use, Community Design, Housing, Conservation/Open Space, Circulation, Safety and Noise (City of Salinas 2002).

- **Policy LU-4.1.** Provide an effective and responsive level of fire protection, public education and emergency response service (including facilities, personnel, and equipment) through the Salinas Fire Department.
- **Policy COS-7.1.** Develop a high-quality public park system that provides adequate space and facilities for a variety of recreational opportunities conveniently accessible to all Salinas residents.

City of Soledad General Plan

The City of Soledad adopted its General Plan in 2005 (City of Soledad 2005, VI-6, VII-4, VIII-10). Example policies within the General Plan that are relevant to public services and recreation and open space are listed below:

- **Policy PR-2.** The City will pursue the development of parks, open space and trails in areas subject to natural or human caused hazards such as natural or developed flood channels, hillsides, and sensitive resource areas.

- **Policy S-1.** The City shall ensure through the development review process that adequate public facilities and services are available to serve new development. New development shall not be allowed until adequate public services and facilities to serve such development are provided. Where existing facilities are inadequate, new development may only be approved when the following condition are met:
  a. The developer and/or City can demonstrate that all necessary public facilities will be adequately financed and installed in time (through fees and other means); and
  b. The facilities improvements are consistent with applicable facility plans approved by the City or other agencies in which the City it a participant.
- **Policy C/OS-11.** The City shall require that significant natural, open space, and cultural resources be identified in advance of development and incorporated into site specific development project design to the extent feasible.

San Benito County

San Benito County General Plan

The San Benito County 2035 General Plan (San Benito County 2015a, 7-2:7-11, 8-2) sets a clear direction for the future of the county and includes goals, policies, and programs necessary to achieve the community's vision and guiding principles. Example policies within the General Plan that are relevant to public services and recreation and open space are listed below:

- **Policy PFS-1.1.** The County shall ensure that adequate public facilities and services essential for public health and safety are provided to all county residents and businesses and maintained at acceptable service levels. Where public facilities and services are provided by other agencies, the County shall encourage similar service level goals.
- **Policy NCR-1.1.** The County shall support and encourage maintenance of open space lands that support natural resources, agricultural resources, recreation, tribal resources, wildlife habitat, water management, scenic quality, and other beneficial uses.

City of Hollister General Plan

The City of Hollister adopted its General Plan in 2005, which is currently being updated (City of Hollister 2005, 5.11, 5.14, 6.8). Example policies within the General Plan that are relevant to public services and recreation and open space are listed below:

- **Policy CSF1.1.** Ensure that future growth does not exceed the capabilities and capacity of local public services such as wastewater collection and treatment, local water supply systems, fire and police protection, maintenance of streets and roads, local school systems, parks and recreational facilities, and landfill capacity, and ensure that public services meet Federal and State standards and are available in a timely fashion.
- **Policy OS1.3.** Hollister shall consider the use of creative site planning in a way that is responsive to open space values. Require those proposing new development to design open spaces to minimize paved areas and to maximize landscaping to reduce outdoor air temperatures around buildings in warm weather.

Santa Cruz County

Santa Cruz County General Plan

The Santa Cruz County Board of Supervisors adopted the most recent iteration of the General Plan and Local Coastal Program in 2022, though it was not effective until 2024. Chapter 5, Agriculture, Natural Resources, and Conservation, and Chapter 7, Parks, Recreation, and Public Facilities of the General Plan and Local Coastal Program contain policies relevant to public services and recreation and open space (Santa Cruz County 2024, 5-118, 7-20, 7-36). Example policies are listed below:

- **ARC-9.2.5.** Require full mitigation of all potential adverse impacts associated with developments located in Urban Open Space areas.
- **PPF-2.211.** Establish local rural parks in the rural portions of the County, typically servicing an area within a four-to-five mile radius. Facilities could include open turf, sport fields, sports courts, basketball courts, picnic areas, parking, restrooms, tot lots, equestrian facilities, and a building for community meetings and recreational programs.
- **PPF-2.6.6.** Obtain managed and controlled public access to environmentally sensitive habitats through master plans, grants, dedications of easements, or other means, including as a condition of new development approval, subject to Policy PPF-2.7.2: Trail Easements.

City of Scotts Valley General Plan

The City of Scotts Valley adopted its most recent General Plan in 2023. Example policies within the General Plan that are relevant to public services and recreation and open space are listed below (City of Scotts Valley 2023, LU-29, OSC-22, CSF-13, CSF-21):

- **Policy OSC-2.3.** Encourage the dedication of property as open space and/or conservation easements to provide increased public access to scenic corridors and open spaces. Encourage that as part of new development, areas over 40% slope as defined by the City's Municipal Code are dedicated as open space scenic easements. The open space designation shall be recorded in the Office of the County Recorder.
- **Policy LU-1.14.** Designate areas for new public and quasi-public facilities and accessory facilities commensurate with the identified need.
- **Policy CSF-4.5.** Continue to encourage school administrations to enable non-school hour use of their facilities by the public for educational and recreational purposes.

City of Santa Cruz General Plan

The City of Santa Cruz 2030 General Plan (City of Santa Cruz 2019, 81,111, 113) was adopted in 2012 and amended in 2019. Example policies within the General Plan that are relevant to public services and recreation and open space are listed below:

- **Policy CC7.6.** Coordinate law enforcement planning with local, regional, State, and federal agencies and private security companies.
  a. Participate in multijurisdictional crime suppression units with emphasis on career criminal apprehension and reducing the number of victims.
  b. Maintain mutual aid agreements and train in mutual procedures.
- **Policy PR1.1.** Provide and manage a system of parks and recreation related facilities that serve the needs of residents and visitors.
  a. Update and modify the park system and services to accommodate changes in the population and recreational needs.
  b. Develop and maintain a citywide Parks Master Plan that sets service standards and strategic goals for the development and maintenance of parks and related facilities.
  c. Plan for expansion of concessions in parks and recreation facilities.
  d. Fund and staff regularly scheduled preventative maintenance.
- **Policy PR3.1.** Enhance the outdoor educational and recreational experience in appropriate open space lands and coastline.
  a. Provide recreational and educational opportunities within the open space lands and coastline consisted with adopted master or management plans.

City of Capitola General Plan

The City of Capitola adopted the General Plan in 2014 and later amended the document in 2019 (City of Capitola 2019, LU-41, OSC-20). Example policies within the General Plan that are relevant to public services and recreation and open space are listed below:

- **Policy LU-13.1.** Provide a diversity of park types, including active low investment (e.g., playfields and picnic facilities), and passive recreational facilities (e.g., natural areas suitable for quiet reflection).
- **Policy OSC-6.1.** Promote the preservation of native species, habitat, and vegetation types and overall natural diversity in Capitola.

City of Watsonville General Plan and Downtown Specific Plan

The City adopted the existing Watsonville 2005 General Plan in 1994 (City of Watsonville 1994, 107, 125:126, 165). Example policies within the General Plan that are relevant to public services and recreation and open space are listed below:

- **Policy 8.A.** The City shall plan for park and recreation needs in coordination with the Pajaro Valley Unified School District, Santa Cruz County, and other groups to meet the demands of the growing population.
- **Policy 9.F.** The City shall designate for open space and environmental management those areas rich in wildlife species and fragile in ecological make-up. These habitat zones shall be made part of the greenbelt where appropriate.

The City adopted its Downtown Specific Plan in 2023, which includes updates to the Land Use and Circulation elements. Example policies within the Downtown Specific Plan that are relevant to public services and recreation and open space are listed below:

- **Policy 3.4 Walkable Environment.** Improve the pedestrian experience, public space, aesthetics, and design quality to attract visitors, serve residents and workers, and promote walking.
- **Policy 4.4 Connections to Nature.** Connect to the Watsonville Slough and Pajaro River with bicycle and walking trails and provide interpretive graphics to celebrate these unique resources.

Emergency Response and Evacuation Plans

Emergency response plans include elements to maintain continuity of government, emergency functions of governmental agencies, mobilization and application of resources, mutual aid, and public information. Emergency response plans are maintained at the federal, state, and local levels for all types of disasters, human-made and natural. Local governments have the primary responsibility for preparedness and response activities.

The Monterey County Office of Emergency Services alerts and notifies appropriate agencies when disaster strikes, coordinates all responding agencies, ensures resources are available and mobilized, develops plans and procedures for response and recovery, and develops and provides preparedness materials for the public.

The County of San Benito adopted its emergency operations plan in January 2024. The emergency operations plan addresses the County's response to extraordinary emergency situations associated with natural disasters or human-caused emergencies. The emergency operations plan describes the methods for carrying out emergency operations, the process for rendering mutual aid, the emergency services of governmental agencies, how resources are mobilized, how the public will be informed, and the process to ensure continuity of government during an emergency or disaster (San Benito County 2024, iii, 1-4, 18-22).

The County of Santa Cruz currently has a draft version of an Emergency Operations Plan (Santa Cruz County 2023). The plan establishes a comprehensive, all-hazards approach to incident management across a spectrum of activities including prevention, preparedness, response, and recovery. It addresses the planned response to extraordinary situations associated with large-scale emergency incidents in or affecting Santa Cruz County.

Recreation and Park Master Plans

Recreation and park master plans outline projected recreation facility needs and strategies for fulfilling those needs. The main purpose of the 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 naturalistic 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.

4.14.3 Impact Analysis

a. Methodology and Significance Thresholds

This analysis includes a program-level, qualitative assessment of impacts related to public services and recreation. Impacts related to these resource areas are more localized in nature, and therefore the analysis is qualitative and focuses on the existing regulations, standards, and policy measures to address these localized impacts. This evaluation of public services and recreation impacts assumes that construction and development under the 2050 MTP/SCS would adhere to applicable federal, State, and local regulations and would conform to appropriate standards in the industry, as relevant for individual projects. Where existing regulatory requirements or permitting requirements exist that are law and binding on responsible agencies and project sponsors, it is reasonable to assume that they would be implemented, thereby reducing impacts.

Appendix G of the CEQA Guidelines identifies the following criteria for determining whether a project's impacts would have a significant impact on public services and recreation:

1. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:
   a. Fire protection,
   b. Police services,
   c. Schools,
   d. Parks, or
   e. Other public facilities;
2. Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or
3. Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

b. Project Impacts and Mitigation Measures

The following section describes public services and recreation impacts associated with the transportation improvements and future land use scenario included in the 2050 MTP/SCS. In general, implementation of proposed transportation improvements and the reasonably foreseeable future development facilitated under the land use scenario envisioned by the 2050 MTP/SCS would result in public services and recreation impacts as described in the following section.

Threshold 1: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

a. Fire protection,
b. Police services,
d. Parks, or
e. Other public facilities?

Impact PSR-1 THE 2050 MTP/SCS WOULD RESULT IN NEW OR EXPANDED GOVERNMENTAL FACILITIES, THE IMPLEMENTATION OF WHICH WOULD RESULT IN SUBSTANTIAL PHYSICAL IMPACTS. THIS IMPACT WOULD BE SIGNIFICANT AND UNAVOIDABLE.

As described in Section 4.13, *Population and Housing*, between 2022 and 2050, the AMBAG region is forecasted to grow by 47,538 people; 43,716 housing units; and 27,799 jobs. The 2050 MTP/SCS designates growth geographies and identifies a set of land use strategies to accommodate the projected growth that results in focused housing and job growth concentrated primarily in or adjacent to already developed areas and along existing transit corridors. The 2050 MTP/SCS was designed to accommodate the people, households, and jobs identified in the regional growth forecast. The overall growth would result in increased demand for services. As the number of households grows, demand for fire protection and police services, parks, and other general government services and facilities (e.g., libraries) would increase.

The 2050 MTP/SCS includes land use strategies that would allow for denser or more compact development in designated growth geographies. Implementation of the 2050 MTP/SCS would result in more dense and intense development than existing conditions, largely as infill development. Therefore, service areas for existing service providers may not substantially expand. This type of growth pattern would allow jurisdictions to leverage existing facilities and absorb some of the increased demand more efficiently than if new development were more dispersed.

Overall, with implementation of the 2050 MTP/SCS, the higher density and intensity of new growth in the AMBAG region, particularly in developed areas, would limit the need to expand service boundaries for law enforcement and fire protection. As a function of distance, these services would not need to expand. However, as function of response time, implementation of the 2050 MTP/SCS could result in the need to construct new or expanded facilities. In order to maintain adequate response times, existing emergency service providers may need to expand their facilities if additional population growth results in substantial increases in the volume of requests for services or a decrease in response times. In cases where future demand exceeds capacity, new facilities may be required. In addition, the demand on fire departments, particularly those serving more rural areas, would increase as the frequency or intensity of

wildfires also increase. As described in Section 4.17, *Wildfire*, implementation of the 2050 MTP/SCS would exacerbate the risk of wildfire.

The general plans for each county in the AMBAG region include goals, policies, and programs which intend to ensure the protection and that supply of services meets local demand. Cities have similar general plan policies. The Monterey County General Plan Public Service Element Goal PS-1 intends to ensure that adequate public facilities and services and the infrastructure to support new development are provided over the life of the General Plan (County of Monterey 2013, Pages PS3-3 through PS-6). Policies PS-1.1 and PS-1.2 are designed to ensure that improvement and financing are designed to accommodate new services, provide adequate public facilities and maintain acceptable levels of service. The San Benito County 2035 General Plan Public Facilities and Services Element Goal PFS-1 intends to provide residents and businesses quality, cost, effective and sustainable public facilities and services (San Benito County 2015). Policies PFS-1.1, PFS-1.2 and PFS-1.4 are designed to ensure that the County maintains adequate public facilities, identifies and finds solutions to support key public facility infrastructure, and to preserve, improve and replace facilities to maintain adequate levels of service for existing and future development. The Parks, Recreation and Public Facilities Element of the Santa Cruz County General Plan and Local Coastal Program (County of Santa Cruz 2024) contains objectives and policies related to Fire, Police, and Public Services and Facilities which are designed to provide high levels of protection services and promote the improvement of public services and facilities (Objective PPF-3.4).

However, at the regional scale, the addition of 47,538 people; 43,716 housing units; and 27,799 jobs would place increased demand on existing resources to the extent that the construction of new or expanded facilities would be required, the construction of which would cause significant environmental impacts. Impacts to fire protection, police services, parks, and other public service facilities resulting from the 2050 MTP/SCS would be significant.

Transportation projects included in the 2050 MTP/SCS would not generate substantial demand for public services, such as fire protection, police, parks, or other public facilities requiring new or expanded facilities. Transportation projects would not generate substantial demand for these services because transportation projects do not increase the population of the AMBAG region, either directly or indirectly. Transportation projects would also not require the removal and replacement of existing public services, such as police stations or fire departments. Therefore, transportation projects included in the 2050 MTP/SCS would result in less than significant impacts to fire protection, police services, parks, and other public service facilities.

Mitigation Measures

Cities and counties in the AMBAG region, as well as other public service providers, can and should implement this measure, where relevant to land use projects implementing the 2050 MTP/SCS. Project specific environmental documents may adjust these mitigation measures as necessary to respond to site specific conditions.

PSR-1 Increased Public Service Demand

During the CEQA review process for individual facilities, the implementing agency with responsibility for construction of new public service facilities or the expansion of existing facilities, including those of fire and police services, parks, and other public facilities, can and should apply necessary mitigation measures to avoid or reduce significant environmental impacts associated with the construction or expansion of such facilities. The environmental impacts associated with such construction or expansion should be avoided or reduced through the imposition of conditions required to be followed by those directly involved in the construction or expansion activities. Such conditions should include those necessary to avoid or reduce significant impacts associated with air quality, noise, transportation, biological resources, cultural resources, greenhouse gas emissions, hydrology and water quality, and others that apply to specific construction or expansion of new public or expanded public service facilities.

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies are cities, counties, and/or implementing agencies for land use projects, and other public service providers. This mitigation measure shall, or can and should, be applied during project permitting and environmental review.

Significance After Mitigation

Mitigation Measure PSR-1 would reduce impacts related to the provision of new or physically altered governmental facilities to less than significant with mitigation because it would require implementing agencies to apply necessary mitigation measures to avoid or reduce significant environmental impacts associated with the construction or expansion of such facilities. However, these mitigation measures may not be feasible or effective for every project. Therefore, this impact would be significant and unavoidable. No additional mitigation measures to reduce this impact to less than significant levels are feasible.

Threshold 1: Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

c. Schools?

Impact PSR-2 THE 2050 MTP/SCS WOULD REQUIRE THE PROVISION OF NEW SCHOOLS, THE CONSTRUCTION OF WHICH WOULD RESULT IN SUBSTANTIAL PHYSICAL IMPACTS. IMPACTS WOULD BE LESS THAN SIGNIFICANT BECAUSE OF STATE REGULATIONS MANDATING DEVELOPMENT IMPACT FEES.

As discussed above, the 2050 MTP/SCS would accommodate the people, households, and jobs identified in the regional growth forecast. The overall growth would result in increased demand for services, including school services. The proposed composition of residential land uses would vary as future development occurs and the total number of households would increase.

Alongside this, the projected population growth in the region would result in more school-age children being brought into school districts within each county. The generation of additional primary and secondary school-age children and the ability of individual schools to accommodate them is dependent on the type of housing, demographics, and the available capacity of the elementary, middle, and high schools that would accommodate them. This is a dynamic condition that changes over time as population characteristics and other variables change. In cases where increased growth exceeds the capacity of schools and other government-related services and facilities, implementation of the 2050 MTP/SCS would require additional or modified facilities to ensure acceptable levels of service.

Future project sponsors of land use development projects would be required by law to pay development impact fees at the time building permits are issued. These fees are used by the applicable school district to mitigate impacts associated with long-term operation and maintenance of school facilities. The fees would be determined at the time of the building permit issuance and would reflect the most current fee amount requested by the school district. Pursuant to Section 65996(3)(h) of the California Government Code (SB 50), payment of these fees "is deemed to be full and complete mitigation of impacts of any legislative or adjudicative act, or both, involving but not limited to, the planning, use, or development of real property, or any change in government organization or reorganization." Impacts of the 2050 MTP/SCS on schools would therefore be less than significant.

Mitigation Measures

None required.

Threshold 2:	Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?
Threshold 3:	Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

Impact PSR-3 THE 2050 MTP/SCS WOULD INCREASE THE USE OF EXISTING PARKS AND RECREATIONAL FACILITIES, RESULTING IN SUBSTANTIAL PHYSICAL DETERIORATION, AND WOULD INCLUDE RECREATIONAL FACILITIES THAT WOULD HAVE AN ADVERSE EFFECT ON THE ENVIRONMENT. THIS IMPACT WOULD BE SIGNIFICANT AND UNAVOIDABLE.

Implementation of the 2050 MTP/SCS would increase demand on existing public parks and other recreational facilities in the region and could cause accelerated physical deterioration of parks, trails, and recreational facilities as a result.

The 2050 MTP/SCS would accommodate the people, households, and jobs identified in the regional growth forecast. The overall growth would result in increased demand for services, including recreational facilities. Implementation of the 2050 MTP/SCS would potentially result in an increased use of existing recreational facilities associated with increases in regional growth. Transportation projects would improve access to recreational facilities, which would result in

additional use. Combined, the land use growth and transportation projects included in the 2050 MTP/SCS would likely increase use of existing facilities, which would result in a substantial physical deterioration of the facilities or require expanded or new recreational facilities.

However, it should also be noted that some of the active transportation projects included in the 2050 MTP/SCS would provide new recreational opportunities such as new Class I-III bike lanes, hiking trails, and improve access to recreational facilities. The provision of new recreational opportunities could decrease use of existing recreation facilities as residents and visitors to the AMBAG region would have more options and destinations for recreation. Because use of existing facilities could decrease with the provision of new facilities, the rate or deterioration of existing facilities would also correspondingly decrease. The construction of active transportation projects that could also be used for recreation would have the potential to result in environmental impacts. The significant environmental impacts of these active transportation projects, as well as any new or expanded recreational facilities to serve the 2050 MTP/SCS, have already been disclosed previously in Chapter 4, *Environmental Impact Analysis,* of this EIR.

Development of the individual projects in the 2050 MTP/SCS would be required on a project by project basis to pay development fees towards to the applicable jurisdiction. Since the passage of the 1975 Quimby Act (Government Code Section 66477 *et seq*.), cities and counties have been authorized to adopt ordinances requiring that developers set aside land, donate conservation easements, or pay fees that can be used for purposes of acquiring parkland. In accordance with this regulation, each county in the AMBAG region requires that new residential development provide parkland and/or pay in lieu fees for the provision of parkland. Cities also typically have similar types of policies in their general plans and/or Code of Ordinances. All future development included in the 2050 MTP/SCS would be required to comply with these regulations. The payment of these fees would go toward maintaining parks or providing new park space, which would also reduce use of existing recreational facilities. Reduced use of existing facilities would result in a corresponding decrease in deterioration of existing facilities. However, payment and utilization of Quimby Act fees would not entirely prevent or remediate deterioration of parks and recreational facilities. While the 2050 MTP/SCS could increase demand on recreational services, existing State requirements regarding development of a complete general plan, including Open Space and Conservation Elements, require local jurisdictions to address impacts on recreational facilities. Compliance with State requirements, which would result in long-range planning for recreation facilities, would help ensure that existing facilities are properly maintained, despite regional growth. As such, substantial physical deterioration of existing facilities and/or accelerated deterioration would not occur. Thus, the proposed 2050 MTP/SCS would not have a significant impact on deterioration of recreational resources.

Although impacts related to substantial physical deterioration would be less than significant, the construction of new or expanded recreational facilities itself would result in significant environmental impacts. Therefore, this impact is significant.

Mitigation Measures

Cities and counties in the AMBAG region, and recreation agencies, can and should implement the following measures, where relevant to land use projects implementing the 2050 MTP/SCS. Project specific environmental documents may adjust these mitigation measures as necessary to respond to site specific conditions.

PSR-3 Impact Reduction from New Recreational Facilities

During project specific design and CEQA review, the cities and counties in the AMBAG region, and other agencies with responsibility for the construction of new or expanded recreation facilities, can and should apply necessary mitigation measures to avoid or reduce significant environmental impacts associated with the construction of such facilities. The environmental impacts associated with such construction should be avoided or reduced through the imposition of conditions required to be followed by those directly involved in the construction or expansion activities. Such conditions should include those necessary to avoid or reduce significant impacts associated with air quality, noise, transportation, biological resources, cultural resources, greenhouse gas emissions, hydrology and water quality, and others that apply to specific construction of new or expanded recreation facilities, including recreational trails.

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for transportation projects, including recreation trails, are cities, counties, and recreation agencies. This mitigation measure shall, or can and should, be applied during project permitting and environmental review.

Significance After Mitigation

Implementation of Mitigation Measure PSR-3 would reduce impacts associated with the construction of additional parks and recreation facilities because it would require implementing agencies to apply necessary mitigation measures to avoid or reduce significant environmental impacts associated with the construction or expansion of such facilities. However, these mitigation measures may not be feasible or effective for every project. Therefore, this impact would be significant and unavoidable. No additional mitigation measures to reduce this impact to less than significant levels are feasible.

c. Specific MTP/SCS Projects That May Result in Impacts

Some transportation network improvements could indirectly induce growth that would generate demand for police, fire, schools, and other public services. Public service standards, performance measures, and policies related to public services, recreation, and utilities are established by local jurisdictions and regulatory agencies. At a regional scale, it is not feasible to quantify separate effects of specific projects on each type of public service in separate jurisdictions, each with a different standard for service. Therefore, it cannot feasibly be determined which of the 2050 MTP/SCS transportation projects would potentially result in impacts to public services and recreation without project specific design details.

4.14.4 Cumulative Impacts

a. Methodology

The cumulative analysis presented below primarily relies on a projections-based approach, using regional land use and growth forecasts for the AMBAG region and adjoining counties to evaluate cumulative conditions. The project is assessed within the existing and foreseeable future environmental setting, and a determination is made as to whether its incremental contribution would be cumulatively considerable when considered alongside both the overall envisioned land use scenario and specific large-scale planned projects. Refer to Section 6.4, *Cumulative Impacts*, in Chapter 6, *Other CEQA Required Discussions*, for a description of the cumulative impact methodology.

b. Impact Analysis

Generally, public services are provided on a local or regional level, and recreational facilities are used locally or regionally. Therefore, the cumulative impact analysis area for public services and recreation consists of the AMBAG region and the adjoining counties.

Impact PSU-C-1 **DEVELOPMENT IN THE CUMULATIVE IMPACT ANALYSIS AREA WOULD RESULT IN SUBSTANTIAL ADVERSE PHYSICAL IMPACTS ASSOCIATED WITH THE PROVISION OF NEW OR PHYSICALLY ALTERED GOVERNMENTAL FACILITIES AND THE USE OF RECREATIONAL FACILITIES, THE CONSTRUCTION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL EFFECTS. CUMULATIVE IMPACTS WOULD BE SIGNIFICANT. THE 2050 MTP/SCS CONTRIBUTION TO CUMULATIVE IMPACTS WOULD BE CUMULATIVELY CONSIDERABLE.**

Growth in the AMBAG region and adjoining counties would generate demand for fire protection, police services, parks and recreational facilities, schools, and other public facilities to the extent that the construction of new or expanded facilities would be required, the construction of which would cause significant environmental impacts. The 2050 MTP/SCS would also increase demand for services and facilities to the extent that new or expanded facilities would be required, the construction of which would result in significant effects. These impacts would be significant and unavoidable, even with implementation of Mitigation Measures PSR-1 and PSR-3. Thus, cumulative impacts related to public services and recreation would be significant, and the 2050 MTP/SCS' contribution to the cumulative public services and recreation impacts would be cumulatively considerable.

4.15 Transportation

This section examines the effects of the changes in projected land use and transportation projects included in the 2050 MTP/SCS and county level Regional Transportation Plans (RTPs) on transportation conditions in 2050.

4.15.1 Setting

The existing transportation system in the region consists of a complex network of State and federal highways, regional roads, and local streets; transit systems; a series of bicycle paths and pedestrian walkways; railroad lines; and several aviation and marine facilities.

a. Roadway Transportation

Roadway Network

The regional roadway network consists of several thousand miles of roadways, including highways, regional arterial roads and other collectors and local streets. Within the region, the designated routes in the national highway system are all State or federal highways, including: U.S. 101 for its entire length through the region, State Route 156 from U.S. 101 to State Route 1, and State Route 1 from State Route 17 in Santa Cruz to State Route 68 in Monterey. Vehicle travel served by these highways includes all trip lengths and purposes, ranging from external trips to and from the region, external trips traveling through the region (e.g., from San Jose to Los Angeles on U.S. 101), and internal travel between points within the region.

The three counties and 18 incorporated cities in the region are responsible for an extensive network of city and county roads. Major highway routes through the region include:

- U.S. 101, a north-south route primarily serving Monterey County, and connecting through San Benito County and the San Jose/San Francisco Bay area;
- State Route 1, which closely follows the Pacific coastline and is the single longest highway in the region, attracting substantial recreational and tourist traffic;
- State Route 17, which connects Santa Cruz and the San Jose Area, carrying a high volume of both commuter and recreational traffic;
- State Route 68 and State Route 183 in Monterey County;
- State Route 25 and State Route 156 in San Benito County; and
- State Route 9 and State Route 129 in Santa Cruz County.

These highways and other expressways, arterials, and collectors not only serve local traffic, but provide access and mobility for trips beginning and/or ending outside the region. Table 4.15-1 identifies the major highways in the region and respective roadway conditions that reflect baseline (2022) conditions, unless a more recent date is noted. These highways are shown in Figure 4.15-1.

This page intentionally left blank.

Table 4.15-1 AMBAG Region Highway Descriptions

ID	Highway	Length within AMBAG Region	Description
1	State Route 1	139.8 miles	State Route 1 is one of two routes that traverse the entire region, connecting the AMBAG region to Northern and Southern California. This important highway provides the primary access to the region's coastal areas, as well as serving the needs of residents and visitors to much of the region's urbanized areas, and assisting with agricultural commodity movement. State Route 1 is designated a California State Scenic Highway from the intersection with State Route 68 south to the San Luis Obispo County line, a distance of approximately 78 miles. At the Santa Cruz and San Mateo County border, State Route 1 is designated a California State Scenic Highway as it travels north towards San Francisco. State Route 1 changes in character as it moves down the Pacific Coast, from a rural, undivided two-lane highway, to a four-lane arterial, to a four-lane divided highway, and finally to a six-lane divided highway. Congestion issues include commuter traffic around and through the cities of Monterey and Santa Cruz and tourism traffic along its entire length, but especially in the Big Sur and Carmel-by-the-Sea areas. Portions of State Route 1 have been periodically closed in Monterey County due to mudslides or collapsed bridges in the past. Most recently, a segment of State Route 1 near Rocky Bridge Creek collapsed in March 2024, leading to closures. At the time of writing this Draft EIR, there have been ongoing repairs and intermittent closures though Caltrans has since stabilized and reinforced this location.
2	State Route 9	25.7 miles	State Route 9 is a two-lane rural highway as it enters the region from San Mateo County in the Santa Cruz Mountains. It is a 27-mile route between the cities of the Santa Clara Valley and Santa Cruz at its junction with State Route 1. It is considerably curvy and traverses forested areas, which limit travel speeds. State Route 9 serves communities in the San Lorenzo Valley, including Boulder Creek, Ben Lomond, and Felton, and is a heavily used commuter and recreational travel route. At the time of writing this Draft EIR, there are occasional planned closures, including one-way controlled traffic at various locations due to maintenance.
3	State Route 17	12.5 miles	State Route 17 is a four-lane freeway/expressway providing the shortest travel distance between the Santa Clara Valley and Santa Cruz County. Travelers to and from the San Francisco Bay area and Santa Cruz County use State Route 17. The route is heavily used for recreational travel on weekends and for commuter travel on weekdays and is therefore subject to delay. Starting at the Santa Clara/Santa Cruz County line near Summit Road, State Route 17 is a rolling to mountainous road, with slopes from four percent to six percent. Segments along this route are narrow, do not have shoulders, or have a narrow median with guard rail. State Route 17 reached its design capacity of 40,000 vehicles per day in 1968. Although this road does not have signalized intersections, there are several unsignalized intersections with acceleration/deceleration lanes as well as t-intersections with local roads. Just south of Scotts Valley, State Route 17 becomes a freeway with shoulders. The freeway portion terminates at the interchange with State Route 1 in the City of Santa Cruz. The program Safe on 17 has been an effective collaboration between Santa Cruz County Regional Transportation Commission (SCCRTC), Caltrans, the California Highway Patrol, and local and elected officials to encourage motorists to travel at safe speeds and use caution on State Route 17. At the time of writing this Draft EIR, there are ongoing lane closures and construction activities on State Route 17, including overnight lane closures for various maintenance and upgrade projects.
4	State Route 25	72.1 miles	State Route 25 enters the region in the north about two miles south of its interchange with U.S. 101 in Santa Clara County. Although only a two-lane undivided highway, it provides the most direct connection between U.S. 101 and the City of Hollister, as well as being the sole north-south highway for the rest of San Benito County. State Route 25 is primarily a two-lane undivided roadway from the Santa Clara/San Benito County line and the intersection with State Route 198 in southern Monterey County. In this section, State Route 25 provides direct access to the East Entrance to Pinnacles National Park. Due, in part, to both differences between housing market costs and a jobs/housing imbalance, increasing commute travel from residents from San Benito County to Santa Clara County has substantially affected the operation of State Route 25, especially from Hollister to the Santa Clara County line.
5	State Route 68	22 miles	State Route 68 begins at Asilomar State Beach in the City of Pacific Grove and is the only highway access from Pacific Grove to State Route 1. At State Route 1, the roads merge for about three miles, then State Route 68 continues east past the Laguna Seca Recreation Area and Monterey County's Toro Regional Park and on into Salinas, where it connects to U.S. 101. State Route 68 is the most direct highway link between the Monterey Peninsula and the City of Salinas and is heavily used by commuters and visitors. State Route 68 is a designated California State Scenic Highway from its intersection with State Route 1 in Monterey to the Salinas River. From Asilomar State Beach to State Route 1, State Route 68 is a steep two-lane highway with narrow shoulders, many curves and signalized intersections. From State Route 1 eastbound, State Route 68 is a four-lane divided road for less than a mile before narrowing to a two-lane undivided rural highway (with signalized intersections) to Toro Park, where it becomes a four-lane freeway to the Spreckels interchange. From here to Blanco Road in the City of Salinas it is a four-lane expressway, and then it becomes a signalized arterial (South Main Street and John Street) through Salinas to U.S. 101. Motorists experience substantial delay on State Route 68 due to its heavy use and signalized intersections.
6	U.S. 101	107.6 miles	U.S. 101 is the only federal highway in the region. U.S. 101 enters the region at the northwest corner of San Benito County as a four-lane freeway/expressway. U.S. 101 is the main north-south route for the region, used heavily by residents of the region, and for external trips to and through the region. It is an important truck route along its entire length. Near Prunedale travel demand significantly outpaces capacity. This section is characterized by at-grade intersections that serve increasing commuter, recreational and truck traffic. At the northern boundary of the City of Salinas, U.S. 101 has been improved to a freeway through the urbanized area, and then it continues as an expressway southward toward the Monterey/San Luis Obispo County line, with alternating segments of four-lane divided expressway and freeway.
7	State Route 129	14.1 miles	State Route 129 connects State Route 1 in Watsonville and U.S. 101 in San Benito County, east of Watsonville. State Route 129 traverses hilly terrain with sharp curves and steep grades. It provides the shortest route between the agriculture center of Watsonville and U.S. 101. It therefore carries a large volume of heavy trucks, especially since semitrailer trucks over 45 feet in length are not allowed on State Route 152, which is another connection between Watsonville and U.S. 101. State Route 129 is a four-lane road from State Route 1 to the Watsonville City limits, where it narrows to a two-lane rural road with narrow or no shoulders. The terrain it traverses, and the resulting roadway characteristics place severe limits on traffic speeds and volume.
8	State Route 146	18.3 miles	State Route 146 is two separate rural two-lane roads, one from U.S. 101 in Monterey County east and the other from State Route 25 in San Benito County west. These roads do not connect or travel across the Gabilan Mountains, but do provide access to Pinnacles National Park via its western and eastern entrances, respectively.

ID	Highway	Length within AMBAG Region	Description
9	State Route 152	11.4 miles	State Route 152 connects the City of Watsonville to Gilroy, northeast of Watsonville in Santa Clara County. In Watsonville, State Route 152 begins at its intersection with State Route 1. It traverses Hecker Pass between Watsonville and Gilroy, before ultimately ending at its junction with U.S. 101 in Gilroy. State Route 152 is primarily a two-lane undivided highway along most of its length, but the segment between State Route 1 and Elkhorn Road in Pajaro is a four-lane divided expressway. As the road crosses Mt. Madonna via Hecker Pass, it becomes hilly with many curves. Due to safety concerns, trucks over 45 feet in length are prohibited on travelling on State Route 152 over Hecker Pass. These trucks are diverted to State Route 129 and other routes.
10	State Route 156	23.9 miles	State Route 156, like State Route 129 and State Route 152, is a major route connecting U.S. 101 and State Route 1. Starting from its interchange with State Route 1 and State Route 183 in Castroville, the highway merges with U.S. 101 in Prunedale and then becomes a separate route again near San Juan Bautista. At San Juan Bautista, the highway continues easterly north of Hollister to the Santa Clara County line just south of its terminus with State Route 152. State Route 156 is a California State Scenic Highway from one mile east of Castroville to its intersection with U.S. 101 near Prunedale. At San Juan Bautista, State Route 156 begins as a four-lane divided expressway, but after eight miles becomes a two-lane, undivided highway to approximately one mile east of Hollister. State Route 156 is a two-lane expressway as it bypasses Hollister and maintains that configuration to the Santa Clara County line. The reduction in travel lanes can be a traffic bottleneck between State Route 1 and U.S. 101 during peak periods and weekends.
11	State Route 183	10.1 miles	State Route 183 is a rural two-lane highway connecting Castroville and Salinas. In Castroville, State Route 183 is also known as Merritt Street and begins at an at-grade interchange with State Route 1. The highway is congested between State Route 1 to Davis Road in the City of Salinas, particularly during commute hours on weekdays. It also experiences high rates of agricultural truck traffic movement. In the City of Salinas, the highway becomes two four-lane divided arterials on Market and North Main Streets. State Route 183 terminates at the U.S. 101 on-ramp south of Bernal Drive/North Main Street.
12	State Route 198	26.2 miles	State Route 198 is a two-lane conventional highway beginning at U.S. 101 just west of San Lucas in southern Monterey County and continuing east to the Fresno County line. Traffic volumes are low and are primarily interregional.
13	State Route 218	2.85 miles	State Route 218 is a small highway connecting State Route 1 and State Route 68 in Monterey County. The route begins in Seaside as 3 to 4-lane city street then exits in Del Rey Oaks at the east end near State State Route 68.
14	State Route 236	16.4 miles	State Route 236 is a two-lane rural road that provides access from State Route 9 at Boulder Creek west to Big Basin Redwoods State Park. Passing through the park, State Route 236 first heads north and then east to reconnect with State Route 9 approximately eight miles north of Boulder Creek. The highway generally is not congested, but does contain narrow to no shoulders, sharp curves. and hilly terrain. The segment of State Route 236 generally within Big Basin Redwoods State Park was closed during the CZU Lightning Complex Fire that ignited in August 2020. The segment of the highway has since reopened, but at the time of writing this Draft EIR, there is one-way controlled traffic at at various locations from Big Basin State Park to the junction of State Route 9 at Waterman Gap due to maintenance.

Source: California Department of Transportation 2025b

Figure 4.15-1 Highways in the AMBAG Region



Operations

A variety of performance measures are used to assess transportation systems. Depending on the type of performance evaluation required, performance measures may be very specific and focus on intersections or roadway segments, or performance measures may be aggregated to evaluate the overall operation of a regional transportation system. A regional travel model typically only contains information on the number of lanes, posted speed and link capacity on roadway segments, and lacks information detailed enough to calculate accurate intersection information.

Because of the programmatic nature of the 2050 MTP/SCS, the performance measures discussed herein are aggregated by county and as a region to evaluate the overall performance of the transportation system. Transportation performance measures were used as planning metrics in creating the 2050 MTP/SCS. Roadway transportation performance measures that address performance goals include:

- Total vehicle miles traveled (VMT);
- VMT per capita; and
- Average work trip travel time during peak period.

The basic measure of the amount of roadway transportation generated is VMT. One vehicle traveling one mile constitutes one vehicle mile, regardless of the size of the vehicle or the number of passengers in the vehicle. Increases in VMT are associated with regional growth that would occur with or without the 2050 MTP/SCS. Thus, VMT data may not reflect deficient traffic operations,[1] although VMT does have a strong correlation with congestion.

An area's per capita (or per person) VMT as applied in this EIR is the total VMT divided by the population of that area and is a measure of the average vehicle miles each person travels on a typical weekday. Per capita VMT tends to increase as a result of greater overall economic activity in the region, higher levels of per-household automobile ownership, and/or a jobs-housing imbalance that contributes to longer average commute distances.

Baseline VMT data for the AMBAG region is shown in Table 4.15-2.

Table 4.15-2 Baseline VMT (2022) for AMBAG Region

Type	Daily VMT
Total	**16,011,425**
Total per Capita[1]	20.9

Source: AMBAG Regional Travel Demand Model (RTDM) Data for 2050 MTP/SCS, 2025

[1] Total VMT per capita is based on a population size of 766,170 (see Section 4.13, *Population and Housing*)

Comprehensive documentation of the modeling methodology, assumptions, calibration, and inputs used for the RTDM is provided in Appendix F of the 2050 MTP/SCS.

[1] Traffic operational measures such as roadway congestion and delay are not considered for purposes of roadway transportation environmental impact analysis under CEQA.

b. Public Transit Transportation

Transit Service Network

Monterey-Salinas Transit (MST) provides fixed route transit service in Monterey County. The fixed route service includes 38 routes and consists of a fleet of 131 vehicles, mostly buses (MST 2024). MST bus stations are located in the cities of Carmel-by-the-Sea, Del Rey Oaks, Greenfield, Gonzales, King City, Marina, Monterey, Pacific Grove, Salinas, Seaside and Soledad, as well as the community of Chualar. MST also provides public transit service in areas of unincorporated Monterey County, including the communities of Castroville, Pajaro, Prunedale, Moss Landing, Toro Park, Carmel Valley, Carmel Highlands and Big Sur. To assist inter-regional connections, MST also provides service to the Gilroy Transit Center in Santa Clara County, Watsonville Transit Center in Santa Cruz County and the North County Transportation Center in San Luis Obispo County. MST had 2.62 million passenger trips on its fixed route system in Fiscal Year 2024 (MST 2024).

The Santa Cruz Metropolitan Transit District (METRO) provides fixed route transit service in Santa Cruz County. METRO provides essential bus transit services for all residents, including students, State Route 17 commuters, transit dependent and choice riders. The county's network for local and express bus routes includes transit centers in Felton, Scotts Valley, Santa Cruz, Capitola and Watsonville. METRO buses serve approximately 479 miles of road throughout the County and cover most arterial and collector routes. Transit to Monterey County is provided at the Watsonville Transit Center via connections with MST. Greyhound provides service from Santa Cruz to surrounding regions. METRO had approximately 3.6 million passenger trips on its fixed route system in Fiscal Year 2024 (METRO 2025).

San Benito County Express is the primary transit provider in the County of San Benito with service in Hollister and countywide via intercounty connections. The County Express system currently provides Tripper services in the City of Hollister, complementary Americans with Disabilities Act (ADA) Paratransit service and a general public Dial-A-Ride.

Operations

Public transit transportation performance measures that address performance goals include:

- Percent of work trips that are 30 minutes or less by transit during peak period; and
- Percent of jobs within 0.5 mile of a high-quality transit stop.

A high quality transit corridor is defined as a corridor that contains transit service with 15-minute frequencies during peak period or a corridor that contains a rail stop. Currently, nearly 31 percent of jobs in the AMBAG region are within 0.5 mile of a high quality transit stop.[2] According to AMBAG's RTDM, the percent of work trips that are 30 minutes or less is 89 percent.

[2] RTDM (AMBAG 2025)

c. Active Transportation

Active transportation refers to modes of travel that rely on human power, primarily walking and bicycling. In planning and infrastructure development, active transportation focuses on creating safe, accessible, and efficient networks for pedestrians and cyclists.

Bikeways

Bikeways are facilities that provide primarily for, and promote, bicycle travel. There are four types of bikeway classifications identified by the California Department of Transportation (Caltrans) (Caltrans 2025a: 100-3-100-4). These classes are as follows:

- **Class I.** Paths or trails, separated from roadways, for the exclusive use of bicycle and pedestrian modes of travel
- **Class II.** Designated lanes for bicycles on roadways
- **Class III.** Roads where bicycles and vehicles share the travel lanes of the roadway
- **Class IV.** Designated lanes for bicycles on roadways, but which are also separated from the roadway traffic by barricades, such as bollards.

There are several major bike routes throughout the region, including the Monterey Bay Sanctuary Scenic Trail (MBSST). Although not yet fully constructed, the MBSST is a bicycle and pedestrian pathway network that is envisioned to run from the Santa Cruz/San Mateo County line to Pacific Grove in Monterey County. In addition, some of the abandoned rail lines in the region have been converted to bicycle/pedestrian trail use.

Monterey County

Monterey County has 239 miles of bikeways (Transportation Agency for Monterey County [TAMC] 2023). One of the major continuous bikeways in the county is the Monterey Bay Coastal Bike Trail, which is approximately 29 miles long stretching from Castroville to the Monterey Peninsula and parts of Pebble Beach. The Monterey Bay Coastal Bike Path runs adjacent to the Fort Ord Dunes State Park located between the cities of Seaside and Marina. The state park also has its own bike path that is accessible on both ends of the Fort Ord Dunes Park from the Monterey Coastal Bike Path. Sections of the MBSST have been completed in Monterey County between Pacific Grove and Monterey, between Sand City and Seaside, and between Marina and Castroville. Most of these sections are Class I bikeways, but short sections are Class II and Class III (TAMC 2007).

Santa Cruz County

Santa Cruz County has approximately 230 miles of bikeways (SCCRTC 2023). Many of the county's major collector and arterial roadways have been established as Class II bikeways (bike lanes), providing an extensive network of resources linking cities throughout the county. For example, Class II bikeways are provided on Bay Drive and High Street in the City of Santa Cruz, providing a bicycle connection between the downtown area of the city and the University of California at

Santa Cruz. There are few Class I bikeways (bike paths) in the County. The Wilder Ranch Bike Path is a Class I bikeway located just west of the City of Santa Cruz is part of the MBSST Network and the Arana Gulch Trail provides a bicycle link between the County of Santa Cruz and City of Santa Cruz bicycle network. The Coastal Rail Trail Segment 7 Phase 1 is another Class I bikeway and paved multi-use trail that runs 1.2 miles from Natural Bridges Drive to Bay/California streets in the City of Santa Cruz constructed in December 2021 as part of the Coastal Rail Trail and MBSST.

San Benito County

Bicycle facilities in San Benito County are generally concentrated in and around Hollister. A Class I bikeway is located approximately parallel with State Route 25 from near the southern limits of Hollister to near the center of the city, north of Rancho San Justo Park. Class II bikeways are provided on several streets in Hollister, including State Route 25 Bypass, Westside Boulevard, Southside Road and Union Road. A Class I bikeway extends between Tres Pinos School and the community of Tres Pinos, south of the City of Hollister. Within the City of San Juan Bautista, a short section of San Juan Highway is in the northern part of town has designated bike lanes. Additionally, Class II bike lanes extend north of San Juan Bautista to Anzar High School on either side of San Juan Highway. The Juan Bautista de Anza National Historic Trail traverses San Juan Bautista and the western part of the county.

d. Rail Transportation

The rail network within the region includes all rail lines or other facilities currently served by a railroad for passenger or freight movement, rail lines used for recreational service, rail lines not currently in use, and abandoned rail lines or facilities (either with or without track). With the exception of Watsonville Junction, all the region's rail lines are single track. Some of the abandoned rail lines have been converted to bicycle/pedestrian trail use.

Passenger Rail

The only regular passenger rail transportation currently operating in the region is provided by Amtrak. Amtrak trains share the Union Pacific Railroad main line tracks. There is one passenger rail station located in the City of Salinas at 30 Railroad Avenue, in the downtown area. This stop services Amtrak's Coast Starlight train, which connects Los Angeles to Seattle.

Monterey County

Passenger rail service is available in Monterey County. Amtrak provides rail service for its Coast Starlight train twice daily via a station stop in Salinas. TAMC adopted the Monterey Bay Area Rail Network Integration Study in 2021. This work was funded by a Transit and Intercity Rail Capital Program grant. This study laid the groundwork for implementing the 2018 California State Rail Plan in the Monterey Bay region by determining the optimal options for: rail connectivity and operations, equipment needs, governance, and community benefits for service between Monterey County and Santa Clara County, Monterey County and Santa Cruz County, and the Coast Rail Corridor. TAMC is also working on the Monterey County Rail Extension project, which will extend passenger rail service from Santa Clara County south to Salinas. This is a transformative project that will revitalize the downtown Salinas train station and create new

multimodal transportation hub for the disadvantaged communities of Pajaro and Castroville. Design of the Pajaro-Watsonville Multimodal Station is underway, and this station would be served by Caltrain, Amtrak Coast Starlight, Monterey-Salinas Transit, and METRO (TAMC 2024).

Santa Cruz County

There is currently no regular passenger rail service in Santa Cruz County. In 2015, the SCCRTC completed the Santa Cruz Rail Transit Feasibility Study which evaluated the feasibility of adding rail transit service on the Santa Cruz Branch Rail Line between Santa Cruz and Watsonville. In 2019, the RTC accepted the Transit Corridor Alternatives Analysis and Rail Network Integration Study which selects electric passenger rail as the locally preferred alternative for the Santa Cruz Branch Rail Line. The Transit Corridor Alternatives Analysis and Rail Network Integration Study was prepared to evaluate high-capacity transit investment options and identify a locally preferred transit system that utilizes the Santa Cruz Branch Rail Line right-of-way. SCCRTC is currently developing preliminary plans for the Zero Emission Passenger Rail and Trail Project, which would provide new high-capacity passenger rail service and stations on approximately 22 miles of the Santa Cruz Branch Rail Line (Branch Line) from the city of Santa Cruz in the north to Pajaro, just south of Watsonville. The project would also involve 12 miles of Monterey Bay Scenic Coastal Rail Trail Segments 13-20 from Rio Del Mar Boulevard through the community of La Selva Beach and the City of Watsonville, as well as the Capitola Trestle portion (SCCRTC 2024).

San Benito County

There is currently no passenger rail service in San Benito County.

Freight Rail

The majority of freight rail service in the region is provided by the Union Pacific Railroad Company and by Saint Paul & Pacific Railroad. Agricultural produce and construction materials are the principal rail freight shipments in the region.

Monterey County

Freight rail service is available in Monterey County. Four freight stations are in Castroville, Gonzales, Salinas, and Watsonville Junction (Pajaro community area).

Santa Cruz County

Freight rail service, once operated by Southern Pacific Railroad and then by Union Pacific and now Saint Paul & Pacific Railroad, has been a historically important form of transportation within Santa Cruz County. There are currently three rail lines in or adjacent to Santa Cruz County that are also occasionally used for freight.

San Benito County

Freight rail service to Hollister and northern San Benito County is provided by the Union Pacific Hollister Branch line (Union Pacific 2025). Union Pacific Railroad retains an exclusive easement to operate freight rail service on the line.

e. Air Transportation

The AMBAG region has six publicly-owned civil aviation airports, which include the following:

- Monterey Regional
- Salinas Municipal
- King City Municipal (Mesa Del Rey)
- Marina Municipal
- Watsonville Municipal
- Hollister Municipal

Of these airports, only the Monterey Regional Airport provides scheduled air carrier service. There are also several private airports in the region that are used primarily for agricultural or business purposes, but one of these, the Frazier Lake Airpark, also allows public use.

In addition, several civil aviation helipads are maintained for helicopter use in the region, including the Mee Hospital helipad in King City, a Texaco helipad in San Ardo, the Soledad Correctional Training Facility helipad, the Watsonville Community Hospital helipad, the Alta Vista helipad near Watsonville, the Dominican Hospital helipad, the Hollister Municipal Airport helipad, the Natividad Medical Center helipad in Salinas, and the Hazel Hawkins Memorial Hospital helipad in Hollister.

Currently, there are two operational military airfields in the region: Camp Roberts Army Airfield and Heliport and the Hunter-Liggett Army Airfield.

f. Marine Transportation

Marine transportation activities along the coastal land areas are related to recreation and commercial fishing. There are no general cargo or passenger ship terminals in the AMBAG region. Public use marine facilities on the Monterey Bay include the Monterey Harbor and the Moss Landing Harbor in Monterey County and the Santa Cruz Harbor in Santa Cruz County.

g. Emerging Transportation Technology

New transportation technologies can have an important influence on regional and national transportation systems, and some have already started to change longstanding transportation behaviors. Transportation innovations include the following: on-demand ridesharing; connected and autonomous vehicles; mobility aggregation applications that provide users with one source for mobility services (e.g., Moovel, CityMapper); transportation network companies (i.e., Lyft, Uber); coordinated and adaptive traffic signals; active traffic management, which provides the ability to dynamically manage traffic through use of strategies such as adaptive ramp metering

and adaptive traffic signal control; and unmanned aircraft systems. These and other emerging technologies have the potential to transform mobility choices and alter the transportation landscape. For example, a company called Joby Aviation currently leases space at the Marina Airport and is developing unmanned aircraft that will operate as on-demand personal taxi service. The effect these technologies will have on the transportation system is uncertain and will be shaped by regulations and policies surrounding their use.

h. Transportation Demand Management/Transportation System Management

Transportation Demand Management (TDM) refers to all programs and strategies that are intended to reduce the number of vehicle trips required over the transportation network or shift the distribution of trips between time periods across the network (Federal Highway Administration [FHWA] 2025). Transportation System Management (TSM) represents a variety of management techniques designed to improve the efficiency and effectiveness of the transportation system. These techniques improve operations and/or services of existing and future transportation networks (FHWA 2024).

Vehicle Flow Management

The U.S. Department of Energy's Fuel Efficient Traffic Signal Management Program has assisted in increasing the number of synchronized traffic signals within the region to promote free flowing vehicle transportation conditions, less use of vehicle fuel, and decreased pollution due to less vehicle miles traveled. In the past, some jurisdictions within the region have implemented minor design improvements to the existing transportation infrastructure in lieu of costly capital construction or reconstruction. In the future, signalization, channelization, and the construction of acceleration and deceleration lanes with ramp metering at key interchanges are expected to achieve roadway vehicle flow improvements.

Intermodal Transportation

Transportation engineers and planners in the AMBAG region have employed one or more of the following methods of enhancing intermodality to increase the use of the existing transportation capacity more efficiently:

- Coordinate transit routes and schedules with those of inter-city rail and bus service;
- Provide amenities and facilities for bicycle and pedestrian access to transit stops;
- Facilitate and encourage access to the regional air carrier airport by paratransit, transit, taxi, transportation network companies and bicycle; and
- Provide mobility hubs with bicycle, pedestrian and transit access amenities.

Ridesharing

Rideshare programs help reduce congestion and improve traffic flow. AMBAG, with grant assistance from the Monterey Bay Air Resources District, has successfully implemented a subsidized vanpool program, which reduced vehicles trips associated with agricultural activities

and production in the region. Other rideshare, vanpool, and carpool programs exist throughout Monterey Bay region to facilitate ridesharing including GO Santa Cruz County, Go831 operated by TAMC, and the Agriculture Van Pool Program operated by CalVans (Cruz 511 n.d, TAMC 2025, CalVans 2025).

Preferential Transit/Carpool Treatment/Electric Vehicle Charging

Methods employed by local jurisdictions to encourage people to reduce their use of single-occupant vehicles include preferential parking for carpools and vanpools; subsidized transit passes; use of agency vans for vanpooling; and provision of an on-site transportation coordinator. Regional transit agencies strive to ensure that major developments within their service areas are transit accessible and that transit stops are located to promote transit use.

Shared Parking Facilities

Parking management refers to programs that result in more efficient use of parking resources and can either provide an incentive or disincentive to single occupant vehicle use. Parking facilities that are shared between multiple users and destinations are found within the region. Park and ride lots are a form of off-site shared parking facilities and facilitate ridesharing. Park and ride lots within the region have been placed in locations where people can easily meet and form carpool trips. To encourage ridesharing, there are several formal, informal and joint use park and ride lots in the AMBAG region. Of the four park and ride lots that serve Santa Cruz County commuters, all are publicly owned (Cruz511 2025). San Benito County has three formal park and ride lots (511 SF Bay 2025). Monterey County commuters have three formal park and ride lots from which to choose (MST 2025). Parking garages are frequently associated with shared parking in the AMBAG region and are located near destinations, attracting many visitors. Parking regulations which control when and how long vehicles may park and the cost of parking in a location is another form of parking management in the region.

4.15.2 Regulatory Setting

a. Federal Laws, Regulations, and Policies

U.S. Department of Transportation Metropolitan Transportation Plan Requirements

Pursuant to Title 23 of the Code of Federal Regulations (CFR), Section 450.324 and Title 49 U.S. Code Section 5303, every Metropolitan Planning Organization (MPO) is required to prepare a MTP, also known as an RTP. The MTP or RTP serves as a long-range planning document that outlines strategies and investments to develop and maintain multimodal transportation system over a minimum 20-year horizon, while remaining fiscally constrained. The plan must be updated every five years in attainment areas and every four years in nonattainment or maintenance areas for air quality. The MTP or RTP must address current and projected transportation demand, identify existing and proposed transportation infrastructure, and report on progress toward meeting performance targets (U.S. Department of Transportation Federal Transit Administration 2022).

Infrastructure Investment and Jobs Act/Bipartisan Infrastructure Law

The Infrastructure Investment and Jobs Act (IIJA), also known as the Bipartisan Infrastructure Law (Public Law 117-58), was signed into law on November 15, 2021. The IIJA reauthorizes surface transportation programs through fiscal year 2026 and builds upon the policy framework and performance-based planning provisions established under Moving Ahead for Progress in the 21st Century Act and the Fixing America's Surface Transportation Act. The IIJA maintains the core metropolitan and statewide transportation planning requirements under 23 U.S. Code § 134 and § 135, while expanding the scope of planning to further address climate change, equity, resiliency, and infrastructure modernization. In the development of the MTP and RTPs, the IIJA continues to require MPOs and RTPAs to:

- Coordinate with officials responsible for other types of planning activities affected by transportation, such as land use, housing, economic development, environmental protection, freight, and emergency management.
- Engage traditionally underserved and disadvantaged communities to ensure equitable access to transportation planning and project benefits.
- Incorporate consideration of climate change, environmental justice, and resilience, particularly regarding the impact of extreme weather and natural disasters on transportation infrastructure.
- Improve infrastructure condition, safety, and system efficiency, while supporting economic vitality, freight mobility, and multimodal connectivity.

The IIJA adds emphasis on:

- Reducing greenhouse gas emissions through transportation planning and investments.
- Increasing resilience to natural hazards and climate-related events.
- Investing in complete streets, bicycle/pedestrian infrastructure, and multimodal transportation.
- Strengthening public involvement and interagency coordination, including with housing and health agencies.
- Supporting equitable access to transportation options for disadvantaged communities.

The 2050 MTP/SCS prepared by AMBAG, along with the RTPs prepared by the Monterey, San Benito, and Santa Cruz Counties' RTPAs, have been developed to comply with the planning requirements of the IIJA and its associated regulations under 23 CFR Part 450.

b. State Laws, Regulations, and Policies

California Transportation Plan

The California Transportation Plan is prepared by the California State Transportation Agency every five years to provide a long-range policy framework to meet the State's future mobility needs and reduce greenhouse gas emissions to goals set by the California Global Warming

Solutions Act of 2006 (AB 32, discussed in Section 4.8, *Greenhouse Gas Emissions/Climate Change*) and implementing legislation SB 375 (discussed below). The most recent California Transportation Plan was adopted in 2021 (Caltrans 2021). The California Transportation Plan defines goals, performance-based policies, and strategies to achieve the State's collective vision for California's future statewide, integrated, multimodal transportation system by envisioning a sustainable system that improves mobility and enhances quality of life. The California Transportation Plan is developed in collaboration with transportation stakeholders such as AMBAG. Through ongoing engagement, the California Transportation Plan is intended to provide goals and visions to support a fully integrated, multimodal, sustainable transportation system that supports the quality of life, prosperous economy, human and environmental health, and social equity.

Assembly Bill 130

AB 130 was signed into law on June 30, 2025. The legislation introduces a new fee-based option for mitigating VMT impacts under CEQA. AB 130 establishes the Transit-Oriented Development Implementation Fund, administered by the California Department of Housing and Community Development. Starting July 1, 2026, lead agencies may mitigate significant VMT impacts to less than significant by funding or facilitating VMT-reducing projects or through contributions to the Transit-Oriented Development Implementation Fund. The bill adds Section 21080.44 to the Public Resources Code, authorizing lead agencies to mitigate significant transportation impacts by facilitating or funding VMT-reducing projects, including through contributions to the Transit-Oriented Development Implementation Fund. However, lead agencies retain discretion to require additional mitigation measures if necessary.

Climate Action Plan for Transportation Infrastructure

The Climate Action Plan for Transportation Infrastructure (CAPTI) was adopted in July 2021. CAPTI details how the state recommends investing billions of discretionary transportation dollars annually to aggressively combat and adapt to climate change while supporting public health, safety and equity. CAPTI builds on executive orders signed by Governor Gavin Newsom in 2019 and 2020 targeted at reducing greenhouse gas (GHG) emissions in transportation, which account for more than 40 percent of all emissions, to reach the state's ambitious climate goals. Throughout 2024, the California State Transportation Agency (CalSTA) engaged with public stakeholders to develop new strategies which informed an updated CAPTI 2.0 adopted in January 2025 (CalSTA 2025).

CAPTI 2.0 builds on the original plan and introduces four new strategies, which include the following:

- S1. Transforming the Future of the State Highway System
- S2. Reducing GHG Impacts of Transportation Investments
- S3. Delivering Equitable Outcomes
- S4. Improving Transparency and Accountability

Each strategy includes specific actions, for a total of 14 new actions necessary for further implementation of the CAPTI framework to align transportation infrastructure investments with California's climate goals and support the Caltrans Transit Policy, which prioritizes transit movement on the state highway system and reaffirms California's commitment to achieving VMT neutrality (CalSTA 2025).

State Regional Transportation Plan Requirements

Government Code Sections 65080 et seq. state that MPOs must prepare and adopt a long-range transportation plan, such as an RTP or MTP, 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 plan must be action-oriented and pragmatic, considering both the short-term and long-term planning, and shall present clear, concise policy guidance to local and state officials. The transportation plan must consider factors specified in the IIJA metropolitan transportation planning rules (23 CFR Part 450 and 49 CFR Part 613), and each transportation planning agency must consider and incorporate, as appropriate, the transportation plans of cities, counties, districts, private organizations and state and federal agencies.

Pursuant to Government Code Section 65080(d), MPOs, such as AMBAG, that are in nonattainment and monitoring areas must update their long-range transportation plans at least every four years.

The California Transportation Commission has developed RTP guidelines to assist MPOs with developing their RTPs so that they are consistent with federal and state transportation planning requirements. The guidelines are updated and adopted periodically, as needed. For the first time, two separate guidelines were adopted in January 2024 to guide RTP development in MPOs and RTPAs. Both documents incorporate new legislation and the associated goals, particularly related to reducing GHG emissions and improving air quality. Both the 2024 RTP Guidelines for MPOs (California Transportation Commission, 2024a) and the 2024 RTP Guidelines for RTPAs (California Transportation Commission, 2024b) specify that the requirements outlined in the documents apply to all RTP updates begun following adoption. Since the 2050 MTP/SCS and RTPs were started after the January 2024 adoption date of the 2024 RTP Guidelines, AMBAG has used the 2024 RTP Guidelines for the 2050 MTP/SCS and the RTPAs have used use the 2024 RTP Guidelines for the RTPs.

The 2024 RTP Guidelines include guidelines for regional travel demand modeling. The regional travel demand model guidelines are "scaled" to different sizes of MPOs. The guidelines also describe the methods for projecting future travel demand, as well as the key assumptions typical of transportation demand models. In addition, the guidelines describe the consultation and coordination process, which are designed to foster involvement by all interested parties including air quality agencies, discuss the environmental considerations of an RTP, and list the general contents of an RTP document.

Senate Bill 375

The Sustainable Communities and Climate Protection Act of 2008 (Chapter 728, Statues of 2008) (SB 375) diversified the areas of study from past MTPs and RTPs to include land use impacts and climate change issues. Specifically, SB 375 requires MPOs to prepare an SCS that demonstrates how the region will meet its GHG reduction targets through integrated land use, housing, and transportation planning. The SCS must identify a transportation network that, when integrated with the forecasted development pattern for the AMBAG region, will reduce GHG emissions from automobiles and light trucks in accordance with targets set by CARB. See Section 4.8, *Greenhouse Gas Emissions/Climate Change*, for a more in-depth discussion of SB 375 and its implications for the proposed 2050 MTP/SCS.

Under SB 375, some development and transportation projects assumed as a part of the 2050 MTP/SCS may be eligible to use a streamlined version of the environmental review process. Among other criteria, these projects must be consistent with the land use designation, density, intensity, and policies of the 2050 MTP/SCS, and fall within the identified criteria for development and transportation projects. Streamlining under SB 375 is described in more detail in Section 1.4.1.

Senate Bill 743

SB 743 (2013) changed the way that public agencies evaluate the transportation impacts of projects under CEQA, recognizing that roadway congestion, while an inconvenience to drivers, is not itself an environmental impact. As specified in PRC Section 21099(b)(2), automobile delay, as described solely by level of service or similar measures of vehicular capacity or traffic congestion, shall not be considered a significant impact on the environment pursuant to CEQA.

Under SB 743, the Governor's Land Use and Climate Innovation (LCI; formerly known as the Office of Planning and Research) established VMT as the preferred metric for measuring transportation impacts of most projects in place of vehicle level of service or related measures of congestion as the primary metric. The use of VMT for determining significance of transportation impacts has become commonplace since the certification of this provision and the release of LCI's Technical Advisory on Evaluating Transportation Impacts in CEQA in December 2018 and, beginning July 1, 2020, is the required metric statewide.

For land use projects, SB 743 provides opportunities to streamline transportation analysis under CEQA for qualifying urban infill development near major transit stops in metropolitan regions statewide, as described in more detail in Section 1.4.1. Additionally, the legislation establishes that aesthetic and parking impacts of these projects are not considered significant impacts on the environment.

SB 743 can also substantially affect the review of transportation projects under CEQA. Some projects, such as expanding facilities for bicycle, pedestrian, or transit only use, will not result in adverse transportation impacts because they are assumed not to substantially increase automobile trips. However, for roadway capacity projects, the *CEQA Guidelines* (Section 15064.3) give lead agencies some discretion over what metric is used to evaluate transportation impacts, as some roadway expansion projects can induce vehicle travel. If using a metric besides VMT,

however, the change in vehicle travel should still be reported. A program-level assessment of roadway projects in a regional plan may also be used to streamline project level analysis (LCI 2018).

Caltrans has provided two guidance documents to address VMT impacts on the state highway system consistent with the requirements of SB 743 and the LCI Technical Advisory:

- The Transportation Analysis under CEQA provides information to support CEQA practitioners in making CEQA significance determinations for transportation impacts of projects on the state highway system. These could include land use projects or transportation projects (Caltrans 2020)
- The Transportation Analysis Framework guides the preferred approach for analyzing the VMT attributable to proposed projects (induced travel) in various project settings, with particular focus on the analysis of induced travel associated with transportation projects which would add road capacity to the transportation system (Caltrans 2020).

CEQA Guidelines Section 15064.3 and LCI Technical Advisory

CEQA Guidelines Section 15064.3 implements SB 743 and establishes VMT as the most appropriate measure of transportation impacts. The primary components of Section 15064.3 include:

- Identifies VMT as the most appropriate measure of transportation impacts;
- Declares that a project's effect on automobile delay shall not constitute a significant environmental impact (except for projects increasing roadway capacity);
- Creates a rebuttable presumption of no significant transportation impacts for (a) land use projects within one-half mile of either an existing major transit stop or a stop along an existing high quality transit corridor, (b) land use projects that reduce VMT below existing conditions, and (c) transportation projects that reduce or have no impact on VMT;
- Allows a lead agency to qualitatively evaluate VMT if existing models are not available; and
- Gives lead agencies discretion to select a methodology to evaluate a project's VMT, but requires lead agencies to document that methodology in the environmental document prepared for the project.

CEQA lead agencies were required to comply with the State Guideline Section 15064.3 no later than July 1, 2020. Some municipalities in the AMBAG region have adopted thresholds for purposes of evaluating VMT impacts of projects within their jurisdiction. For example, the County of Santa Cruz Board of Supervisors adopted Resolution 146-2020 on June 16, 2020, effectively establishing significance thresholds for VMT impacts in the unincorporated areas of Santa Cruz County. Other municipalities and agencies in the AMBAG region have not formally adopted thresholds for evaluating VMT impacts. They may consider using a threshold of 25 percent less VMT per capita compared to 2019 levels by 2030 and 30 percent below by 2045. The 25-30 percent below 2019 VMT threshold for land use projects is based on guidance provided by the California Air Resources Board's 2022 Scoping Plan for Achieving Carbon Neutrality (CARB 2022).

Assembly Bill 1358

AB 1358, also known as the Complete Streets Act of 2008, amended the California Government Code Section 65302 to require that any substantive revisions to a city or county's Circulation Element include provisions for accommodations of all roadway users, including bicyclists and pedestrians.

California Bicycle Transportation Act

The California Bicycle Transportation Act of 1994 required all cities and counties to have an adopted bicycle master plan to apply for the Bicycle Transportation Account funding source. As of 2013, the Bicycle Transportation Account, along with older programs such as the Transportation Alternatives Program, and Safe Routes to School, have been consolidated into the Active Transportation Program, which is now the primary source of funding for infrastructure and non-infrastructure projects and planning to promote walking and biking in California. The Program is administered by Caltrans and the Division of Local Assistance, Office of State Programs, and supports a wide range of projects that facilitate active modes of transportation. Jurisdictions are encouraged to develop and maintain comprehensive Active Transportation Plans to maintain eligibility for Active Transportation Program funding.

California Manual on Uniform Traffic Control Devices

Pursuant to California Vehicle Code Section 21400 and the recommendations of the California Traffic Control Devices Committee, Caltrans has revised the 2014 California Manual on Uniform Traffic Control Devices to establish uniform standards for all official traffic control devices in the State of California. Revisions (referred to as Revision 9) went into effect on April 1, 2025, and include policy revisions to nine California Traffic Control Devices Committee recommendations and various corrections and format changes (Caltrans 2025d).

c. Regional and Local Laws, Regulations, and Policies

Regional Transportation Planning Agency Transportation Plans

As described in Chapter 1, *Introduction*, there are three RTPAs that oversee some planning, programming and administration functions related to transportation projects and coordinating directly with local agencies in their part of the AMBAG region. These RTPAs are TAMC for Monterey County, SBtCOG for San Benito County, and SCCRTC for Santa Cruz County. Each RTPA prepares a county-level long range RTP. Under federal regulations (23 CFR 450.322(c)) and State law (Government Code 65080(d)), the RTPAs must update their RTPs every four years. RTPs must be consistent with the California Transportation Plan.

General Plans

State law requires cities and counties to adopt general plans, which must incorporate a circulation element, also often called a transportation element. A general plan's transportation element is an infrastructure plan and policy document used to determine the needed expansion or modification of the transportation network (including services) to accommodate planned

population and employment growth. The elements generally address expectations for transportation network operations and safety based on goals and policies of the city or county. Transportation elements typically address the roadway network and its traffic operations, goods movement, public transit, bicycle facilities and pedestrian facilities.

Applicable county general plans and examples of city general plans in the AMBAG region are discussed below.

Monterey County

The Monterey County General Plan Circulation Element (Monterey County 2010) contains various goals and policies that pertain to transportation and circulation within Monterey County. Some applicable policies include protecting public transportation facilities from the encroachment of incompatible land uses; encouraging a reduction in the number of vehicle miles traveled per person; encouraging land use patterns that reduce the need to travel by automobile; and locating and designing new development with convenient access and efficient transportation. In addition, the County's General Plan includes policies encouraging new development to be concentrated along major transportation corridors and near cities to make transit services to these areas more feasible; encouraging the use of public transit and alternative modes of transportation through land use designations and zoning which cluster employment centers with a mix of other land uses; and endorsing efforts to accommodate mobility-impaired persons on regularly scheduled public transit operations.

Cities in Monterey County also have general plans with goals and policies pertaining to transportation. For example, the City of Seaside's General Plan contains several transportation-related goals and policies to achieve them that are addressed in Chapter 6: Mobility, including Goals M-1 through M-11. Goal M-2, for example, is intended to ensure new development includes multi-modal transportation components, with policies aimed at VMT reductions, incentivized transit use, pedestrian amenities, and enhanced multi-modal connectivity between existing and new pedestrian and bicycle developments. Goal M-5 intends to complete the citywide bikeway network and ensure that adequate bicycle circulation and access is provided throughout Seaside and to/from regional designations. Goal M-6 intends to enhance local support for transit improvements and efforts to increase service frequency and ridership, anticipate future transit opportunities, and consider measures to enhance transit-operating speeds on priority transit corridors through increased funding, coordination, provision of new amenities, maintenance of transit stops, and introduction of new bus infrastructure. Goal M-10 encourages the City to support mobility policies focused on sustainability components (City of Seaside 2024).

San Benito County

The San Benito County 2035 General Plan (San Benito County 2015) contains various goals and policies that pertain to transportation and circulation within San Benito County. Some applicable policies include ensuring that, whenever possible, roadway, highway, public transit systems and pedestrian and bicycle trails are interconnected with other modes of transportation; encouraging

development project applicants to provide sidewalks or pedestrian paths, or other safe and convenient accommodations for pedestrians; encouraging transit lines, stops and facilities in locations where land uses and density would support transit use; encouraging major employment centers to work with the San Benito County Local Transportation Authority to facilitate the provision of adequate public transit facilities; and encouraging employers to provide transit subsidies, bicycle facilities, alternative work schedules, ridesharing, telecommuting, employee education, and preferential parking for carpools/vanpools.

Cities in San Benito County also have general plans with goals and policies pertaining to transportation. For example, the City of Hollister's General Plan contains policies encouraging the City to provide a variety of pedestrian and bicycle facilities to promote safe and efficient non-motorized vehicle circulation in Downtown and throughout Hollister; and to cooperate with Caltrans, the SBtCOG, the County of San Benito, and any other regional transportation authorities to ensure the funding and implementation of the transportation improvements specified in the San Benito County RTP (City of Hollister 2005).

Santa Cruz County

The Santa Cruz County General Plan and Local Coastal Program contains goals and policies pertaining to transportation. It is the goal of the County General Plan to reduce automobile trips and congestion by improving alternative transportation modes, developing effective travel demand management strategies and whenever possible improving the efficiency rather than increasing the size of the existing road system. Policies to achieve this goal include reducing VMT by encouraging concentrated commercial centers with mixed residential and commercials uses; and encouraging use of bicycles, public transit, and other modes of transportation besides single occupancy vehicles (Santa Cruz County 2024).

Cities in Santa Cruz County also have general plans with goals and policies pertaining to transportation. For example, the City of Capitola's General Plan, which was adopted in 2014 and updated in 2019, contains goals to provide "Complete Streets" that serve all modes of transportation, including vehicles, public transit, bicyclists, and pedestrians; provide balanced multi-modal transportation system that enhances mobility in a safe and sustainable manner; to improve and expand public transportation services for residents, workers, and visitors; to provide a complete network of bikeways and bicycle facilities in Capitola; and provide high quality pedestrian facilities that support walking and the enjoyment of the outdoors in Capitola (Capitola General Plan 2019).

Bicycle Master Plans and Other Modal Plans

City and countywide bicycle and pedestrian master plans, active transportation plans and other mode-specific plans serve as policy documents to guide the development and maintenance of the transportation network, support facilities and non-infrastructure programs. These plans describe the acceptable operating service standards, facility classifications, opportunity sites, and mode-specific goals and policies of a given city or county. Numerous existing bicycle and other model plans have been adopted for the AMBAG region. For example, TAMC adopted the Monterey County Active Transportation Plan in June 2018. The plan focuses on analyzing key

gaps from the existing and proposed bicycle and pedestrian networks, identifying opportunity sites for innovative bicycle facility design, and identified areas for enhanced regional and local connectivity (TAMC 2018). Another example of applicable plans in the AMBAG region include the Santa Cruz County Active Transportation Plan (Santa Cruz County 2022). This EIR does not explicitly identify localized transportation issues that might be the focus of a city- or countywide modal plan; rather, it addresses issues of overall transportation system performance from a regional perspective.

4.15.3 Impact Analysis

a. Methodology and Significance Thresholds

AMBAG utilized its RTDM to compare the 2050 conditions under the 2050 MTP/SCS to the 2022 baseline conditions using a range of performance metrics (see Appendix C). The AMBAG RTDM is an activity based model that includes Monterey, San Benito, and Santa Cruz counties. The RTDM allows AMBAG to obtain an understanding of the transportation network performance characteristics (e.g., vehicle speeds, volume to capacity relationships, travel time, VMT) and estimate how socioeconomic changes (e.g., population increases, land use development) will impact travel demand. The RTDM allows for comparisons of different scenarios, including consequences of future changes or absence of change to the transportation system (e.g., building new facilities, improving existing facilities, or doing nothing at all).

The AMBAG RTDM has been peer reviewed and meets best practice standards. A FHWA sponsored Travel Model Improvement Program peer review was conducted in 2020 to review the AMBAG model and discuss future model needs and improvements. The MTP determines what transportation projects are programmed into the RTDM. The existing RTDM reflects transportation projects adopted by the AMBAG Board of Directors in June 2022.

The 2026 AMBAG RTDM is an updated travel demand model estimated and calibrated to 2022 conditions. The model updates and improves upon the 2015 base year update performed in 2022. The 2026 RTDM is estimated and calibrated using survey data from the 2012 California Household Travel Survey and the 2017 National Household Transportation Survey, Census, employment, and traffic data for the 2022 base year utilized for the 2050 MTP/SCS.

The model utilizes advanced techniques to capture travel behavior at a more individual level and incorporates disaggregate level data into some of the modeling stages. The primary reasons for introducing more disaggregate level data into the model were to assist in addressing elements of SB 375, and to answer policy questions at the level of individual and household characteristics. This updated model is an activity based model (ABM), which accommodates a fine-grained analysis of the region's mobility patterns and scenarios. The ABM begins with an enhanced population synthesis implementation that simulates a list of households and persons that match aggregate demographic totals from the real population for the base year of 2022, as well as the forecast years. The resulting accurate enumeration of the region's residents is then leveraged to apply detailed, person and household-level models of activity and travel choices. The results of

the ABM are summarized into a travel diary that represents a microscopic snapshot of every household's daily activity schedule.

The criteria for determining whether the 2050 MTP/SCS would have significant environmental impacts related to transportation and traffic were based in part on the environmental checklist in Appendix G of the State *CEQA Guidelines* (14 CCR 15000 et seq.) and performance measures established by AMBAG. Significant impacts to transportation would occur if the plan would:

1. Conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. The following performance indicators would be considered a significant impact:
   a. Decrease in percent of jobs within ½ mile of a high quality transit corridor; or
   b. Substantial disruption of transit service; or
   c. Inconsistencies with adopted bicycle and pedestrian facilities plans
2. Would the project conflict with or be inconsistent with *CEQA Guidelines* Section 15064.3, subdivision (b)?
   a. A change in VMT per capita in the region that fails to reach 25 percent below 2019 VMT per capita conditions by 2030 or 30 percent below by 2045 would be considered a significant impact; or
   b. A substantial increase in induced travel due to roadway capacity expansions would be considered a significant impact;
3. Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment); or
4. Result in inadequate emergency access.

b. Project Impacts and Mitigation Measures

The following section describes transportation impacts associated with the transportation projects and land use scenario included in the 2050 MTP/SCS. In general, implementation of proposed transportation improvements and the reasonably foreseeable future development facilitated under the land use scenario envisioned by the 2050 MTP/SCS would result in transportation impacts as described in the following sections.

Threshold 1: Would the project conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities? The following performance indicators would be considered a significant impact:

a. Decrease in percent of jobs within of ½ mile of a high-quality transit corridor;
b. Substantial disruption of transit service; or
c. Inconsistencies with adopted bicycle and pedestrian facilities plans?

Impact TRA-1 TRANSPORTATION PROJECTS FACILITATED BY THE 2050 MTP/SCS WOULD INVOLVE IMPROVEMENTS TO TRANSIT, ROADWAY, BICYCLE, AND PEDESTRIAN FACILITIES. THE 2050 MTP/SCS WOULD NOT RESULT IN A SIGNIFICANT IMPACT DUE TO CONFLICTS WITH ANY PROGRAMS ADDRESSING THE CIRCULATION SYSTEM. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

Job Proximity to Transit Stops

Table 4.15-3 compares the percentage of jobs that are within 0.5 mile of a high quality transit corridor under 2022 and 2050 conditions with implementation of the 2050 MTP/SCS. Conditions in 2050 without implementation of the 2050 MTP/SCS are also provided for informational purposes.

Table 4.15-3 Percent of Jobs within 0.5 Mile of a High Quality Transit Corridor

County	Baseline Conditions (2022)	2050 Conditions with 2050 MTP/SCS	2050 Conditions without 2050 MTP/SCS
AMBAG Region	30.8%	46.1%	38.8%

Source: RTDM (AMBAG 2025)

As shown in Table 4.15-3, the 2050 MTP/SCS would increase the percentage of jobs that are within 0.5 mile of a high-quality transit corridor compared to baseline 2022 conditions. Thus, the 2050 MTP/SCS would have a beneficial impact by increasing the percentage of jobs within 0.5 mile of a high quality transit corridor. Therefore, impacts related to this performance indicator (percent of jobs within of ½ mile of a high quality transit corridor) would be less than significant.

Transit Service

The 2050 MTP/SCS transit projects include a range of improvements aimed at enhancing regional bus service capacity and sustainability. Notable projects include the construction of the Salinas Bus Rapid Transit corridor along East Alisal Street and the Surf! Busway and BRT project along the TAMC Branch Line, both of which are designed to improve travel times and service frequency for Monterey-Salinas Transit. In Santa Cruz County, METRO is implementing projects such as Rapid Corridors (Routes 1 and 2) and Bus Rapid Transit infrastructure to improve reliability and reduce delays of METRO services. San Benito County is planning a 25 percent increase in transit service hours supported by new zero emissions buses, a mobility hub in Hollister, and expanded transit capital infrastructure including yard and fueling improvements. Across the AMBAG region, transit agencies are investing in fleet replacements, preventative maintenance, and fare modernization

systems to ensure long-term operational efficiency and minimize service disruptions. These types of projects and improvements would improve conditions for bus operations in the region.

As indicated in Table 4.15-4, between 2022 and 2050 transit trips would increase by 13 percent with the implementation of the 2050 MTP/SCS compared to 2022.

Table 4.15-4 General Transit Use Indicators

Indicator	Baseline Conditions (2022)	2050 Conditions with 2050 MTP/SCS	2050 Conditions without 2050 MTP/SCS
Transit Trips*	350,340	395,547	394,630

* The transit trips shown in this table include bicycle and pedestrian trips, as well as transit trips.

Source: RTDM (AMBAG 2025)

The transit use indicator values for the 2050 MTP/SCS shown in Table 4.15-4 likely low given the lack of sensitivity to transit within the RTDM. It is common practice to calibrate models to observe conditions within the region. Currently the region has relatively low transit ridership; however, it also has very few passenger rail services. Further, the region does not have a wide-spread practice of transit oriented development. Thus, the RTDM is not sensitive to premium transit service[3] or land use changes near those services and underestimates the total ridership gains that would be realized with the introduction of new types of infrastructure. Improvements would result from both the SCS land use scenario emphasis on infill and transit oriented development and implementation of additional transit services and facilities. These improvements would be beneficial for MST, METRO, and San Benito County Express transit services. Impacts would be less than significant, since transit service would not be substantially disrupted.

Bicycle Pedestrian Facilities

The 2050 MTP/SCS is intended to improve the system for all modes of transportation so that motor vehicles and non-motorized vehicles can use the streets simultaneously and safely. The 2050 MTP/SCS includes goals and policies to support bicycle and pedestrian facilities. Projects within the 2050 MTP/SCS would add new pedestrian and bicycle facilities, including sidewalks, cross walks, trails and bike lanes, bicycle/pedestrian bridges parallel to existing overpasses and over railways, upgrading ramps to be ADA compliant, as well as safety measures such as intersection crosswalks and safety programs related to schools, repairing failing sections of recreational trails, and installing protected bicycle lanes, traffic-calming measures, and rapid-flashing beacons and streetlights. Bicycle and pedestrian improvement projects identified in the 2050 MTP/SCS are aimed primarily at improving bicycle and pedestrian safety and expanding facilities such as bike lanes. The 2050 MTP/SCS includes projects that would result in the addition of more Class I and Class II bike lanes to the AMBAG region by 2050. Pedestrian and bicycle facilities would be designed and constructed in compliance with applicable safety regulations, such as the California Manual of Uniform Traffic Control Devices.

[3] Premium transit service typically means a high-quality transit, either bus or rail, that reduces transit travel times, enhances regional connectivity, and provides improved vehicle and transit amenities to attract new customers.

The 2050 MTP/SCS projects would also increase pedestrian and bicycle trips in the AMBAG region in 2050 compared to 2022. Furthermore, the 2050 MTP/SCS goals, policies, and projects would be consistent with the bicycle and pedestrian mode encouragement, provision, convenience, and safety goals included in the County and City General Plans that are discussed above under Regulatory Setting. Since the 2050 MTP/SCS would result in additional and improved facilities to accommodate pedestrian and bicycle travel modes, there would not be substantial disruption of bicycle and pedestrian facilities, and impacts would be less than significant.

Mitigation Measures

None required.

Threshold 2: Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b) in either of the following manners:

a. A change in VMT per capita in the region that fails to reach 25 percent below 2019 VMT per capita conditions by 2030 or 30 percent below by 2045 would be considered a significant impact; or

b. A substantial increase in induced travel due to roadway capacity expansions would be considered a significant impact?

Impact TRA-2 THE 2050 MTP/SCS WOULD RESULT IN AN INCREASE TO DAILY VMT PER CAPITA BETWEEN THE BASELINE 2022 CONDITIONS AND THE 2050 CONDITIONS. PER CAPITA VMT IMPACTS FROM IMPLEMENTATION OF THE 2050 MTP/SCS WOULD BE SIGNIFICANT AND UNAVOIDABLE. THE INDUCED TRAVEL IMPACT AT THE REGIONAL LEVEL WOULD BE LESS THAN SIGNIFICANT.

Per Capita Vehicle Miles Traveled

As shown in Table 4.15-5, total 2050 VMT would increase above 2022 baseline conditions in all three counties, as well as the AMBAG region as a whole. As the table shows, at the regional level, total VMT would increase by 2,192,537 miles, which would be a 13.7 percent increase from baseline 2022 conditions. Per capita VMT would increase between baseline 2022 conditions and 2050 conditions.

The 2050 MTP/SCS does not reduce VMT due to the nature of the AMBAG region, which makes certain aggressive VMT reducing measures infeasible. For example, the region has a high variability in residential density and has a large rural component, with substantially longer trip lengths and therefore higher VMT for those in rural areas. These commuter trips are not easily replaced by transit, as longer transit trip lengths typically require multiple stops and/or transfers, making commuting via transit less attractive. The rural areas of the AMBAG region are also experiencing higher growth in housing and employment than urban areas. Such growth is particularly evident in the eastern and southern sections of the AMBAG region, with employment in the agriculture and service industries. These industries require a high level of in-person work and are therefore not conducive to telecommuting. Other factors limiting the applicability of VMT reduction measures are discussed in Chapter 7, *Alternatives.*

Table 4.15-5 compares the daily VMT and VMT per capita for baseline conditions in 2022 and 2050 conditions with implementation of the 2050 MTP/SCS on all roadways for the AMBAG region as a whole. The daily per capita VMT in 2050 without implementation of the 2050 MTP/SCS is provided in the table for informational purposes. The daily per capita VMT in 2050 would be the same under both the no project scenario and the 2050 MTP/SCS scenario because projected growth in population, jobs, and homes would remain the same regardless of implementation of the 2050 MTP/SCS.

Table 4.15-5 Daily Vehicle Miles Traveled

County/Region	Baseline Conditions (2022)	2050 Conditions with 2050 MTP/SCS	2050 Conditions without 2050 MTP/SCS
AMBAG Region Total	16,011,425	18,203,962	18,216,739
AMBAG Region Total Per Capita	20.9	22.4	22.4

Note: See Appendix F of the 2050 MTP/SCS for the modeling methodology for VMT .

Table 4.15-5 shows that daily VMT per capita would increase from 20.9 to 22.4 miles by 2050, with or without implementation of the MTP/SCS due to projected population growth. As previously discussed, population growth in the region would increase daily total VMT, regardless of the potential implementation of the 2050 MTP/SCS. Compared to baseline conditions, the daily total VMT per capita in the region would increase by the year 2050 under implementation of the 2050 MTP/SCS, there would not be a reduction of VMT per capita that is 25 percent below 2019 VMT per capita conditions by 2030 or 30 percent below by 2045, and this impact would be significant.

Induced Travel

Some of the 2050 MTP/SCS projects include expanding the capacity of highways in the region, such as adding additional travel lanes to U.S. 101 near Salinas. Numerous studies and research suggest that an expansion of highway capacity may induce travel (LCI 2018; Handy and Boarnet 2015; Deakin et al. 2020). According to LCI (2018), the initial reduction in traffic congestion and travel times from increased capacity is attractive to travelers, resulting in more trips on the facility and increasing the total VMT. These types of projects may result in the following trip-making changes, which have implications for total VMT, according to LCI:

- **Longer Trips.** The ability to travel a long distance in a shorter time increases the attractiveness of destinations that are further away, increasing trip length and VMT.
- **Changes in Mode Choice.** When transportation investments are devoted to reducing automobile travel time, travelers tend to shift toward automobile use from other modes, which increases VMT.
- **Route Changes.** Faster travel times on a route attract more drivers to that route from other routes, which can increase or decrease VMT depending on whether it shortens or lengthens trips.

- **Newly Generated Trips.** Increasing travel speeds can induce additional trips, which increases VMT. For example, an individual who previously telecommuted or purchased goods on the internet might choose to accomplish those ends via automobile trips as a result of increased speeds.
- **Land Use Changes.** Faster travel times along a corridor lead to land development further along that corridor; that development generates and attracts longer trips, which increases VMT. Over several years, this component of induced VMT can be substantial, e.g., approximately half of the total effect on VMT.

The 2050 MTP/SCS coordinates land use and transportation projects through the 2050 horizon year. The SCS is intended to identify a land use strategy that supports the objectives of SB 375 to achieve, among other things: increased roadway optimization, increased modes of travel other than single occupancy automobiles, increased access to jobs and amenities, minimized increases in VMT and reduced 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 and visitors of the region to conduct everyday activities without the need to travel by car. Consequently, the RTDM and associated transportation system performance results discussed in this analysis capture the effects of land use changes on overall travel demand in the region. Although the AMBAG RTDM does not specifically evaluate induced travel from the perspective of longer trips, changes in mode choice, route changes or newly generated induced trips, at the regional level these effects may be negligible compared to the overall amount of travel. As discussed in Deakin et al. 2020, induced travel is more pronounced at the project or corridor level, where changes in accessibility can lead to substantial shifts in travel behavior. However, at the regional scale, these effects are often diluted, as a portion of the total VMT growth can be attributed to induced travel from any single project. The report notes that "Corridor-level analyses pick up only a portion of the potential for induced travel" and that "induced travel can occur over a large area" but may take longer to appear in areas with slow growth or limited development pressure" (Deakin et al. 2020). Therefore, additional VMT resulting specifically from induced travel demand would not be substantial, and the induced travel impact at the regional level would be less than significant.

Mitigation Measures

For transportation projects under their jurisdiction, TAMC, SBtCOG, and SCCRTC shall implement, and transportation project sponsor agencies can and should implement, the following mitigation measures developed for the 2050 MTP/SCS program where applicable for transportation projects that would increase the capacity of a roadway, and where feasible and necessary based on project and site specific considerations. For land use projects under their jurisdiction, the cities and counties in the AMBAG region shall implement the following mitigation measure. Project specific environmental documents may adjust these mitigation measures as necessary to respond to site specific conditions.

TRA-2(a) Land Use Project VMT Analysis and Reduction

Regionally, 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, and other land use project conditions that reduce VMT. Programs shall be designed to reduce VMT from existing land uses, where feasible, and from new discretionary residential or employment land use projects. The design of programs shall focus on VMT reduction strategies that increase travel choices and improve the comfort and convenience of sharing rides in private vehicles, using public transit, biking, or walking.

At a project level, implementing agencies shall evaluate VMT as part of project specific CEQA review and discretionary approval decisions for land use projects. Where project level significant impacts are identified, implementing agencies shall identify and implement measures that reduce VMT. Examples include but are not limited to:

- Provide carsharing, vanpool, bike sharing, and ride-sharing programs
- Implement or provide access to commute reduction programs
- Encourage telecommute programs
- Incorporate affordable housing into the project
- Increase density, infill, and transit oriented development
- Increase mixed uses within the project area
- Incorporate improved pedestrian connections within the project/neighborhood
- Incentivize development in low VMT communities
- Incentivize housing near commercial and offices
- Increase access to goods and services, such as groceries, schools, and daycare
- Orient the project toward transit, bicycle, and pedestrian facilities
- Implement complete streets
- Provide traffic calming
- Provide bicycle parking
- Reduce parking requirements
- Separate out parking costs
- Provide parking cash-out programs

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for land use projects are cities and counties. Mitigation shall, or can and should, be applied during project permitting and environmental review and implemented during project operation, as applicable.

TRA-2(b) Transportation Project VMT Analysis and Reduction

Transportation project sponsor agencies shall evaluate transportation projects that involve increasing roadway capacity for their potential to increase VMT. Where project level increases are found to be potentially significant, implementing agencies shall, or can and should, identify

and implement measures that reduce VMT. Examples of measures that reduce the VMT associated with increases in roadway capacity include, but are not limited to:

- Tolling new lanes to encourage carpools and fund transit improvements
- Converting existing general purpose lanes to high occupancy vehicle lanes
- VMT banks
- Implementing or funding offsite travel demand management
- Providing a bus rapid transit system
- Implement bus on shoulder operations during peak congestion periods
- Improving pedestrian or bicycle networks, or transit service
- Providing transit passes
- Incorporating neighborhood electric vehicle network

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for transportation projects are RTPAs and transportation project sponsor agencies. Mitigation shall, or can and should, be applied during project permitting and environmental review and implemented during project operation, as applicable.

Significance After Mitigation

If implementing agencies adopt and require this mitigation, impacts would be reduced because less VMT would be added to the AMBAG region. However, the implementation of project level VMT-reducing measures such as mixed uses and transit-oriented development may not be feasible and cannot be guaranteed on a project by project basis. Participation in the VMT-reduction program facilitated by AB 130, the Transportation Oriented Development Fund, is voluntary, and would not available for MTP/SCS development occurring before July 1, 2026. Therefore, this impact would remain significant and unavoidable. No additional mitigation measures to reduce this impact to less than significant levels are feasible.

Threshold 3:	Would the project substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible use (e.g., farm equipment)?

Impact TRA-3 THE 2050 MTP/SCS WOULD NOT SUBSTANTIALLY INCREASE HAZARDS DUE TO GEOMETRIC DESIGN FEATURES OR INCOMPATIBLE USES. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Transportation Design Features

The regional growth pattern of the 2050 MTP/SCS does not define design level features of roadways. While the 2050 MTP/SCS expands development and increases density in growth geographies, 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. Specific transportation projects under the 2050 MTP/SCS would be subject to

and expected to follow the design guidelines established by the State or the local jurisdiction with authority over the project, including curve radii on curving road segments, maximum road grade/slope, and minimum separating distance between intersections and driveways.

Construction activities from implementation of the 2050 MTP/SCS 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 would be evaluated at the project level as more information about the timing, design, scope, and construction program are available. Generally, construction activities for land use development and transportation projects would be 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.

The transportation projects would be required to conform to the design standards of the public agency responsible for implementation, and such standards include safety standards. Complete Streets policies and programs, included as part of the 2050 MTP/SCS, also support reducing hazards on roadways and preventing incompatible uses by designing roads for all trip purposes, including for more vulnerable users such has cyclists and pedestrians. As such, the 2050 MTP/SCS is not expected to negatively impact the design of transportation facilities. Rather, investments are expected to incentivize design improvements to make roadways safer. Therefore, the potential of the 2050 MTP/SCS to substantially increase hazards due to geometric design features or incompatible land uses would be less than significant.

Incompatible Uses

The 2050 MTP/SCS would not adversely impact the compatible use of transportation facilities. Rather, investments are expected to incentivize design improvements to make roadways safer. The SCS does not create new agricultural uses or other similar uses that would result in increased incompatible vehicle uses on roadways in the region, such as slow-moving farm equipment. In addition, specific transportation projects under the 2050 MTP/SCS would be subject to and follow the allowable uses established by the State or the local jurisdiction with authority over the project. Therefore, the potential of the 2050 MTP/SCS to substantially increase hazards due to incompatible uses would be less than significant.

Mitigation Measures

None required.

Threshold 4: Would the project result in inadequate emergency access?

Impact TRA-4 THE 2050 MTP/SCS WOULD NOT RESULT IN INADEQUATE EMERGENCY VEHICLE ACCESS. IMPACTS WOULD BE LESS THAN SIGNIFICANT.

Emergency Vehicle Access

The 2050 MTP/SCS would entail upgrades and improvements to existing transportation infrastructure as well as "focused growth" in existing communities along the existing transportation network encouraging more dense development in developed areas. The State Route 1 infrastructure upgrades included in the 2050 MTP/SCS would be anticipated to benefit emergency vehicle access by protecting areas from potential hazards, including flooding or erosion, that could otherwise impair emergency access using transportation facilities. In addition, all transportation projects under the 2050 MTP/SCS would comply with State, regional, and local regulations regarding the provision of at least two emergency vehicle access points during both operation and construction.

Construction activities could temporarily impair emergency access points used for emergency vehicle access. However, standard construction procedures for development of a construction management plan would address these conditions and would require provision of alternative emergency vehicle access points. Specifically, per Caltrans permitting requirements, a traffic control plan would be required that adheres to the standards set forth in the California Manual of Uniform Traffic Control Devices (Caltrans 2025d). In addition, while implementation of 2050 MTP/SCS land use development pattern and transportation projects could temporarily impede emergency access at project locations during construction periods, construction projects would conform to State, regional, and local regulations requiring maintenance of emergency access during construction. Therefore, the impact of the 2050 MTP/SCS on emergency access would be less than significant.

Emergency Vehicle Requirements

Transportation infrastructure plays a key role in providing access to destinations during emergencies. These systems must be able to accommodate emergency response vehicles, personnel, and equipment. In widespread disasters, the AMBAG area's roads and other transportation networks can determine the success or failure of the region during the emergency and in the recovery. The 2050 MTP/SCS would entail upgrades and improvements to existing transportation infrastructure as well as "focused growth" in existing communities along the existing transportation network encouraging more dense development in developed areas. Dense development in existing developed areas is generally more efficient at serving the public for emergency response. This is often because existing developed areas tend to be well served with emergency facilities such as fire and police stations as well as existing transportation infrastructure, and because the denser land use pattern better facilitates emergency vehicles access to specific sites.

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, curve radii on curving road segments, maximum road grade/slope, and minimum separating distance between intersections and driveways. Transportation projects would be subject to review regarding emergency vehicle requirements 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 design standards. Therefore, the impacts of the 2050 MTP/SCS on emergency vehicle requirements would be less than significant.

Mitigation Measures

None required.

c. Specific 2050 MTP/SCS Projects That May Result in Impacts

The RTDM data does not have the capability to distinguish which project or projects would specifically result in increased daily VMT per capita. Therefore, any 2050 MTP/SCS project that expands roadway capacity or improves traffic flow and circulation could presumably increase VMT and be assumed to have the potential to cause or contribute to direct or indirect impacts to transportation such as those discussed above. This section is not intended to provide project-specific impact determinations under CEQA. The intent of this summary is to support potential future streamlining efforts as a screening tool to facilitate early identification of projects likely to result in the impacts identified above. Streamlining opportunities are discussed in Section 1.5, *Implementation Issues and Future Environmental Review*, in Chapter 1, *Introduction.*

4.15.4 Cumulative Impacts

a. Methodology

The cumulative analysis presented below primarily relies on a projections-based approach, using regional land use and growth forecasts for the AMBAG region and adjoining counties to evaluate cumulative conditions. The project is assessed within the existing and foreseeable future environmental setting, and a determination is made as to whether its incremental contribution would be cumulatively considerable when considered alongside both the overall envisioned land use scenario and specific large-scale planned projects. Refer to Section 6.4, *Cumulative Impacts*, in Chapter 6, *Other CEQA Required Discussions*, for a description of the cumulative impact methodology.

b. Impact Analysis

The transportation impacts of the 2050 MTP/SCS could extend in adjoining areas. Therefore, the cumulative impact analysis area for transportation consists of the AMBAG region and the adjoining counties.

Impact TRA-C-1 DEVELOPMENT IN THE CUMULATIVE IMPACT ANALYSIS AREA WOULD RESULT IN SIGNIFICANT AND UNAVOIDABLE INCREASE IN DAILY VMT PER CAPITA FROM BASELINE 2022 CONDITIONS. THE 2050 MTP/SCS CONTRIBUTION TO CUMULATIVE VMT IMPACTS WOULD BE CUMULATIVELY CONSIDERABLE.

Federal, State, and regional laws, regulations, and policies outlined in Section 4.15.2, *Regulatory Setting,* apply to surrounding counties in the same manner as they apply to projects within the AMBAG region. Future transportation projects and land use development in the cumulative impact area would be required to comply with these requirements, and consistency with laws, regulations, and policies would be verified as individual projects occur. Therefore, cumulative impacts related to conflicts with a program, plan, or policy addressing the circulation system would be less than significant.

Implementation of the 2050 MTP/SCS would maintain emergency vehicle access and avoid transportation hazards, as projects envisioned under the 2050 MTP/SCS would be required to comply with State, regional, and local regulations for emergency vehicle access and transportation design hazards. Future transportation projects and land use development in the cumulative impact area would also be required to comply with these requirements. Cumulative impacts related to emergency vehicle access and transportation hazards would not be significant, and the 2050 MTP/SCS contribution would not be cumulatively considerable.

VMT in the AMBAG region is partially due to commuters travelling to and from employment in the adjoining counties, particularly Santa Clara County and San Mateo County in the San Francisco Bay Area. The 2050 MTP/SCS is designed to promote economic growth and employment in the AMBAG region, while also providing the proper balance between jobs and housing within the region. However, cities in the San Francisco Bay Area also continue to develop and grow, adding more employment opportunities within proximity of areas of the AMBAG region. Therefore, it is likely that some residents of the AMBAG region would continue to commute to the San Francisco Bay Area for employment. Likewise, people residing outside of but close to the AMBAG region may commute into the AMBAG region for outdoor recreation. For example, the City of Santa Cruz is a common recreational weekend destination for residents of San Jose in Santa Clara County. These trips contribute to VMT in the cumulative impact analysis area.

As shown in Table 4.15-5, the 2050 MTP/SCS would increase daily VMT by 2,192,537 VMT compared to the baseline 2022 conditions, which is an approximately 14 percent increase over existing conditions. Daily VMT per capita would increase from 20.9 to 22.4 miles by 2050.

While the majority of the VMT would be expected to remain within the AMBAG region, some portion of the VMT would inevitably extend to areas within adjoining counties to the region, such as the San Francisco Bay Area, described above in the previous paragraph. The most reasonable assumption is that VMT to adjoining counties would be concentrated to the most heavily travelled roadways in the counties with the highest relative employment, such as State Routes 17, 25 and U.S. 101 into Santa Clara County and State Route 1 into San Mateo County. The increased VMT in adjoining areas would be in addition to the VMT generated from the increased population growth of these counties into the future. Per capita VMT in the cumulative impact

analysis area would be unlikely to reach 25 percent below 2019 VMT per capita or 30 percent below by 2045 due to increased VMT in the cumulative impact analysis. Thus, cumulative impacts on VMT would be significant and the 2050 MTP/SCS contribution to VMT impacts would be cumulatively considerable.

The implementation of project-level VMT-reducing mitigation measures such as mixed uses and transit oriented development may not be feasible and cannot be guaranteed on a project by project basis. Thus, the 2050 MTP/SCS contribution to VMT impacts in adjoining areas would be cumulatively considerable even after implementation of mitigation measures TR-2(a) and TR-2(b).

This page intentionally left blank.

4.16 Tribal Cultural Resources

This section evaluates effects on tribal cultural resources related to implementation of the 2050 MTP/SCS.

4.16.1 Setting

The AMBAG region is within the traditional tribal territory of the Costanoan/Ohlone, Esselen, Salinan and the Northern Valley Yokuts. Costanoan territory includes northern Monterey County, northwestern San Benito County, and Santa Cruz County. Esselen territory includes western Monterey County. Salinan territory includes southern Monterey County and southwestern San Benito County. Northern Valley Yokuts territory includes southeastern San Benito County.

The Costanoans occupied permanent village sites in the valleys and maintained numerous hunting camps in the mountain terrain that they occupied seasonally. The subsistence for the Costanoan depended heavily on acorns and plant species during the various seasons (San Benito County 2015). Costanoan territory extended from the point where the San Joaquin and Sacramento rivers issue into the San Francisco Bay to Point Sur, 135 miles south of San Francisco, with the interior Coast Ranges likely constituting their inland boundary (Kroeber 1925). The Costanoan were semi-sedentary with a settlement system characterized by base camps of tule reed houses and seasonal specialized camps (Skowronek 1998). Subsistence was based on hunting, gathering, and fishing. Mussels and acorns were particularly important food resources (Kroeber 1925, Skowronek 1998).

The Costanoans, like most Native California groups, were organized according to politically independent land-holding groups referred to by anthropologists as tribelets. There were approximately 40 Costanoan tribelets. The basic Ohlone social unit was the family household of about 15 individuals, which was extended patrilineally (Broadbent 1972; Harrington 1933). Households grouped together to form villages and villages combined to form tribelets. Tribelets exchanged trade goods such as obsidian, shell beads and baskets; participated in ceremonial and religious activities together; intermarried; and could have extensive reciprocal obligations to one another involving resource collection.

Contact was established in the Costanoan territory with the founding of the Mission Nuestra Senora de la Soledad in 1791. The Costanoans suffered disenfranchisement and cultural collapse during the post-contact period and by 1810 the traditional lifeway of the Costanoans had virtually ceased. In 1971 descendants of the Costanoans united as a corporation, the Ohlone Indian tribe (San Benito County 2015).

The Esselen inhabited the upper Carmel Valley in the Santa Lucia Mountains between Point Sur and Lopez Point, with the inland boundary just east of the Salinas River. The Esselen occupied seasonal villages depending on resource availability (Breschini and Haversat 2001).

Salinan territory ranged from Carmel Valley south to Morro Bay. They occupied permanent villages. Salinan subsistence was centered on the gathering of acorns and other edible plants and the hunting of animals such as dove, quail, rabbit, and deer (Taylor 2013).

Northern Valley Yokuts populations were concentrated along waterways in the San Joaquin River. Settlements were typically composed of single-family dwellings, sweathouses, and ceremonial structures. Subsistence revolved around water resources in the San Joaquin Valley, with a focus on salmon and acorns.

Tribal cultural resources that could be present within the AMBAG region include but are not limited to Native American burial sites, village or occupation sites, traditional resource gathering locations and natural landforms such as mountain peaks, ridge tops, or rivers. Such resources are present throughout the AMBAG region, including known and documented sites as well as undocumented sites that will be identified through cultural resources survey or ground disturbance.

4.16.2 Regulatory Setting

a. Federal Laws, Regulations, and Policies

The Department of Transportation Act

Passed in 1966, the Department of Transportation Act (49 United States Code 303, formerly 49 United States Code 1651(b)(2) and 49 United States Code 1653(f) includes Section 4(f), which states that the Federal Highway Administration and other U.S. Department of Transportation agencies cannot approve the use of land from public and private historical sites unless certain conditions apply. These conditions are the following: If there is no feasible and prudent avoidance alternative to the use of land, and if the action includes all possible planning to minimize harm to the property resulting from such use; or if the Federal Highway Administration determines the use of the property will have a de minimis impact.

Archaeological Resources Protection Act

This regulation was enacted to protect archaeological resources and sites that are on public lands and tribal lands, to foster increased cooperation and exchange of information between government representatives, the professional archaeological community, and private individuals. Section 4 of the statute and Sections 16.5-16.12 of the uniform regulations describe the requirements that must be met before federal authorities can issue a permit to excavate or remove any archaeological resource on federal or tribal lands. The curation requirements of artifacts, other materials excavated or removed, and the records related to the artifacts and materials are described in Section 5 of the ARPA. This section also authorizes the Secretary of the Interior to issue regulations describing in more detail the requirements regarding these collections.

American Indian Religious Freedom Act

The American Indian Religious Freedom Act of 1978 (AIRFA) (42 U.S. Code Section 1996) pledges to protect and preserve the traditional religious rights of American Indians, Aleuts, Eskimos, and Native Hawaiians. It establishes a national policy that traditional Native American practices and

beliefs, sites (and right of access to those sites), and the use of sacred objects shall be protected and preserved. If a place of religious importance to American Indians could be affected by a federal undertaking, AIRFA promotes consultation with Indian religious practitioners, which could be coordinated with Section 106 consultation. Amendments to Section 106 of the NHPA in 1992 strengthened the interface between AIRFA and the NHPA by clarifying the following: (1) properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization could be determined to be eligible for inclusion in the NRHP; and (2) in carrying out its responsibilities under Section 106, a federal agency shall consult with any Indian tribe or Native Hawaiian organization that attaches religious and cultural significance to properties described under (1).

Native American Graves Protection and Repatriation Act

The intent of the Native American Graves Protection and Repatriation Act of 1990 (25 U.S. Code Section 3001) is to identify Native American affiliation or lineal descent and ensure the rightful disposition, or repatriation, of Native American human remains, funerary objects, sacred objects, and items of cultural patrimony that are in federal possession or control. The regulations implementing the requirements of Native American Graves Protection and Repatriation Act relating to the inadvertent discovery of human remains and objects of cultural patrimony of Native American origin on federal or tribal lands are described in 43 CFR Section 10.4.

b. State Laws, Regulations, and Policies

Assembly Bill 52

California Assembly Bill (AB) 52 of 2014 expanded CEQA by defining a new resource category, "tribal cultural resources." AB 52 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 21084.2). It further states that the lead agency avoid impacts that would alter the significant characteristics of a tribal cultural resource, when feasible (PRC Section 21084.3). PRC Section 21074 (a)(1)(A) and (B) defines tribal cultural resources:

1. Sites, features, places, cultural landscapes, sacred places and objects with cultural value to a California Native American tribe" and meets either of the following criteria: Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)
2. A cultural 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 Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

AB 52 also establishes a formal consultation process for California tribes regarding those resources. The consultation process must be completed before a CEQA document can be certified. AB 52 requires that lead agencies "begin consultation with a California Native American

tribe that is traditionally and culturally affiliated with the geographic area of the proposed project." Native American tribes to be included in the formal consultation process are those that have requested notice of projects proposed within the jurisdiction of the lead agency. Pursuant to PRC Sections 21080.3.1, 21080.3.2, and 21082.3, 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. PRC Section 21080.3.2 states:

> Within 14 days of determining that a project application is complete, or to undertake a project, the lead agency must provide formal notification, in writing, to the tribes that have requested notification of proposed projects in the lead agency's jurisdiction. If it 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 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 under PRC Section 21084.3 (b) describe mitigation measures that may avoid or minimize the significant adverse impacts. Examples include:
>
> (1) Avoiding and preserving the resources in place, including, but not limited to, 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
> (2) Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
> (A) protecting the cultural character and integrity of the resource
> (B) protecting the traditional use of the resource
> (C) protecting the confidentiality of the resource
> (3) Establishing permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places
> (4) Protecting the resource

c. Local Laws, Regulations, and Policies

Monterey County

The County of Monterey does not have specific policies related to tribal cultural resources.

San Benito County

The Land Use Element and Natural and Cultural Resources Element of the San Benito County 2035 General Plan (San Benito County 2015a) includes one policy addressing tribal consultation:

> **Policy NCR-7.9 Tribal Consultation.** The County shall consult with Native American tribes regarding proposed development projects and land use policy changes consistent with the State's Local and Tribal Intergovernmental Consultation requirements.

Santa Cruz County

The Santa Cruz County General Plan and Local Coastal Program (Santa Cruz County 2024) Agriculture, Natural Resources + Conservation Element includes policies related to tribal cultural resources. Applicable policies are listed below.

> **Policy ARC-8.1.1 (LCP) Evaluation of Native American Cultural Sites.** Protect all archaeological resources until they can be evaluated. Prohibit any disturbance of Native American Cultural Sites, archaeological sites, or identified tribal cultural resources without an appropriate permit. Maintain the Native American Cultural Sites ordinance.
>
> **Policy ARC-8.1.5 Accidental Discovery of Archaeological Resources.** If archaeological resources or human remains are discovered accidentally during grading or construction, the activity shall cease and the property owner shall notify the proper authority in accordance with the Native American Cultural Sites ordinance.
>
> **Policy ARC-8.1.6 (LCP) Environmental Review.** Environmental review shall be required for any project with the potential to significantly impact archaeological or tribal cultural resources.
>
> **Policy ARC-8.1.7 (LCP) Consultation for Discretionary Projects.** The County shall consult with any California Native American tribe that requests notice of projects in the geographic area traditionally affiliated with the tribe prior to the release of a Negative Declaration or Environmental Impact Report, pursuant to Public Resources Code Sections 21073 and 21080. If tribal cultural resources are identified, the County shall work with the affected tribe to identify appropriate mitigation measures to protect the resource.
>
> **Policy ARC-8.1.8 (LCP) Consultation for General Plan Amendments.** The County shall consult with California Native American tribes as identified by the California Native American Heritage Commission (NAHC) prior to an amendment or update to the General Plan and prior to the designation of open space in order to identify and protect Native American cultural resources on land affected by the proposal, pursuant to California Government Code Section 65352.3.

The Santa Cruz County Municipal Code Title 16 (Environmental and Resource Protection) outlines criteria for Native American cultural studies (chapter 14.60) and historic preservation (Chapter 16.42). Chapter 16.40 defines when archaeological surveys and reports are required, as well as required actions when Native American cultural sites or human remains are discovered during the review of a proposed project or during excavation or other ground disturbing activities. Chapter 16.42 defines the significance and designation of protected historic resources

on the Santa Cruz County Inventory of Historic Resources and development procedures for designated historic resources.

4.16.3 Impact Analysis

a. Methodology and Significance Thresholds

In accordance with the requirements of AB 52, AMBAG conducted AB 52 consultation for the 2050 MTP/SCS, which consisted of written communication with the following tribes:

- Amah Mutsun Tribal Band
- Amah Mutsun Tribal Band of Mission San Juan Bautista
- Costanoan Ohlone Rumsen-Mutsun Tribe
- Costanoan Rumsen Carmel Tribe
- Esselen Tribe of Monterey County
- Indian Canyon Mutsun Band of Costanoan
- KaKoon Ta Ruk Band of Ohlone-Costanoan Indians of the Big Sur Rancheria
- Muwekma Ohlone Indian Tribe of the SF Bay Area
- Northern Valley Yokut/Ohlone Tribe
- Ohlone/Costanoan-Esselen Nation
- Rumsen Am:a Tur:ataj Ohlone
- Salinan Tribe of Monterey, San Luis Obispo Counties
- Santa Rosa Rancheria Tachi Yokut Tribe
- Tule River Indian Tribe
- Wuksachi Indian Tribe Eshom Valley Band
- Xolon-Salinan Tribe

Copies of letters provided to each of these tries are included in Appendix F. None of the tribes requested AB 52 consultation with AMBAG.

Appendix G of the *CEQA Guidelines* identifies the following criteria for determining whether a project's impacts would have a significant impact to tribal cultural resources:

1. Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code 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, and that is one of the following:
    a. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k).

b. 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 Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

b. Project Impacts and Mitigation Measures

The following section describes tribal cultural resource impacts associated with the transportation improvements and future land use scenario included in the 2050 MTP/SCS. Table 4.16-1 included in Section 4.16.3(c), below, summarizes the specific transportation projects that may result in tribal cultural resource impacts. In general, implementation of proposed transportation improvements and the reasonably foreseeable future development facilitated under the land use scenario envisioned by the 2050 MTP/SCS would result in tribal cultural resource impacts as described in the following sections.

Threshold 1: Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074 that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k)?

Threshold 2: Would the project cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074 that is 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 Public Resources Code Section 5024.1?

Impact TCR-1 IMPLEMENTATION OF PROPOSED TRANSPORTATION IMPROVEMENTS AND FUTURE PROJECTS INCLUDED IN THE LAND USE SCENARIO ENVISIONED IN THE 2050 MTP/SCS WOULD CAUSE A SUBSTANTIAL ADVERSE CHANGE IN THE SIGNIFICANCE OF A TRIBAL CULTURAL RESOURCE. IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

As stated above, none of the tribes contacted for AB 52 consultation requested consultation with AMBAG. Therefore, AB 52 notification did not result in the identification of any tribal cultural resources. However, it is possible that Native American burial sites, village or occupation sites, traditional resource gathering locations, and natural landforms of importance to the Esselen peoples could exist in the AMBAG planning area. Thus, tribal cultural resources could be encountered during implementation of the transportation improvement projects listed in the 2050 MTP/SCS and the land use scenario envisioned by the 2050 MTP/SCS. Effects on tribal cultural resources depend highly on the individual project site conditions and the characteristics of the proposed project. Impacts may include damage or destruction of the tribal cultural resources. Adherence to the requirements of AB 52 would encourage tribal consultation with local California Native American tribes and require the identification of project specific substantial adverse effects on tribal cultural resources and appropriate project specific mitigation measures. If the implementing agency determines that a specific transportation or land use

project could cause a substantial adverse change in the significance of a tribal cultural resource, the impact would be significant.

Mitigation Measures

For transportation projects under their jurisdiction, TAMC, SBtCOG, and SCCRTC shall, and transportation project sponsor agencies can and should, implement the following mitigation developed for the 2050 MTP/SCS program where applicable for transportation projects that result in impacts to tribal cultural resources, and where feasible and necessary based on project- and site-specific considerations. Cities and counties in the AMBAG region can and should implement these measures, where relevant to land use projects implementing the 2050 MTP/SCS. Project specific environmental documents may adjust these mitigation measures as necessary to respond to site specific conditions.

TCR-1 Tribal Cultural Resources Impact Minimization

Implementing agencies shall, or can and should, comply with AB 52, which may require formal tribal consultation. If the implementing agency determines that a project may cause a substantial adverse change to a tribal cultural resource, they shall, or can and should, implement mitigation measures identified in the consultation process required under PRC Section 21080.3.2, or shall, or can and should, implement the following measures where feasible to avoid or minimize the project specific significant adverse impacts:

- Avoidance and preservation of the resources in place, including, but not limited to planning and construction 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 considering the tribal cultural values and meaning of the resource, including, but not limited to, the following:
  - Protecting the cultural character and integrity of the resource
  - Protecting the traditional use of the resource
  - Protecting the confidentiality of the resource
  - Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places
- Native American monitoring by the appropriate tribe for all projects in areas identified as sensitive for potential tribal cultural resources and/or in the vicinity (within 100 feet) of known tribal cultural resources
- If potential tribal cultural resources are encountered during ground-disturbing activities; work in the immediate area must halt and the appropriate tribal representative(s), the implementing agency, and an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (National Park Service 1983) shall be contacted immediately to evaluate the find and determine the proper course of action

Implementing Agencies and Timing

Implementing agencies for transportation projects are RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects are cities and counties. This mitigation measure shall, or can and should, be applied during permitting and environmental review and implemented during construction where appropriate.

Significance After Mitigation

Mitigation Measure TCR-1 would require AB 52 compliance and would result in necessary mitigation being identified through tribal consultation to avoid impacts to tribal cultural resources. These measures would protect the resource's character, traditional use, and confidentiality. With such protection, implementation of the above measure would reduce impacts to tribal cultural resources. However, it cannot be guaranteed that all future project-level impacts can be mitigated and as such, impacts would be significant and unavoidable.

c. Specific MTP/SCS Projects that May Result in Impacts

Table 4.16-1 identifies transportation projects with the potential to cause or contribute to direct or indirect impacts to tribal cultural resources such as those discussed above. Program-level impact determinations were provided for the overall 2050 MTP/SCS project above. This section is not intended to provide project-specific impact determinations under CEQA. Rather, the transportation projects identified in Table 4.16-1 are representative of those that may result in project-level impacts with or without mitigation and were selected based on their potential scope and likelihood to result in the tribal cultural resources impacts identified above. The intent of this summary is to support potential future streamlining efforts as a screening tool to facilitate early identification of projects likely to result in the impacts identified above. Streamlining opportunities are discussed in Section 1.5, *Implementation Issues and Future Environmental Review*, in Chapter 1, *Introduction*.

Table 4.16-1 2050 MTP/SCS Projects that May Result in Tribal Cultural Resources Impacts

AMBAG ID	Project	Location	Impact
MON-GRN005-GR-2026	Thorne Road Bridge over US 101	Monterey County	CR-1, CR-2
MON-GRN008-GR-2026	US 101 - Walnut Avenue Interchange	Monterey County	CR-2
MON-SOL002-SO-2026	US 101 - North Interchange	Monterey County	CR-2
MON-MAR077-MA-2026	Salinas Ave. Improvement Project	Monterey County	CR-1, CR-2
MON-MAR150-MA-2026	Del Monte Blvd Extension	Monterey County	CR-1, CR-2
MON-MAR165-MA-2026	Imjin Road Widening Project	Monterey County	CR-1, CR-2
MON-MYC307-UM-2026	Davis Road Bridge Replacement and Road Widening	Monterey County	CR-1, CR-2
MON-SNS044-SL-2026	Natividad Road Widening	Monterey County	CR-1, CR-2
MON-SNS090-SL-2026	Russell Road Extension	Monterey County	CR-1, CR-2
MON-SNS097-SL-2026	Williams Russell Collector	Monterey County	CR-1, CR-2
MON-SNS098-SL-2026	Sconberg Parkway Extension	Monterey County	CR-1, CR-2
MON-CAR036-CM-2026	Junipero and Ocean Roundabout	Monterey County	CR-2

AMBAG ID	Project	Location	Impact
MON-KCY044-CK-2026	Lonoak RR Crossing Improvements	Monterey County	CR-1, CR-2
MON-MYC202-UM-2026	Johnson Road Bridge	Monterey County	CR-1, CR-2
MON-MYC315-UM-2026	Las Lomas Drainage Project	Monterey County	CR-2
MON-MYC341-UM-2026	Chualar Canyon Road Bridge	Monterey County	CR-1, CR-2
MON-SOL042-SO-2026	Gabilan Dr/Sn Vincente Rd Intersection Improvements	Monterey County	CR-2
MON-SOL052-SO-2026	Front St and San Vicente Rd Intersection Improvements	Monterey County	CR-2
MON-MPA061-MRA-2026	Terminal Complex - Construction (Terminal Building)	Monterey County	CR-2
MON-KCY053-CK-2026	King City Multimodal Transit Station	Monterey County	CR-2
MON-TACM014-TAMC-2026	Pajaro Station	Monterey County	CR-2
SB-SBC-A22-2026	Airline Highway Bike Path	San Benito County	CR-2
SB-SBC-A65-2026	San Benito River Recreational Trail	San Benito County	CR-2
SB-CT-A44-2026	State Route 25 Corridor Improvement Project	San Benito County	CR-1, CR-2
SB-COH-A18-2026	Westside Boulevard Extension	San Benito County	CR-1, CR-2
SB-COH-A55-2026	Memorial Drive North Extension: Santa Ana Road to Flynn Road/Shelton Intersection	San Benito County	CR-1, CR-2
SB-SBC-A05-2026	Union Road Widening (West) San Benito Street to Highway 156	San Benito County	CR-1, CR-2
SB-SBC-A09-2026	Fairview Road Widening: McCloskey to SR 25	San Benito County	CR-1, CR-2
SB-COH-A78-2026	Rancho Drive & East Nash (Tres Pinos Road) Intersection	San Benito County	CR-2
SB-SBC-A54-2026	Panoche Road Bridge (Bridge No. 43C0027)	San Benito County	CR-1, CR-2
SC-CAP-P12-CAP-2026	Monterey Avenue Multimodal Improvements	Santa Cruz County	CR-1, CR-2
SC-CO-P50-USC-2026	East Cliff Dr Pedestrian Pathway (7th-12th Ave)	Santa Cruz County	CR-2
SC-TRL-13-20-RTC-2026	MBSST Segments 13 to 20 (Rio Del Mar to Pajaro Junction)	Santa Cruz County	CR-2
SC-WAT-01A-WAT-2026	Hwy 1 Harkins Slough Bike-Ped Overcrossing (Safer Access to PVHS & Beyond) (EA 05-1G490)	Santa Cruz County	CR-1, CR-2
SC-WAT-P36-WAT-2026	Alley Improvements	Santa Cruz County	CR-1, CR-2
SC-RTC-24e-RTC-2026	3 - Hwy 1 Auxiliary Lanes & Bus on Shoulders (State Park to Bay/Porter) & Mar Vista Bike/Ped Xing	Santa Cruz County	CR-1, CR-2
SC-CO-P106-USC-2026	Pajaro River Flood Risk Management Project	Santa Cruz County	CR-2
SC-CT-P59-CT-2026	Hwy 9 San Lorenzo River Bridge & Kings Creek Bridge Replacement (EA 05-1H470)	Santa Cruz County	CR-1, CR-2
SC-CT-P84-CT-2026	Waddell Creek Bridge Replacement (EA 05-1R420)	Santa Cruz County	CR-1, CR-2
SC-CO-P102-USC-2026	Glen Arbor Road Bridge Replacement	Santa Cruz County	CR-1, CR-2

AMBAG ID	Project	Location	Impact
SC-CO-P104-USC-2026	Soquel Dr to 41st Ave Dedicated Right Turn Lane	Santa Cruz County	CR-2
SC-CO-P90-USC-2026	Fern Dr at San Lorenzo River Bridge Replacement Project	Santa Cruz County	CR-1, CR-2
SC-42SC-2026	Soquel Ave at Frederick St Intersection Modifications	Santa Cruz County	CR-2
SC-SC-P91-SCR-2026	Shaffer Road Widening and Railroad Crossing	Santa Cruz County	CR-1, CR-2
SC-WAT-P80-WAT-2026	Lake Avenue Underground Utilities	Santa Cruz County	CR-2

4.16.4 Cumulative Impacts

a. Methodology

The cumulative analysis presented below primarily relies on a projections-based approach, using regional land use and growth forecasts for the AMBAG region and adjoining counties to evaluate cumulative conditions. The project is assessed within the existing and foreseeable future environmental setting, and a determination is made as to whether its incremental contribution would be cumulatively considerable when considered alongside both the overall envisioned land use scenario and specific large-scale planned projects. Refer to Section 6.4, *Cumulative Impacts*, in Chapter 6, Other *CEQA Required Discussions*, for a description of the cumulative impact methodology.

b. Impact Analysis

Tribal cultural resources are regionally specific and determined by the local tribes. When resources occur near jurisdictional boundaries, such city or county limits, the resource can extend across jurisdictions. Therefore, the cumulative impact analysis area for tribal cultural resources consists of the AMBAG region and the adjoining counties.

Impact TCR-C-1 DEVELOPMENT IN THE CUMULATIVE IMPACT ANALYSIS AREA COULD RESULT IN SIGNIFICANT IMPACTS TO TRIBAL CULTURAL RESOURCES THAT WOULD RESULT IN A SIGNIFICANT CUMULATIVE IMPACT. THE 2050 MTP/SCS CONTRIBUTION TO THIS IMPACT WOULD BE CUMULATIVELY CONSIDERABLE.

Tribal cultural resources are regionally specific and determined by local tribes. However, development in the cumulative impact analysis area would increasingly extend into previously undeveloped areas. Construction of transportation and land use development projects would require ground disturbance that could impact tribal cultural resources. Tribal cultural resources are often associated with areas near water, such as rivers, because Native American Tribes congregated near water. The increase in growth in previously undisturbed areas would contribute to regional impacts on tribal cultural resources. Cumulative impacts would be significant. Development in the AMBAG area would increase under the 2050 MTP/SCS by increasing mobility and growth. The increase in growth in previously undisturbed areas contributes to regional impacts on tribal cultural resources. If there may be tribal cultural resources at the location of a project site, tribal consultation in accordance with AB 52 would help ensure protection of tribal cultural resources. However, tribal territory often crosses the

boundaries of multiple jurisdictions within and outside of the AMBAG region, and there could be several minor impacts to tribal cultural resources that together would result in a significant cumulative impact. Thus, the cumulative tribal cultural resources impact would be significant, and the proposed 2050 MTP/SCS's contribution to the cumulative tribal cultural resources impact would be cumulatively considerable despite implementation of Mitigation Measure TCR-1.

4.17 Utilities and Service Systems

This section evaluates the utilities and service system impacts of the proposed 2050 MTP/SCS.

4.17.1 Setting

a. Water Supply

Monterey County

Many agencies and private companies provide water supply across Monterey County. These include cities, community water districts, and private water providers. Below are some examples of water providers within Monterey County.[1]

California American Water

California American Water (CalAm) is a wholly owned subsidiary of the publicly traded company, American Water Works Company, Inc. (American Water). American Water, through its subsidiaries, provides water and wastewater services in the United States and Canada. It serves approximately 14 million people with drinking water, wastewater, and other water-related services in 46 states in the United States and Ontario, Canada. California American Water provides water and wastewater service to five regions of California including the Central Division, which includes the Monterey Peninsula. The Central Division serves approximately 41,000 customer connections and a population of approximately 114,000 (Monterey Peninsula Water Management District 2020). California American Water adopted its 2020 Urban Water Management Plan (UWMP)[2] in June 2021. Please refer to Section 4.17.2b below for more information on the 2020 UWMP.

Monterey County Water Resources Agency

The Monterey County Water Resources Agency manages, protects, stores, and conserves water resources in Monterey County for beneficial and environmental use, while minimizing damage from flooding to create a safe and sustainable water supply for present and future generations. The Monterey County Water Resources Agency owns two dams (Nacimiento and San Antonio) that are integral to providing flood control services and maintaining water resources for the County of Monterey.

Monterey Peninsula Water Management District

The mission of the Monterey Peninsula Water Management District (MPWMD) is to sustainably manage and augment the water resources of the Monterey Peninsula to meet the needs of its residents and business while protecting, restoring, and enhancing its natural and human

[1] The water providers listed herein are examples, and not intended to represent a full accounting of water purveyors in Monterey County.

[2] Please note that UWMPs are required to be updated every five years pursuant to California Water Code Sections 10610–10656. The next UWMPs will be adopted by July 1, 2026. As such, the 2020 UWMPs currently represent the most recent and applicable planning documents for water districts and agencies.

environment (MPWMD 2025a). MPWMD serves approximately 114,000 people within the cities of Carmel-by-the-Sea, Del Rey Oaks, Monterey, Pacific Grove, Seaside, Sand City, Monterey Peninsula Airport District and portions of unincorporated Monterey County including Pebble Beach, Carmel Highlands, and Carmel Valley. The primary goals of the District are to:

1. Increase the water supply to meet community and environmental needs
2. Assist California American Water in developing a legal water supply
3. Protect the quality of surface and groundwater resources and continue the restoration of the Carmel River environment
4. Instill public trust and confidence
5. Manage and allocate available water supplies and promote water conservation (MPWMD 2025b).

Pajaro/Sunny Mesa Community Services District

The Pajaro/Sunny Mesa Community Services District provides potable water services, fire flows, parks, and streetlight services to thousands of residents of North Monterey County. The District provides these services from the Pajaro River in the north, to Moss Landing in the west, to the U.S. 101 corridor in the south. It is the only public agency which provides public potable water services in the Pajaro, Elkhorn, and Prunedale areas (Pajaro/Sunny Mesa Community Services District 2025).

Marina Coast Water District

The Marina Coast Water District (MCWD) is located in Monterey County, on the coast of the Monterey Bay at the northwest end of the Salinas Valley. MCWD's jurisdictional service area is approximately 10.3 square miles, encompassing the City of Marina and portions of the former Fort Ord. MCWD currently supplies approximately 3,300 AFY, or an average of 3 million gallons per day (MCWD 2021:1, 3).

The MCWD 2020 UWMP characterizes historical water supplies and use, projects future demand and supply through 2040, and identifies supply augmentation projects and programs, cumulative water demand projections, and water shortage contingency plans (WSCPs). Supply and demand projections address climate variability and regional cooperative agreements (MCWD 2021).

San Benito County

Many agencies and private companies provide water supply across San Benito County. These include cities, community water districts, and private water providers. Below are some examples of water providers within San Benito County.[3]

[3] The water providers listed herein are examples, and not intended to represent a full accounting of water purveyors in San Benito County.

San Benito County Water District

The San Benito County Water District owns two surface water treatment plants in the Hollister Urban Area (HUA) that deliver drinking water to Sunnyslope County Water District and the City of Hollister. The District also manages local and imported surface water through the San Benito River System and the San Felipe Distribution System. The San Felipe System delivers imported Central Valley Project water to irrigation, municipal and industrial customers. The drinking water that the District delivers to Sunnyslope County Water District and the City of Hollister ultimately becomes recycled water from the City of Hollister's Reclamation Plant. This reclaimed water is then used for irrigation water by local farmers (San Benito County Water District 2023).

The San Benito County Water District prepared the 2020 HUA UWMP was a collaborative effort with the Sunnyslope County Water District (Sunnyslope), and the City of Hollister adopted in July 2021. The 2020 HUA UWMP characterizes historical water supplies and use, projects future demand and supply through 2040, and identifies supply augmentation projects and programs, cumulative water demand projections, and WSCPs. Supply and demand projections address climate variability and regional cooperative agreements (San Benito County Water District 2021).

City of Hollister Utilities Water Division

The City of Hollister Utilities Water Division is responsible for producing and distributing potable water for approximately half of the City of Hollister, which is generally located west of Memorial Drive. The remaining portion of the City is serviced by Sunnyslope County Water District. The division is also responsible for wastewater collection advance to the wastewater treatment plants (City of Hollister 2023).

Sunnyslope Water District

Sunnyslope Water District's water system serves an area of approximately 4 square miles in the City of Hollister and surrounding areas. The District's wastewater system (of collection, treatment, and disposal) serves a smaller area within the County consisting of Ridgemark Estates and the Oak Creek and Quail Hollow subdivisions. The District serves approximately 6,250 water accounts, of which 99.8 percent are residential customers, and approximately 1,235 sewer accounts, of which 99.3 percent are residential customers (Sunnyslope Water 2025).

City of San Juan Bautista Water System

The City of San Juan Bautista Water System supplies water to residents and businesses within the City of San Juan Bautista. Water in the system is primarily from a series of groundwater wells located near the south end of San Juan Bautista, as well as a small reservoir (State Water Resources Control Board 2025).

The City of San Juan Bautista approved its 2020 Water Master Plan in November 2020. The purpose of the 2020 Water Master Plan is to document the planned land use for the City of San Juan Bautista, identify existing and future demands generated within the City, and to plan water infrastructure to provide adequate levels of service to the customers at the lowest lifecycle cost feasible (City of San Juan Bautista 2020).

Santa Cruz County

Many agencies and private companies provide water supply across Santa Cruz County. These include cities, community water districts, and private water providers. Below are examples of water providers within Santa Cruz County.[4]

San Lorenzo Valley Water District

The San Lorenzo Valley Water District (SLVWD) supplies water in the San Lorenzo Valley to the communities of Boulder Creek, Brookdale, Ben Lomond, Lompico, Zayante, Scotts Valley, Manana Woods, and Felton. Through a network of distribution lines, pump stations and reservoirs it serves more than 7900 connections (SLVWD 2025).

Scotts Valley Water District

The Scotts Valley Water District (SVWD) is located six miles north of the City of Santa Cruz, along State Highway 17 and covers approximately six square miles including most of the incorporated area of the City of Scotts Valley and a portion of the unincorporated area north of the City — about 10,700 people through 4,200 service connections. It generally follows the boundary of the City of Scotts Valley. Notable exceptions to the service area include Pasatiempo Pines and Manana Woods subdivisions, and Vista Del Lago and Spring Lakes Mobile Home Parks, which are served by San Lorenzo Valley Water District (SVWD 2025).

SVWD and SLVWD collaborated to prepare the 2020 UWMP for their combined service areas. The 2020 UWMP was approved in June 2021. The purpose of the 2020 UWMP is for SVWD and SLVWD to conduct long-term resource planning and establish management measures to ensure adequate water supplies are available to meet existing and future demands. The 2020 UWMP provides a framework to help water suppliers maintain efficient use of urban water supplies, promote conservation programs and policies, ensure that sufficient water supplies are available for future beneficial use, and provide a response mechanism during drought conditions or other water supply shortages (SVWD and SLVWD 2021).

City of Santa Cruz Water Department

The City of Santa Cruz Water Department operates a system that includes more than 300 miles of pipes to bring water to customers that serves almost 100,000 people. Santa Cruz's drinking water is supplied primarily through surface water collected from local rainfall (SCWD 2025).

The City of Santa Cruz adopted its 2020 UWMP in 2021. This version addresses water demand and supply, water conservation, the efficient use of water supplies, and a WSCP (City of Santa Cruz 2021).

[4] The water providers listed herein are examples, and not intended to represent a full accounting of water purveyors in Santa Cruz County.

Soquel Creek Water District

The Soquel Creek Water District serves approximately 40,400 customers through 15,800 connections in four service areas within mid-Santa Cruz County solely with groundwater. Approximately 90 percent of its customers are residential (Soquel Creek Water 2025).

The Soquel Creek Water District's 2020 UWMP was approved by the Board of Directors on June 15, 2021. The 2020 UWMP is a long-range planning document that assesses current water demand, projects future demand over a minimum 20-year planning horizon, and identifies a mix of water resources and conservation efforts to meet future demand. The 2020 UWMP also includes the District's WSCP which identifies water shortage stages and associated curtailment actions to allow for efficient management of any water shortage with predictability and accountability (Soquel Creek Water District 2021).

City of Watsonville Department of Public Works and Utilities

The City provides water service to residential, commercial, industrial, and institutional customers. It serves the City of Watsonville and parts of unincorporated areas of Santa Cruz County. The City's regional water system consists of 190 miles of pipelines, 14 wells, 8 reservoirs and the Corralitos Filtration Plant treatment plant that delivers clean, safe water to a service population of 66,000 customers (Watsonville Water Division 2025).

The City of Watsonville's 2020 UWMP was approved in July 2021. The UWMP gathers, characterizes, and synthesizes water-related information from numerous sources to assess and project the City's water reliability well into the future. The City's 2020 UWMP includes water reliability forecasts through the year 2045. It also acts as a guide to maintain efficient use of urban water supplies, promote conservation programs and policies, and proactively plan and update the City's strategies to address potential water shortages and drought conditions (City of Watsonville 2021).

Pajaro Valley Water Management Agency

The Pajaro Valley Water Management Agency is a state-chartered water management district formed to manage existing and supplemental water supplies in order to prevent further increase in, and to accomplish continuing reduction of, long-term overdraft The Pajaro Valley Water Management Agency also works to provide and ensure sufficient water supplies for present and future anticipated needs within its boundaries, generally the greater coastal Pajaro Valley (Pajaro Valley Water Management Agency 2025).

b. Wastewater Treatment

Wastewater is generated by residential, commercial, and industrial sources throughout the AMBAG region. Treatment of wastewater provides protection for human health and receiving water bodies, preservation of the health of aquatic and riparian species, and improved supply reliability through the removal of harmful pollutants from discharges. Urbanized and unincorporated areas of cities and counties throughout the AMBAG region provide wastewater treatment facilities. These facilities include systems made up of pipelines, pipe stations, interceptor stations and discharge stations. Treatment plants send wastewater through up to

three treatment processes (primary, secondary, tertiary) depending on treatment requirements established by the pertinent Regional Water Quality Control Board (RWQCB) for the plant. The level of treatment is often dictated by where treated effluent is discharged (land, water body) and if there is an end use that requires higher treatment levels (recycling). Wastewater is also recycled for other uses, such as agriculture, irrigation, or landscaping. Treatment requirements are promulgated by the RWQCB and are typically reviewed, along with treatment capacity, every five years. As a result of this process, planning and upgrading of treatment plants is an ongoing process for each plant.

Wastewater treatment in the AMBAG region is provided by various agencies, as well as individual city and town wastewater treatment systems. Some treatment plants serve individual cities, while others serve multiple jurisdictions. Because of the dynamic nature of treatment plant planning/upgrading/expansion, it is not practical, at this regional and programmatic level of analysis, to characterize treatment plant technology, flows, and capacity. However, below is a list of wastewater treatment providers or facilities in the AMBAG region. The wastewater providers and facilities listed herein are examples, and not intended to represent a full accounting of wastewater providers or facilities in the AMBAG region:

- Monterey One Water Regional Treatment Plant (near Marina)
- City of Greenfield Wastewater Treatment Plant
- Seaside County Sanitation District Sewer Collection System
- City of Salinas Industrial Wastewater Treatment Plant
- City of Hollister Wastewater Treatment Plant
- Sunnyslope County Water District Lessalt Wastewater Treatment Plant (near Hollister)
- City of Santa Cruz Wastewater Treatment Facility
- City of Scotts Valley Water Reclamation Facility
- City of Watsonville Wastewater Treatment Facility

c. Stormwater Management

Stormwater has been identified as urban runoff by the U.S. Environmental Protection Agency. After a precipitation event, polluted runoff is discharged over land or through storm sewer systems, often untreated with direct flow into water bodies. If left uncontrolled, this polluted water can result in the destruction of wildlife and aquatic ecosystems and can threaten public health. The National Pollutant Discharge Elimination System (NPDES) permitting program provides implementation measures for reducing potentially harmful pollutants found in stormwater runoff from entering water bodies or affecting public health. Additionally, stormwater capture systems assist in maintaining flood protection and create opportunities for ecosystem protection and restoration.

Additionally, each county has its own storm water pollution management programs, which are intended to facilitate compliance with State and federal regulations through coordination with local municipalities, residents, businesses, and schools. These programs provide initiatives for preventing stormwater pollution; protecting and enhancing water quality in watersheds, waterways, creeks, and wetlands; and preventing water pollution in the Monterey Bay and Pacific Ocean.

Stormwater runoff occurs when precipitation from rain and snowmelt events flows over land or impervious surfaces and does not percolate into the ground. In rural areas, storm water flows into natural drainages, such as creek, streams, and rivers. In the urban areas of the AMBAG region, storm water is collected in Municipal Separate Storm Sewer Systems (MS4s). MS4s collect storm water runoff in a system of conveyances, including roads with drainage systems, catch basins, curbs, gutters, ditches, man-made channels, or storm drains. Storm water systems and facilities are necessary to convey water and prevent flooding in urban areas, for controlling erosion, and for protecting water quality.

As the runoff flows over the land or impervious surfaces (paved streets, parking lots, and building rooftops), it accumulates debris, chemicals, sediment, or other pollutants that could adversely affect water quality if the runoff is discharged untreated. Stormwater pollution prevention is discussed in detail in Section 4.10, *Hydrology and Water Quality*. Each MS4 operator, identified in Table 4.17-1, is responsible for operation, maintenance, and management of their own system. MS4s are interconnected and often share facilities, cooperatively manage systems, and coordinate pollution control efforts. MS4s within this table are broken down into three types: Traditional, Non-traditional, and Waiver. Traditional MS4 operators are incorporated cities, towns, Urbanized Areas, counties, and similar municipal organizations. Non-traditional MS4 operators are transportation agencies (where the 'MS4' is often a system of drainage channels alongside transportation infrastructure), military bases, public universities, and prisons. Waiver MS4 are types of waivers and exemptions to permit requirements, examples include small MS4s, usually less than 1,000 connections or population, MS4s that can demonstrate they are not discharging pollutants in any significant level, or MS4s whose discharges are accounted for in TMDL limits already set for impaired bodies.

Table 4.17-1 Phase II Regulated Small MS4s within the AMBAG Region

MS4 (City, County, University, etc.)	County	MS4 Type
7th District Agricultural Association - Monterey County Fairgrounds	Monterey	Non- Traditional
California State Parks Monterey District Monterey - Point Lobos State Reserve	Monterey	Non-Traditional
California State University Monterey Bay	Monterey	Waiver
Julia Pfeiffer Burns State Park	Monterey	Non-Traditional
US Army Presidio of Monterey	Monterey	Non-Traditional
California State Parks Monterey District Monterey - Carmel River SB	Monterey	Non-Traditional
City of Carmel-by-the-Sea	Monterey	Traditional
City of Del Rey Oaks	Monterey	Traditional
City of Gonzales	Monterey	Traditional
City of King	Monterey	Traditional
City of Marina	Monterey	Traditional
City of Monterey	Monterey	Traditional
City of Pacific Grove	Monterey	Traditional
City of Sand City	Monterey	Traditional
City of Seaside Phase II Permit	Monterey	Traditional
City of Soledad	Monterey	Traditional
County of Monterey	Monterey	Traditional
City of Greenfield - Waiver	Monterey	Waiver
City of Hollister	San Benito	Traditional
California State Parks Monterey District Monterey - Año Nuevo State Reserve and State Park	Santa Cruz	Non-Traditional
Santa Cruz County Fairgrounds	Santa Cruz	Non-Traditional
University of California Santa Cruz	Santa Cruz	Non-Traditional
City of Capitola	Santa Cruz	Traditional
City of Santa Cruz	Santa Cruz	Traditional
City of Scotts Valley	Santa Cruz	Traditional
City of Watsonville	Santa Cruz	Traditional
County of Santa Cruz	Santa Cruz	Traditional

Source: Central Coast RWQCB 2018

d. Electric Power and Natural Gas Facilities

Electric, liquid fuel, and natural gas energy sources make up most of the AMBAG energy systems, which are becoming increasingly diversified as newer, more renewable energy sources are developed and expanded. A range of public and private providers operate the energy systems in the region and maintain the regional infrastructure systems. Pacific Gas and Electric Company (PG&E) is the major operator of electricity infrastructure in the AMBAG region. PG&E is one of

the largest combination natural gas and electric utilities in the United States. The company, a subsidiary of PG&E Corporation, serves approximately 16 million people in 70,000 square miles of northern and central California. PG&E provides electric service to Monterey, San Benito, and Santa Cruz counties with natural gas coverage to most areas in the region except in some locations where no natural gas service is available. PG&E obtains its electricity from natural gas, fossil fuels, nuclear power, hydroelectric power, and eligible renewable resources.

As discussed in Section 4.6, *Energy*, parts of the AMBAG region are served by Central Coast Community Energy (3CE; formerly Monterey Bay Community Power). 3CE is a Community Choice Energy agency established by local communities to source clean and renewable electricity for Monterey, San Benito, Santa Cruz, San Luis Obispo, and Santa Barbara counties. In total, 3CE has enrolled 33 communities throughout the Central Coast. It serves residents while retaining their utility provider's traditional role delivering power and maintaining electric infrastructure. In its first two years of operations, 3CE contracted for 453.3 MW of long term eligible renewable resources and 192.7 MW of battery storage in furtherance of California's 100 percent greenhouse gas-free by 2045 goal (3CE 2025).[5]

e. Telecommunication

Telecommunications are mainly a privately owned enterprise and are offered by a variety of companies with different service capacities across the AMBAG region. 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. This approach differs from that of most other utilities, which are generally publicly owned or offered by limited or individual service providers in a given area.

Many telecommunications providers offer phone, internet, and/or television service in Monterey, San Benito, and Santa Cruz counties. Telecommunications providers will usually complete infrastructure and other service improvements for an area as the need arises to meet customer demand. Additionally, some areas in the AMBAG region do not have access to cellular or broadband services, typically in rural areas or locations marked by topographical features that make accessible services difficult.

f. Solid Waste Disposal

Monterey, San Benito, and Santa Cruz counties each have a local enforcement agency (LEA) covering all solid waste facilities in the region. LEAs are responsible for ensuring the correct operation and closure of solid waste facilities in the State, as well as for guaranteeing the proper storage and transportation of solid wastes. In concurrence with the California Department of Resources Recycling and Recovery (CalRecycle), LEAs issue operating permits to facilities, including landfills, transfer stations, material recovery, and composting facilities. Solid waste is the garbage, refuse, and other discarded solid materials generated by residential, commercial, and industrial activities.

[5] This EIR provides only a partial list of energy providers in the AMBAG region as examples. There are other energy providers in the AMBAG region that are not listed or described in this EIR.

CalRecycle identifies 10 categories of wastes: paper, glass, metal, electronics, plastic, other organic, construction and demolition, household hazardous waste, special waste, and mixed residue. Solid waste generation is measured by disposal and diversion. Public Resources Section 40192 defines disposal as "the final deposition of solid wastes onto land, into the atmosphere, or into the waters of the state." Solid waste that is disposed of in landfills is measured in volume (cubic yards) and weight (tons). 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.

There are two active operating landfills in Monterey County, one in San Benito County, and three in Santa Cruz County. Table 4.17-2 shows the remaining capacity of landfills located in the AMBAG region and their estimated date of closure.

Table 4.17-2 Landfills Located in the AMBAG Region

County	Max Permitted Throughput (tons per day)	Remaining Capacity (tons)	Anticipated Closure Date
Monterey County			
Johnson Canyon Sanitary Landfill	1,694	12,590,000	12/31/2066
Monterey Peninsula Landfill	3,500	48,560,000	2/28/2107
San Benito County			
John Smith Road Landfill	1,000	1,921,000	8/1/2025[1]
Santa Cruz County			
City of Santa Cruz Resource Recovery Facility	535	5,322,000	1/1/2037
City of Watsonville Landfill	275	1,098,980	12/31/2029
Buena Vista Drive Sanitary Landfill	838	1,766,005	7/1/2031

Source: CalRecycle 2025

[1] The John Smith Road Landfill is proposed for expansion; an EIR was prepared for the John Smith Road Landfill Expansion Project in 2022.

4.17.2 Regulatory Setting

a. Federal Laws, Regulations, and Policies

California Building Standards Code (California Code of Regulations Title 24)

Title 24 applies to all buildings throughout the State of California, and includes requirements for structural, mechanical, electrical, and plumbing systems, and requires measures for energy conservation, green design, construction and maintenance, fire and life safety and accessibility. Cities and counties are required by state law to enforce Title 24. More restrictive ordinances can also be adopted by cities and counties due to specific geographical conditions. Included among the twelve parts of Title 24 are Part 9, which includes the California Fire Code, and is based on the International Fire Code, and Part 11, which includes the California Green Building Standards Code that includes measures for incorporating energy efficiency into buildings.

Safe Drinking Water Act

The Federal Safe Drinking Water Act (SDWA) establishes standards for contaminants in drinking water supplies. Contaminants regulated by the SDWA include metals, nitrates, asbestos, total dissolved solids, and microbes.

National Pollutant Discharge Elimination System Permits

The NPDES permit program was established in the Clean Water Act to regulate municipal and industrial discharges to surface waters of the United States. Federal NPDES permit regulations have been established for broad categories of discharges, including point-source municipal waste discharges and nonpoint-source stormwater runoff. NPDES permits generally identify effluent and receiving water limits on allowable concentrations and/or mass emissions of pollutants contained in the discharge; prohibitions on discharges not specifically allowed under the permit; and provisions that describe required actions by the discharger, including industrial pretreatment, pollution prevention, self-monitoring, and other activities.

Wastewater discharge is regulated under the NPDES permit program for direct discharges into receiving waters and by the National Pretreatment Program for indirect discharges to a sewage treatment plant. In California, the Federal requirements are administered by the State Water Resources Control Board (SWRCB), and individual NPDES permits are issued by the RWQCBs.

Resource Recovery and Conservation Act

Subtitle D of the Resource Recovery and Conservation Act focuses on state and local governments as the primary planning, regulating, and implementing entities for the management of nonhazardous solid waste, such as household garbage and nonhazardous industrial solid waste. To promote the use of safer units for solid waste disposal, Subtitle D provides regulations for the generation; transportation; and treatment, storage, or disposal of hazardous wastes. The United States Environmental Protection Agency developed federal criteria for the proper design and operation of municipal solid waste landfills and other solid waste disposal facilities. The United States Environmental Protection Agency approved the State of California's program, a joint effort of the California Integrated Waste Management Board, SWRCB, RWQCBs, and LEAs, on October 7, 1993.

Title 40 of the Code of Federal Regulations

Title 40 of the Code of Federal Regulations, Part 258 (Resource Conservation and Recovery Act, Subtitle D) contains regulations for municipal solid waste landfills and requires states to implement their own permitting programs incorporating the Federal landfill criteria. The federal regulations address the location, operation, design, groundwater monitoring, and closure of landfills.

b. State Laws, Regulations, and Policies

California Building Standards Code (Title 24, CCR)

Title 24 applies to all buildings throughout the State of California, and includes requirements for structural, mechanical, electrical, and plumbing systems, and requires measures for energy conservation, green design, construction and maintenance, fire and life safety and accessibility. Cities and counties are required by state law to enforce Title 24. More restrictive ordinances can also be adopted by cities and counties due to specific geographical conditions. Included among the twelve parts of Title 24 are Part 9, which includes the California Fire Code, and is based on the International Fire Code, and Part 11, which includes the California Green Building Standards Code that includes measures for incorporating energy efficiency into buildings.

Safe Drinking Water Act

California enacted its own Safe Drinking Water Act in 1976. The California Department of Public Health (formerly the California Department of Health Services) has been granted primary enforcement responsibility for the SDWA. Title 22 of the California Administrative Code establishes California Department of Public Health authority and stipulates drinking water quality and monitoring standards. These standards are equal to or more stringent than the federal standards.

California Water Code, Title 22

The California Water Code requires the California Department of Public Health to establish water reclamation criteria. In 1975, the former California Department of Health Services prepared Title 22 to fulfill this requirement. Title 22 regulates production and use of reclaimed water in California by establishing three categories of reclaimed water: primary effluent, which typically includes grit removal and initial sedimentation or settling tanks; adequately disinfected, oxidized effluent (secondary effluent) which typically involves aeration and additional settling basins; and adequately disinfected, oxidized, coagulated, clarified, filtered effluent (tertiary effluent) which typically involves filtration and chlorination. In addition to defining reclaimed water uses, Title 22 defines requirements for sampling and analysis of effluent and requires specific design requirements for facilities.

Water Supply Planning

SB 610 (Chapter 643, Statutes of 2001) and SB 221 (Chapter 642, Statutes of 2001) amended state law to improve the link between information on water supply availability and certain land use decisions made by cities and counties. The intent of SB 610 is to ensure that sufficient water supplies are available for growing communities. SB 610 requires local public water providers with more than 3,000 service connections to prepare a Water Supply Assessment (WSA) for any project that is subject to CEQA and meets specified minimum size criteria.

The WSA must document sources of water supply, quantify water demands, and compare future water supply and demand to show that sufficient water will be available to serve the project.

Water supply must be assessed for normal, single dry, and multiple dry water years during a 20-year forecast. If supplies are found to be insufficient to serve the project, the WSA must include plans for acquiring sufficient supplies.

Senate Bill 221

SB 221 (Chapter 642, Statutes of 2001) applies to subdivisions of more than 500 dwelling units. Like SB 610, it is intended to ensure an adequate water supply for new development. SB 221 requires that approval of a tentative map include a requirement that a sufficient water supply is available.

Urban Water Management Planning Act

In 1983, the California Legislature enacted the Urban Water Management Planning Act (Water Code, Section 10610 et seq.), which requires urban water suppliers to develop water management plans to actively pursue the efficient use of available supplies. Every five years, water suppliers are required to develop UWMPs to identify short-term and long-term water demand management measures to meet growing water demands. UWMPs for the year 2025 are currently under preparation.

Section 4.17.1a outlines UWMPs in the AMBAG region. Brief descriptions of some of the UWMPs in the AMBAG region are provided below. The descriptions include a portion of the total UWMPs in the region as examples.

The 2020 UWMP for the California-American Water Company's Salinas District covers northern Monterey County. The District includes several public water systems including Salinas, Las Lomas, Oak Hills, Salinas Hills, and Country Meadows Mutual (California American Water Company 2020). Total water use in the plan region is anticipated to be 16,988 AFY in 2030, the supply for which would be met from five groundwater subbasins. The 2020 UWMP includes conservation measures and BMPs that are currently being implemented or are in the process of being implemented to reduce water demand in the area as well as water supply reliability and water shortage contingency planning.

SVWD and SLVWD prepared a draft 2020 UWMP (SVWD and SLVWD 2021). The two districts are adjacent and prepared a joint plan for the first time. SVWD is approximately 4.8 square miles and includes most of the City of Scotts Valley as well as some unincorporated areas north of the City. SLVWD is approximately 98 square miles and includes the remainder of Scotts Valley, Felton, and unincorporated communities. Water demand in 2045 in SVWD is projected to be 1,144 AFY and water supply is estimated at 1,454 AFY including recycled water. Water demand in 2045 in SLVWD is projected to be 2,277 AFY and water supply is estimated at 2,325 AFY including recycled water (SVWD and SLVWD 2021).

The Soquel Creek Water District (SqCWD) is a nonprofit, local government agency that provides potable water service and groundwater resource management within its service area. Founded in 1961 under the County Water District Law (Water Code, Division 12, Section 30000 et. seq.), SqCWD's original purpose was to provide flood control and water conservation services. SqCWD adopted its 2020 UWMP on June 15, 2021. The SqCWD's service area includes seven miles of

shoreline along Monterey Bay, and extends one to three miles inland into the foothills of the Santa Cruz Mountains, essentially following the County Urban Services Line. The City of Capitola is the only incorporated area within the SqCWD service area. Unincorporated communities include Aptos, La Selva Beach, Rio Del Mar, Seascape, Seacliff Beach, and Soquel. Projected demand for potable water in 2040 is 3,655 acre feet per year (AFY) and the projected supply is 3,655 AFY (SqCWD 2021).

The City of Santa Cruz UWMP was prepared by the City of Santa Cruz Water Department in August 2020 (City of Santa Cruz 2021). The UWMP covers approximately 20 square miles including the City of Santa Cruz, a small part of the City of Capitola, adjoining unincorporated areas in Santa Cruz County, and coastal agricultural lands north of the city. Projected demand for potable water in 2045 is 2,784 million gallons per year and the projected supply is 2,670 million gallons per year. Therefore, there is not enough supply to meet the projected demand (City of Santa Cruz 2020).

State Water Conservation Requirements

Executive Order B-37-16 established a new water use efficiency framework for California. The order bolstered the state's drought resilience and preparedness by establishing longer-term water conservation measures that include permanent monthly water use reporting, new urban water use targets, reducing system leaks and eliminating clearly wasteful practices, strengthening urban drought contingency plans, and improving agricultural water management and drought plans. Based on monthly water use reporting, most urban water suppliers reported sufficient supplies to meet demand in three additional dry years and are not subject to state conservation mandates.

Water Efficiency Legislation

Legislation passed in 2018 (AB 1668 and SB 606) directed the State Water Board to adopt long-term standards for the efficient use of water by June 30, 2022. In alignment with the legislative directives of AB 1668 and SB 606, the SWRCB adopted a comprehensive regulation in 2024 to advance California's long-term water use efficiency. Effective January 1, 2025, the regulation establishes urban water use objectives tailored to local conditions, incorporating standards for indoor residential use, outdoor irrigation, commercial and institutional landscapes, and water loss reduction. Specifically, the indoor residential water use standard will be reduced to 47 gallons per capita per day by 2025, while outdoor irrigation standards are based on climate-adjusted landscape area calculations. Suppliers must also meet performance measures for commercial, industrial, and institutional irrigation with dedicated meters and comply with water loss targets derived from validated audits. These measures promote sustainable water management by requiring suppliers to assess irrigable areas, reduce leaks, and report performance metrics. The framework supports California's resilience to drought by encouraging conservation, improving data transparency, and enabling flexible compliance pathways, including variances for unique local conditions and incentives for potable reuse.

California Department of Resources Recycling and Recovery

CalRecycle (formerly the California Integrated Waste Management Board) oversees, manages, and monitors waste generated in California. It provides limited grants and loans to help California cities, counties, businesses, and organizations meet the State waste reduction, reuse, and recycling goals. It also provides funds to clean up solid waste disposal sites and co-disposal sites, including facilities that accept hazardous waste substances and non-hazardous waste. CalRecycle develops, manages, and enforces waste disposal and recycling regulations, including AB 939 and SB 1016, both of which are described below.

Assembly Bill 939

AB 939 requires cities and counties to prepare integrated waste management plans and to divert 50 percent of solid waste from landfills beginning in calendar year 2000 and each year thereafter. AB 939 also requires cities and counties to prepare Source Reduction and Recycling Elements as part of the integrated waste management plans. These elements are designed to develop recycling services to achieve diversion goals, stimulate local recycling in manufacturing and stimulate the purchase of recycled products.

Assembly Bill 341

AB 341 is California's Mandatory Recycling Law for commercial businesses, multifamily complexes, and public entities. AB 341 went into effect on July 1, 2012, and requires all businesses that generate four or more cubic yards of garbage per week and multifamily dwellings with five or more units to recycle. AB 341 also sets a statewide goal of 75 percent waste diversion.

Assembly Bill 1826

AB 1826 is California's Mandatory Organics Recycling Law for commercial businesses and multifamily complexes. AB 1826 requires businesses to recycle organic waste on and after April 1, 2016. By January 1, 2016, local jurisdictions were required to implement an organic waste recycling program that diverts organic waste generated by businesses and multifamily residential dwellings consisting of five or more units. AB 1826 phases the mandatory recycling of commercial organic waste over time based on volume of waste generated by businesses. In April 2016, businesses generating over eight cubic yards of organic waste per week are required to arrange for organic waste recycling services; in January 2017, businesses generating over four cubic yards of organic waste per week were required to do the same. Additionally, jurisdictions are required to submit annual reports. In 2020, CalRecycle will conduct a formal review to determine if statewide organic waste disposal has been reduced by 50 percent of 2014 levels. If not, the mandate will expand to include businesses that generate over two cubic yards of organic waste per week.

Senate Bill 1383

In September 2016, the Governor signed into law SB 1383 which establishes methane emissions reduction targets in a statewide effort to reduce emissions of short-lived climate pollutants in various sectors of California's economy. 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 bill builds upon California's leading commitments to reduce greenhouse gas emissions and air pollution statewide. California has made progress toward the organic waste reduction goals established by SB 1383, but the targets have not been fully met. While the state achieved notable success in food recovery and expanded residential organic waste collection, reaching 94 percent of the 2025 edible food recovery goal, commercial organic waste disposal increased by 27 percent, and infrastructure capacity remains insufficient to meet the mandated diversion of 75 percent by 2025.

Senate Bill 1016

SB 1016 requires that the 50 percent solid waste diversion requirement established by AB 939 be expressed in pounds per person per day. SB 1016 changed the CalRecycle review process for each municipality's integrated waste management plan. After an initial determination of diversion requirements in 2006 and establishing diversion rates for subsequent calendar years, the Board reviews a jurisdiction's diversion rate compliance in accordance with a specified schedule. Beginning January 1, 2018, the Board was required to review a jurisdiction's source reduction and recycling element and hazardous waste element once every two years.

Executive Order N-82-20

Executive Order N-82-20 was signed by California Governor Gavin Newsom on October 7, 2020, to address the biodiversity crisis. The order establishes the California Biodiversity Collaborative and sets a goal to conserve at least 30 percent of the state's lands and coastal waters by 2030. This Executive Order involves federal, state, and local governments, Native American Tribes, and community stakeholders and requires cooperation among multiple state agencies including the California Department of Food and Agriculture, California Natural Resources Agency, and California Environmental Protection Agency.

c. Local Laws, Regulations, and Policies

Planning for water management, wastewater and stormwater management, and solid waste disposal is conducted by local agencies to support their long-term resource planning and ensure adequate service to meet existing and future demands. In addition to federal and state regulations governing these planning efforts, cities, counties, and water districts may provide regulatory advisement on water resources, water treatment, and solid waste disposal. Many jurisdictions incorporate goals and policies relating to these topic areas in their municipal codes, general plans, development standards, or other regulations (e.g., utility master plans, solid waste management plans).

City and County General Plans

State law requires every city and county to adopt a general plan that expresses the community's development goals and embodies public policy relative to the distribution of future land uses, both public and private (California Governor's Office of Planning and Research 2017). Included in

the general plan are potential hazards, policies, and mitigation measures related to utilities and service systems. The elements contained in the general plan are intended to promote the highest quality of life in a given jurisdiction.

Each general plan is required to include a public services and utilities element, which outlines the infrastructure and services necessary to support the community's growth and maintain quality of life. The purpose of this element is to ensure that essential services, such as water supply, wastewater treatment, stormwater management, solid waste disposal, and energy delivery, are planned and provided in a reliable, efficient, and sustainable manner. This element also addresses the capacity of existing utility systems, identifies future demand based on projected development, and evaluates opportunities for system upgrades, conservation measures, and alternative energy sources. Coordination with service providers and regional agencies is emphasized to ensure long-term service adequacy and resilience.

Monterey County

Monterey County General Plan

The Monterey County General Plan (Monterey County 2010, PS-3:25, C/OS-3) includes 12 planning areas. Example policies within the General Plan that are relevant to utilities and service systems are listed below:

- **Policy PS-1.1.** Adequate Public Facilities and Services (APFS) requirements shall:
  a. Ensure that APFS needed to support new development are available to meet or exceed the level of service of "Infrastructure and Service Standards" (Table PS-1) concurrent with the impacts of such development;
  b. Encourage development in infill areas where APFS are available, while acknowledging the rights of property owners to economically viable use of existing legal lots of record throughout the county; and
  c. Seek to achieve acceptable level of service (LOS) standards through improvements funded by fair share impact fees and planned capital improvements (CIFPs).
- **Policy PS-13.1.** The County shall, when planning for development, require utility corridor rights-of-way or other easements of sufficient size to accommodate current and future needs.

City of Carmel-by-the-Sea General Plan

The City of Carmel-by-the-Sea adopted its General Plan in 2003 (City of Carmel-by-the-Sea 2003, 6-3:6:4, 7-2). Example policies within the General Plan that are relevant to utilities and service systems are listed below:

- **Policy P6-19.** Maintain the City's roadways, storm drains, and other public infrastructure to ensure they are safe and functioning adequately.

City of Gonzales General Plan

The City of Gonzales adopted the Gonzales 2010 General Plan in 2011 and revised in 2018 (City of Gonzales 2018, VI-48:VI-51). Example policies within the General Plan that are relevant to utilities and service systems are listed below:

- **Policy COS-5.1**. Safeguard the quality and availability of groundwater supplies in Gonzales and the Salinas Valley.
- **Policy FS-1.1**. Provide public services and infrastructure in a manner that supports the land use diagram, discourages premature development, minimizes adverse environmental and fiscal impacts, and maintains or improves current service levels.
- **Policy FS-2.1.** Meet the demand for increased water service by new development in a timely, cost effective matter by construction of new wells, water distribution lines and reservoirs to keep pace with new development. Maintain average groundwater extractions necessary to serve full build out of the area contained in the urban growth boundary to approximately 5.8 MGD in order to avoid significantly increasing groundwater withdrawals over current (2010 levels. To the degree necessary, the city shall rely on best management practices, water conservation and recycled wastewater in order to make up any deficit in accommodating the demand for water supply that accommodates build out of this General Plan.
- **Policy FS-3.1.** Increase capacity of the Gonzalez wastewater treatment plant commensurate with projected population and employment growth. Increases in capacity should occur in a timely, cost-effective manner. Improvements should include expansion of existing capacity, expansion of effluent disposal facilities, and construction of new collection mains and a gradual transition to higher levels of treatment.
- **Policy FS-4.1.** Meet the demand for new drainage facilities in a timely, cost effective manner by requiring at a minimum the retention of the 10-year 24-hour storm event and the detention of the 100-year 24-hour storm event.
- **Policy FS-5.1:** The city shall support the continued operation of the Johnson Canyon Valley Landfill east of Iverson Road. as a primary means of meeting the city's need for additional solid waste capacity.

City of Marina General Plan

The City of Marina General Plan (City of Marina 2000, 75:78, 114) was adopted by the City in 2000 and is currently being updated. Example policies within the General Plan that are relevant to utilities and service systems are listed below:

- **Policy 3.3.14.** Support water resource programs, including desalinization and reclamation efforts, to provide an adequate water supply to accommodate General Plan-permitted growth.

City of Monterey General Plan

The City of Monterey adopted the General Plan in 2005 (City of Monterey 2005), with significant updates to the Housing, Land Use, and Safety Elements completed as part of the Monterey 2031 project in July 2024. Example policies within the General Plan that are relevant to utilities and service systems are listed below:

- **Policy a.3.** Encourage infill development within the City where it can efficiently be provided with public facilities and utilities.
- **Policy a.5.** Control the rate of development if all projects being proposed cannot adequately be served with public facilities, or could cause a rate of growth higher than the community feels is acceptable.
- **Policy k.1.** Encourage measures to promote proper disposal of pollutants into the sanitary sewer or hazardous waste facilities rather than into the storm drainage system.
- **Policy k.3.** Set sewer fees at a rate sufficient to maintain and, when necessary, replace the system.
- **Policy l.1.** Set storm drain fees at a rate sufficient to maintain and, when necessary, replace and upgrade the system.
- **Policy m.1.** Develop alternatives for long-term water supply both within and outside the framework of the Water Management District and the California American Water Company.
- **Policy m.2.** Encourage continued development of the City's water supply system to meet established fire flow standards (including reservoirs, mains, and hydrants).
- **Policy m.3.** Identify the current unmet community needs that require water, and establish priorities so that the most essential land uses are provided for.
- **Policy n.1.** Continue to provide specific waste reduction and recycling programs for users, such as manufacturing, restaurant, business, military, and residential customers.
- **Policy n.3.** Implement waste and recycling enclosure standards for all new developments and remodels.

City of Salinas General Plan

The City of Salinas General Plan (City of Salinas 2002, LU-14, COS-12:COS-13, H-20) was adopted in 2002. The City is currently updating the Plan. Since the last comprehensive update in 1988, the city grew substantially and is now the largest city in Monterey County. The major focus of this General Plan is how to protect valuable agricultural resources while promoting a diversified economy. This General Plan includes the following elements: Land Use, Community Design, Housing, Conservation/Open Space, Circulation, Safety and Noise (City of Salinas 2002).

- **Policy COS-7.11.** Develop and maintain an integrated system of open-space corridors and trails along utility easements, power-transmission-line right-of-way, the reclamation ditch, stream banks, drainageways, slopes, and other natural features.

The City of Salinas General Plan also addresses water supply and water use. The General Plan includes Policy H-2.7 that supports public education programs around water conservation and provides homeowners with low cost or free water efficiency improvements for existing housing units.

City of Soledad General Plan

The City of Soledad adopted its General Plan in 2005 (City of Soledad 2005, VI-6, VII-4, VIII-10) which is currently undergoing updates. Example policies within the General Plan that are relevant to utilities and service systems are listed below:

- **Policy S-1.** The City shall ensure through the development review process that adequate public facilities and services are available to serve new development. New development shall not be allowed until adequate public services and facilities to serve such development are provided. Where existing facilities are inadequate, new development may only be approved when the following condition are met:
  a. The developer and/or City can demonstrate that all necessary public facilities will be adequately financed and installed in time (through fees and other means); and
  b. The facilities improvements are consistent with applicable facility plans approved by the City or other agencies in which the City it a participant.
- **Policy S-2.** The City shall plan for the expansion of needed water and sewer infrastructure including, but not limited to, the expansion of water production, storage and distribution facilities, the expansion of wastewater collection and treatment capacity, and storm drainage facility expansion.
- **Policy S-8.** The City shall promote the efficient use of water and reduced water demand by:
  a. Requiring water conserving design and equipment in new construction;
  b. Encouraging water conserving landscaping and other conservation measures;
  c. Encouraging the retrofitting of existing fixtures with water conserving fixtures.
- **Policy S-10.** The City will manage the increase in water demand from new development to help ensure groundwater resources are not overdrafted. The City will work with Monterey County and public and private water entities to plan for the efficient, long term management of groundwater resources.
- **Policy S-12.** The City shall encourage the use of natural drainage systems where feasible to preserve and enhance natural features.
- **Policy S-14.** The City shall strive to improve the quality of urban stormwater runoff and quality of groundwater recharge through the use of appropriate mitigation measures including, but not limited to, infiltration/sedimentation basins, oil/grit separators, and other management practices, including storm water retention.

- **Policy S-15.** The City shall require new development to adequately mitigate increases in stormwater peak flows and/or volume. Mitigation measures shall take into consideration impacts on adjoining properties and impacts on groundwater recharge related to existing and proposed water wells.
- **Policy S-16.** The City shall encourage project designs that minimize drainage concentrations and impervious coverage and maintain, to the extent feasible, natural site drainage conditions. Drainage onto adjacent properties shall be restricted to pre-project levels minus any runoff from the area to be developed.
- **Policy S-18.** The City shall coordinate mitigation measures with responsible agencies (including California Regional Water Quality Control Board, Monterey County Environmental Health Department, and Monterey County Water Resources Department) for the control of storm drains, the monitoring of discharges and the implementation of measures to control pollutant loads in urban storm water runoff.
- **Policy S-26.** The City shall promote maximum use of solid waste source reduction, recycling, composting and environmentally safe transformation of wastes.
- **Policy S-27.** The City shall require that all new development complies with applicable provisions of the Monterey County Integrated Waste Management Plan.

San Benito County

San Benito County General Plan

The San Benito County 2035 General Plan (San Benito County 2015a, 7-2:7-11, 8-2) sets a clear direction for the future of the county and includes goals, policies, and programs necessary to achieve the community's vision and guiding principles. Example policies within the General Plan that are relevant to utilities and service systems are listed below:

- **Policy PFS-1.1.** The County shall ensure that adequate public facilities and services essential for public health and safety are provided to all county residents and businesses and maintained at acceptable service levels. Where public facilities and services are provided by other agencies, the County shall encourage similar service level goals.

The County's General Plan also contains goals pertaining to water supply. General Plan Goal PFS-3 is to "ensure reliable supplies of water for unincorporated areas to meet the needs of existing and future agriculture and development, while promoting water conservation and the use of sustainable water supply sources." Related policies under Goal PFS-3 include water district support (PFS-3.1), water rights protection (PFS-3.3), drought response (PFS-3.5), groundwater management (PFS-3.7) and integrated management (PFS-3.8).

City of Hollister General Plan

The City of Hollister adopted its General Plan in 2005, which is currently being updated (City of Hollister 2005, 5.11, 5.14, 6.8). Example policies within the General Plan that are relevant to utilities and service systems are listed below:

- **Policy CSF1.1.** Ensure that future growth does not exceed the capabilities and capacity of local public services such as wastewater collection and treatment, local water supply systems, fire and police protection, maintenance of streets and roads, local school systems, parks and recreational facilities, and landfill capacity, and ensure that public services meet Federal and State standards and are available in a timely fashion.
- **Policy CSF2.4.** Encourage development in those portions of the Hollister Planning Are which are already serves by the local water supply systems or to which water supply systems can reasonably be extended.

Santa Cruz County

Santa Cruz County General Plan

The Santa Cruz County Board of Supervisors adopted the most recent iteration of the General Plan and Local Coastal Program in 2022, though it was not effective until 2024. Chapter 7, Parks, Recreation, and Public Facilities of the General Plan and Local Coastal Program contain policies relevant to utilities and service systems (Santa Cruz County 2024, 5-118, 7-20, 7-36). Example policies within the General Plan that are relevant to utilities and service systems are listed below:

- **Policy PPF-4.1.1.** Coordinate with all water agencies and water management agencies to ensure that land use and growth management decisions are linked directly to the availability of adequate, sustainable public and private water supplies.
- **Policy PPF-4.1.3.** Review all new development proposals to assess impacts on municipal water systems, County water districts, or small water systems. Require that either adequate service is available or that the proposed development provide mitigation of its impacts as a condition of project approval.
- **Policy PPF-4.1.6.** Utilize the best available methods for water conservation in new developments. Work with all water agencies to implement demand management programs and water conservation measures. Require the use of water-saving devices such as ultra low-flow fixtures and native drought-resistant planting in new development projects to promote ongoing water conservation.
- **Policy PPF-4.2.5.** Require new development to pay its full fair share of downstream sewer system improvements needed. In areas where cumulative sewer capacity is a problem, as indicated by the CDID, require all development to make required downstream improvements or be appropriately limited until downstream improvements are made.
- **Policy PPF-4.2.6.** Require developers, including public agencies, to locate and size new systems to best serve all areas anticipated to require sewer service.
- **Policy PPF-4.5.1.** Establish, in conformance with state law, materials recovery through recycling, reuse and composting, as the primary and fundamental strategy of solid waste management by the County, with landfill disposal as a secondary and essential component. Designate materials recovery and reuse projects as a funding priority in allocating capital expenditures for solid waste management

- **Policy PPF-4.5.2.** Take into account the whole materials management system to achieve a zero waste goal by focusing on reducing and eliminating materials from entering into the waste stream first and foremost; as a secondary strategy focus on reusing materials; and as a tertiary strategy recycling and composting all remaining materials for their highest and best use.
- **Policy PPF-4.6.9.** Support increased energy efficiency in new and existing buildings and public facilities.

City of Scotts Valley General Plan

The City of Scotts Valley adopted its most recent General Plan in 2023. Example policies within the General Plan that are relevant to utilities and service systems are listed below (City of Scotts Valley 2023, LU-29, OSC-22, CSF-13, CSF-21):

- **Policy OSC-1.2.** Continue to partner with and support federal, state, and local agencies in regional planning and management initiatives to promote and enhance water quality in Scotts Valley and the region. Participate in efforts to reduce stormwater and urban runoff impacts to water quality, restoration efforts, and regional mitigation, monitoring, and public education programs.
- **Policy OSC-3.1.** Continue to partner with and support federal, state, and local agencies in regional planning and management initiatives to promote and enhance water quality in Scotts Valley and the region. Participate in efforts to reduce stormwater and urban runoff impacts to water quality, restoration efforts, and regional mitigation, monitoring, and public education programs.
- **Policy OSC-3.7.** As part of the environmental review process, and in cooperation with the applicable water districts, require new development to evaluate the impact to local water resources. Where deemed appropriate, mitigation may include construction of recharge improvements.
- **Policy OSC-3.9.** Require new development, public and private, to meet or exceed state stormwater requirements and incorporate best management practices to treat, infiltrate, or filter stormwater runoff and reduce pollutants discharged into the storm drain system during construction and post-construction, to the maximum extent practicable.
- **Policy OSC-3.14.** Require new development to protect water infiltration, purification, and retentive functions of natural systems. Drainage plans shall be designed to complement and utilize existing drainage patterns and systems, providing drainage for the developed area while minimizing the potential for erosion.
- **Policy OSC-3.18.** Require new development to implement best management practices that reduce stormwater runoff and water quality impacts associated with the construction and operation of the project.

City of Santa Cruz General Plan

The City of Santa Cruz 2030 General Plan (City of Santa Cruz 2019, 81,111, 113) was adopted in 2012 and amended in 2019. Example policies within the General Plan that are relevant to utilities and service systems are listed below:

- **Policy CC3.6.** Coordinate major land use planning decisions in all three jurisdictions served by the City water system based on water supply availability.
- **Policy CC4.1.** Provide an adequate and environmentally sound wastewater collection, treatment, and disposal system.
- **Policy CC6.1.** Lead the community in recycling and in reducing waste in an effort to achieve the goal of Zero Waste.

City of Capitola General Plan

The City of Capitola adopted the General Plan in 2014 and later amended the document in 2019 (City of Capitola 2019, LU-41, OSC-20). Example policies within the General Plan that are relevant to utilities and service systems are listed below:

- **Policy OSC-8.2.** Minimize, avoid, or eliminate non-point source pollution by controlling stormwater runoff, polluted dry weather runoff, and other pollution, in compliance with Capitola's National Pollutant Discharge Elimination System (NPDES) Permit and Stormwater Management Plan.
- **Policy OSC-8.3.** Require all new development, public and private, to meet or exceed State stormwater requirements and incorporate best management practices to treat, infiltrate, or filter stormwater runoff and reduce pollutants discharged into the storm drain system and surrounding coastal waters during construction and post-construction, to the maximum extent practicable.
- **Policy OSC-11.1.** Work with Green Waste Recovery to increase community diversion of solid waste to 60 percent by 2020.
- **Policy OSC-11.2.** Increase the City government waste diversion rate to 75 percent by expanding reduction, recycling, and composting programs; practicing reuse; conducting waste audits; and promoting the purchase of environmentally friendly office products.
- **Policy OSC-11.3.** Continue to require mandatory recycling of building demolition materials.

City of Watsonville General Plan

The City adopted the existing Watsonville 2005 General Plan in 1994 (City of Watsonville 1994, 107, 125:126, 165). Example policies within the General Plan that are relevant to utilities and service systems are listed below:

- **Policy 11.C.** The water system shall be designed, constructed and managed to provide a sufficient quantity of appropriate-quality water for the existing and planned community

Groundwater Sustainability Plans

As discussed in Section 4.10, *Hydrology and Water Quality,* there are multiple groundwater subbasins in the AMBAG region, each of which has a designated groundwater sustainability agency (GSA) responsible for developing and implementing a groundwater sustainability plan (GSP) for the respective basin. The Salinas Valley Basin GSA is responsible for developing and implementing a GSP for the greater Salinas Valley Groundwater Basin, which is comprised of

multiple subbasins. In January 2020, the California Department of Water Resources (DWR) approved the Salinas Valley Basin GSA's Final GSP for the Salinas Valley 180/400-ft. Aquifer Subbasin, which covers 89,700 acres and was identified by the California DWR as being a High Priority basin. The GSP reports a general decline in groundwater elevations, annual loss of groundwater storage, threat of seawater intrusion, and elevated nitrate concentrations. Considering these threats, the GSP projects that pumping would need to be lowered by about seven percent to meet the long-term sustainable yield for the Salinas Valley 180/400-ft. Aquifer Subbasin. The GSP identifies actions to encourage groundwater recharge, which focus on agriculture (Salinas Valley Basin Groundwater Sustainability Agency 2020). A GSP 5-Year Evaluation under SGMA was submitted to DWR for review in January 2025 (Salinas Valley Basin Groundwater Sustainability Agency 2025).

In addition to the Salinas Valley Basin GSA, other GSAs within the AMBAG region include the Santa Cruz Mid-County Groundwater Agency, which developed a GSP for the Santa Cruz Mid-County Groundwater Basin, also identified by the DWR as a High Priority basin. The Santa Cruz Mid-County Basin GSP was approved by the California DWR on June 3, 2021. The GSP addressed, among other topics, seawater intrusion which is actively affecting this basin due to over-pumping that has lowered groundwater elevations in the coastal portion of the basin, and is the main threat to the sustainability of the basin. Lower water demand since 1995 has reduced groundwater pumping, but modeling indicates that supplemental water supply is still needed to achieve groundwater sustainability. To prevent additional seawater intrusion, the GSP recommends continuing to conserve water, manage demand, and redistribute municipal groundwater pumping, while adding efforts to improve aquifer storage and recovery, increase water transfers, add distributed stormwater managed aquifer recharge, and use advanced purified wastewater (Santa Cruz Mid-County Groundwater Agency 2019). A GSP 5-Year Evaluation under SGMA was submitted to DWR for review in January 2025 (Santa Cruz Mid-County Groundwater Agency 2025).

As shown in Section 4.10, *Hydrology and Water Quality*, Table 4.10-2, GSPs are currently under development for most groundwater subbasins in the AMBAG region. The Salinas Valley Basin GSA has completed and submitted GSPs for the Salinas Valley Groundwater Basin, which also address other High Priority basins in accordance with the Sustainable Groundwater Management Act (SGMA)-required timeline. These High Priority basins include the Salinas Valley-Langley Area Subbasin and the Salinas Valley-East Side Aquifer Subbasin, which were required to have a DWR-approved GSP in place by 2022. Similarly, the DWR-designated Medium Priority basins have also been addressed by a GSP in accordance with the SGMA-required timeline, including the Monterey, Carmel Valley, Forebay Aquifer, and Upper Valley Aquifer Subbasins. San Benito County Water District completed a GSP for the three Medium Priority basins within the county by 2022, including the Bolsa, Hollister, and San Juan Bautista Subbasins. In addition, Santa Cruz County is now implementing approved GSPs for the Santa Margarita and Corralitos-Pajaro Valley. All of these basins are now operating under approved GSPs and are in the 20-year implementation phase, during which they must demonstrate progress toward achieving groundwater sustainability. These GSPs that were submitted in 2022 are subject to 5-Year Evaluations under SGMA with their first updates due in 2027.

In accordance with SGMA, the purpose of a GSP is to facilitate the attainment and maintenance of sustainable groundwater conditions within the respective basin. Within the 2050 MTP/SCS area, there are multiple groundwater subbasins, several of which are currently being managed in accordance with a DWR-approved GSP, and most of which currently have a GSP in development by the respective GSA. Each GSP identifies measures to encourage groundwater recharge and improve sustainable conditions, including with respect to seawater intrusion and associated effects on water supply availability. To characterize appropriate actions required to achieve and maintain sustainable conditions in a given groundwater basin, the GSA considers the approved and planned development types and intensities within the GSP study area, to anticipate how water demands may fluctuate in the future.

Adjudicated Areas

When water users within a basin are in dispute over legal rights to the water, a court can issue a ruling known as an adjudication, which determines and allocates water rights for the groundwater basin. Adjudications can cover an entire basin, a portion of a basin, or a group of basins and all non-basin locations between. The court decree will define the area of adjudication. The court typically appoints a watermaster to administer the court's decree. Adjudicated basins are not subject to SGMA.

In basins or areas where a lawsuit is brought to adjudicate, the groundwater rights of all the overliers and appropriators are determined by the court.

The court also decides:

1. Who the water rights owners are.
2. How much groundwater those rights owners can extract.
3. How the groundwater area will be managed. Often, a watermaster is emplaced by the court to manage the ownership of rights and water use.

Within the AMBAG region, the Seaside Basin is the only adjudicated basin.

Stormwater Discharges from Municipal Sources

As described in Section 4.10, *Hydrology and Water Quality*, to prevent harmful pollutants from being washed or dumped into MS4s, certain operators are required to obtain NPDES permits and develop stormwater management programs (SWMPs). The SWMP describes the stormwater control practices that will be implemented consistent with permit requirements to minimize the discharge of pollutants from the sewer system. There are many MS4 permittees in the AMBAG region. Some examples of MS4 permittees in the region including the City of Santa Cruz, City of Capitola, City of Hollister, City of Monterey, and County of Monterey. Cities and counties within the AMBAG region are in charge of regulating and permitting stormwater permits within their respective jurisdictions. Details of local regulations for stormwater permits are provided in Section 4.10, *Hydrology and Water Quality.*

Solid Waste Plans

There are various plans and ordinances in effect within the AMBAG region that are intended to reduce the amount or types of solid waste that goes to landfills. For example, each county in the AMBAG region, as well as most of the cities within the counties have a variation of a reusable bag ordinance. These ordinances are intended to reduce the number of plastic shopping bags that are disposed in landfills. There are also adopted solid waste plans applicable to the AMBAG region. For example, the County of Santa Cruz has its *Zero Waste Plan for Santa Cruz County* (County of Santa Cruz 2015). The Zero Waste Plan is a long-term goal for the County and set a 75 percent diversion rate by the year 2010, and additional diversion goals for future years.

4.17.3 Impact Analysis

a. Methodology and Significance Thresholds

Refer to Section 4.10, *Hydrology and Water Quality*, for a discussion of the potential for the 2050 MTP/SCS to substantially decrease groundwater supplies or interfere substantially with groundwater recharge, or to conflict with or obstruct implementation of a sustainable groundwater management plan.

This analysis includes a program-level, qualitative assessment of impacts related to utilities and service systems. Impacts related to these resource areas are more localized in nature, and therefore the analysis is qualitative and focuses on the existing regulations, standards, and policy measures to address these localized impacts. This evaluation of utilities and service system impacts assumes that construction and development under the 2050 MTP/SCS would adhere to applicable federal, State, and local regulations and would conform to appropriate standards in the industry, as relevant for individual projects. Where existing regulatory requirements or permitting requirements exist that are law and binding on responsible agencies and project sponsors, it is reasonable to assume that they would be implemented, thereby reducing impacts.

Appendix G of the CEQA Guidelines identifies the following criteria for determining whether a project's impacts would have a significant impact on utilities and service systems:

1. Require or result in the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction of which could cause significant environmental effects;
2. Result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments;
3. 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;
4. Not comply with federal, state and local management and reduction statutes and regulations related to solid waste; or
5. Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years.

b. Project Impacts and Mitigation Measures

The following section describes utilities and service system impacts associated with the transportation improvements and future land use scenario included in the 2050 MTP/SCS. In general, implementation of proposed transportation improvements and the reasonably foreseeable future development facilitated under the land use scenario envisioned by the 2050 MTP/SCS would result in the utilities and service system impacts as described in the following section.

Threshold 1:	Would the project 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?
Threshold 2:	Would the project result in a determination by the wastewater treatment provider which 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?

Impact UTIL-1 PROPOSED TRANSPORTATION IMPROVEMENTS AND LAND USE PROJECTS ENVISIONED BY THE 2050 MTP/SCS WOULD REQUIRE OR RESULT IN THE RELOCATION OR CONSTRUCTION OF NEW OR EXPANDED WATER, WASTEWATER TREATMENT, STORMWATER DRAINAGE, ELECTRIC POWER, NATURAL GAS, OR TELECOMMUNICATIONS FACILITIES, THE CONSTRUCTION OF WHICH WOULD CAUSE SIGNIFICANT ENVIRONMENTAL EFFECTS. THIS IMPACT WOULD BE SIGNIFICANT AND UNAVOIDABLE.

Envisioned 2050 MTP/SCS land use development would result in a need for new or expanded water and wastewater treatment facilities to accommodate demand in specific areas that exceeds the capacity at existing facilities. Transportation improvements would not lead to the construction of projects that include habitable residences, commercial buildings, or industrial uses, but projects implemented under the 2050 MTP/SCS would introduce additional water demands to the AMBAG region. Most transportation improvements involve modification of existing facilities and would not result in a substantial increase in landscaped areas that require irrigation. However, future transit projects with restrooms envisioned by the 2050 MTP/SCS would require potable water, such as the King City Multimodal Transit Station (MON-KCY053-CK). As described below in Impact UTIL-4, water supply could be insufficient for meeting demand. In some instances, wastewater treatment capacity may need to be expanded along with the use of advanced treatment technology, reclaimed water distribution, or groundwater recharge. In combination, proposed transportation improvements and land use projects envisioned by the 2050 MTP/SCS would require construction or expansion of water or wastewater treatment facilities or result in the determination by a wastewater treatment provider that it is has inadequate capacity to serve future demand. Depending on the exact timing and location of future development, it may become necessary to construct new water and wastewater treatment facilities or expand existing facilities to maintain adequate water supply and wastewater treatment capacity. The construction of new or expanded water and wastewater

treatment facilities could result in potentially significant impacts, depending on their location and design and the environmental resources present where the facilities are located.

The proposed 2050 MTP/SCS would result in an increase of approximately 43,716 new housing units through this horizon year. Development of the remaining acres outside of existing urban areas could be composed of a variety of land uses and impervious surfaces (e.g., paved areas, building rooftops, parking lots) that would result in incremental increases in the volume and rate of stormwater runoff, and possibly require the expansion or construction of new stormwater drainage facilities. Urban infill can also increase impervious surfaces by converting permeable vacant or underused parcels into land with more paving or structures. Redevelopment can also increase the amount and rate of runoff by discharging greater amounts of water on a site than before development, typically because of excessive landscape irrigation. Infrastructure upgrades would accommodate the stormwater and water quality treatment needs of the individual development. As described in Section 4.10, *Hydrology and Water Quality*, the Clean Water Act NPDES MS4 Phase I and Phase II requirements compel agencies and developments to implement SWMPs, which in turn require the implementation of source and treatment control measures. NPDES MS4 permittees are also required to develop and enforce ordinances and regulations to reduce the discharge of sediments and other pollutants in runoff and must verify compliance. New development that would introduce 10,000 or more square feet of new impervious surfaces would be required under by NPDES MS4 permit to incorporate LID strategies such as stormwater reuse, onsite infiltration, and evapotranspiration. Some typical BMPs to meet regulatory standards for project operation include erosion control and revegetation programs, LID, alternative discharge options and integrated pest management techniques in landscaped areas. During operations and maintenance of envisioned projects, operational BMPs would result in compliance with applicable stormwater runoff discharge permits. In addition, consistent with the Post-Construction Stormwater Management Requirements for development projects in the central coast region (February 2013), post project stormwater flows from a project site are required to be the same or less than pre-project stormwater flows.

The infill nature of the 2050 MTP/SCS development pattern, combined with compliance with existing stormwater regulations that mitigate runoff flows, would result in less than significant impacts on the stormwater capacity of existing systems because much of the growth would occur on already impervious land built to lower standards and the slight increase of urbanized land would have to comply with current standards. However, it can reasonably be assumed that development outside of urbanized areas would require the construction of new stormwater drainage systems that may create adverse environmental effects.

Likewise, some transportation projects would also increase impervious surface area compared to existing conditions, such as transportation projects that involve adding new or additional travel lanes to paved roads. Depending on the location and design specific to transportation projects included in the 2050 MTP/SCS, stormwater runoff may be captured in existing storm drain systems and conveyed to local or regional wastewater treatment facilities. In addition, roadways, such as state highways, are often adjacent to pervious surfaces, such as gravel shoulders, agricultural fields, or other unpaved surfaces. Runoff from the roadway surface is able to flow overland into these pervious areas and infiltrate the ground, reducing impacts to the local

stormwater system. For other transportation projects, additional drainage infrastructure that results in additional ground disturbance would be required.

As discussed in Section 4.6, *Energy*, certain transportation projects such as highway capacity expansions within the AMBAG region may induce travel demand and result in increased energy consumption. However, many projects included in the 2050 MTP/SCS such as bikeway and pedestrian improvements, rail and transit expansions, and Transportation System Management and Demand Management initiatives, are designed to enhance access to alternative transportation modes and reduce overall energy use. Electricity and natural gas services for these projects would be provided by utility providers such as Pacific Gas & Electric and Central Coast Community Energy. The 2050 MTP/SCS supports a transition away from petroleum-based transportation and encourages the adoption of fuel-efficient technologies. In combination with ongoing improvements to State fuel efficiency standards and mandates for alternative fuel use, these efforts are expected to reduce overall energy demand. As a result, existing utility providers are anticipated to have sufficient capacity to serve future transportation projects within the AMBAG region. However, development occurring outside of established urbanized areas may lack access to existing energy infrastructure and could require the construction of new electric power or natural gas facilities that may create adverse environmental effects. Overall, implementation of the 2050 MTP/SCS may require new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunications facilities or the relocation of existing facilities. The construction or relocation of these facilities may have effects related to construction and to conversion of undeveloped land. Therefore, these impacts would be significant.

Mitigation Measures

For transportation projects under their jurisdiction, TAMC, SBtCOG, and SCCRTC shall implement, and transportation project sponsor agencies can and should implement, the following mitigation measures developed for the 2050 MTP/SCS program where applicable for transportation projects that require new or expanded water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities, and where feasible and necessary based on project and site specific considerations. Cities and counties in the AMBAG region, and other utility providers, can and should implement these measures, where relevant to land use projects implementing the 2050 MTP/SCS. Project specific environmental documents may adjust these mitigation measures as necessary to respond to site specific conditions.

UTIL-1(a) Water and Wastewater Treatment Facilities

During the CEQA review process for individual facilities, TAMC, SBtCOG, and SCCRTC shall implement, and transportation project sponsor agencies, and cities and counties in the AMBAG region and other utility providers with responsibility for the construction of new water or wastewater treatment and collection facilities or the expansion of existing facilities can and should apply necessary mitigation measures to reduce significant environmental impacts associated with the construction or expansion of such facilities. The environmental impacts

associated with such construction or expansion should be avoided or reduced through the imposition of conditions required to be followed by those directly involved in the construction or expansion activities. Such conditions should include those necessary to avoid or reduce impacts associated with air quality, noise, traffic, biological resources, cultural resources, greenhouse gas emissions, hydrology and water quality and others that apply to specific construction or expansion of water or wastewater treatment and collection facilities projects.

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for transportation projects are RTPAs and transportation project sponsor agencies. Implementing agencies are cities, counties, and utility agencies for land use projects. This mitigation measure shall, or can and should, be applied during project permitting and environmental review.

UTIL-1(b) Stormwater Facilities

During the CEQA review process for individual facilities, TAMC, SBtCOG, and SCCRTC shall implement, and transportation project sponsor agencies, and cities and counties in the AMBAG region and special districts with responsibility for the construction of new stormwater drainage facilities or the expansion of existing facilities to adequately meet projected capacity needs can and should apply necessary mitigation measures to avoid or reduce significant environmental impacts associated with the construction or expansion of such facilities. The environmental impacts associated with such construction or expansion should be avoided or reduced through the imposition of conditions required to be followed by those directly involved in the construction or expansion activities. Such conditions should include those necessary to avoid or reduce impacts associated with air quality, noise, traffic, biological resources, cultural resources, greenhouse gas emissions, hydrology and water quality, and others that apply to specific construction or expansion of storm water drainage facilities projects.

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for transportation projects are RTPAs and transportation project sponsor agencies. Implementing agencies are cities, counties, and utility agencies for land use projects. This mitigation measure shall, or can and should, be applied during project permitting and environmental review.

UTIL-1(c) Stormwater Control Methods

During the CEQA review process for individual facilities, TAMC, SBtCOG, and SCCRTC shall implement, and transportation project sponsor agencies can and should incorporate stormwater control, retention, and infiltration features, such as detention basins, bioswales, vegetated median strips, and permeable paving, early into the design process to ensure such features are analyzed during environmental review. Implement mitigation measures identified for such features on a project specific basis, where feasible and necessary based on project and site specific considerations.

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for transportation projects are RTPAs and transportation project sponsor agencies. This mitigation measure shall, or can and should, be applied during project permitting and environmental review.

UTIL-1(d) Power, Natural Gas, or Telecommunications Facilities

During the CEQA review process, cities, counties, and AMBAG region energy and telecommunications providers and regulatory agencies with responsibility for the construction or approval of new electric power, natural gas, or telecommunications facilities or the expansion of existing facilities to adequately meet projected capacity needs can and should apply necessary mitigation measures to avoid or reduce significant environmental impacts associated with the construction or expansion of such facilities. The environmental impacts associated with such construction or expansion should be avoided or reduced through the imposition of conditions required to be followed by those directly involved in the construction or expansion activities. Such conditions should include those necessary to avoid or reduce impacts associated with air quality, noise, traffic, biological resources, cultural resources, greenhouse gas emissions, hydrology and water quality, and others that apply to specific construction or expansion of natural gas and electric facilities projects.

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies are cities, counties, and utility agencies for land use projects. This mitigation measure shall, or can and should, be applied during project permitting and environmental review.

Significance After Mitigation

Implementation of Mitigation Measure UTIL-1(a) through UTIL-1(d) would reduce impacts associated with the construction of additional water and wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities because it would require implementing agencies to apply necessary mitigation measures to avoid or reduce significant environmental impacts associated with the construction or expansion of such facilities. However, these mitigation measures may not be feasible or effective for every project. Therefore, this impact would be significant and unavoidable. No additional mitigation measures to reduce this impact to less than significant levels are feasible.

Threshold 3: Would the project 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?

Impact UTIL-2 PROPOSED TRANSPORTATION IMPROVEMENTS AND LAND USE PROJECTS ENVISIONED BY THE 2050 MTP/SCS WOULD GENERATE SOLID WASTE IN EXCESS OF THE CAPACITY OF LOCAL INFRASTRUCTURE. THIS IMPACT WOULD BE SIGNIFICANT AND UNAVOIDABLE.

Construction activities would generate solid waste that would need to be disposed at local landfills, and individual contributions on a project by project basis would be analyzed under planning review prior to project implementation. Impacts associated with transportation infrastructure projects would be temporary and reduced by compliance with the California Green Building Code and SB 1016, which require that construction operations recycle a minimum of 50 percent of waste generated. Similarly, land use development projects would also be required to comply with a 50 percent diversion rate, as required by California's Integrated Waste Management Act of 1989 (AB 939) and a future 75 percent diversion pursuant to AB 341. Compliance with these requirements would ensure that solid waste generated from land use development would be minimized the extent practical, and that diversion rates would increase into the future, as development included in the 2050 MTP/SCS is built out.

For the non-diverted waste generated by projects included in the 2050 MTP/SCS, solid waste would require disposal in area landfills. As shown in Table 4.17-2, there are six active landfills in the AMBAG region. Between 2022 and 2050, the AMBAG region is projected to grow by 47,538 people; 43,716 housing units; and 27,799 jobs. This increase in population would result in increased generation of solid waste and would potentially exceed local landfill capacity.

Land use development projects undertaken with implementation of the 2050 MTP/SCS would be required to comply with federal, State, and local statues and regulations related to solid waste, including County and City General Plans. Local jurisdictions also have goals and policies for recycling and diversion of solid waste to ensure compliance such as AB 939 which requires that all California counties provide at least 15 years of ongoing landfill capacity.

While there are regulations in place intended to reduce solid waste generation, implementation of the 2050 MTP/SCS would result land use development that would not occur evenly around the region. Areas with the most growth would generate waste that could exceed the current permitted capacity at local landfills. Implementation of the 2050 MTP/SCS land use development pattern and transportation projects would reduce the capacity of existing landfills, leading to earlier closure dates than currently anticipated and a need for increased landfill capacity. Therefore, this impact would be significant.

Mitigation Measures

For transportation projects under their jurisdiction, TAMC, SBtCOG, and SCCRTC shall implement, and transportation project sponsor agencies can and should implement, the following mitigation measures developed for the 2050 MTP/SCS program where applicable for transportation projects that result in impacts related to solid waste, and where feasible and necessary based on project and site specific considerations. Cities and counties in the AMBAG region can and should

implement these measures, where relevant to land use projects implementing the 2050 MTP/SCS. Project specific environmental documents may adjust these mitigation measures as necessary to respond to site specific conditions.

UTIL-2 Solid Waste Generation and Disposal

During the CEQA review process for individual facilities, TAMC, SBtCOG, and SCCRTC shall implement, and transportation project sponsor agencies, and cities and counties in the AMBAG region can and should implement, the following measures where feasible:

- Provide an easily accessible area that is dedicated to the collection and storage of non-hazardous recycling materials.
- Maintain or reuse existing building structures and materials during building renovations and redevelopment.
- Use salvaged, refurbished, or reused materials to help divert such items from landfills.
- Divert construction waste from landfills, where feasible, through means such as:
  - Submitting and implementing a construction waste management plan that identifies materials to be diverted from disposal;
  - Establishing diversion targets, possibly with different targets for different types and scales of development;
  - Helping project sponsors and implementing agencies share information on available materials with one another, to aid in the transfer and use of salvaged materials.

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for transportation projects are RTPAs and transportation project sponsor agencies. Implementing agencies are cities, counties, and utility agencies for land use projects. This mitigation measure shall, or can and should, be applied during project permitting and environmental review.

Significance After Mitigation

Implementation of Mitigation Measure UTIL-2 would reduce impacts associated with solid waste generation because it would require that land use and transportation projects apply landfill diversion strategies including reusing building materials, maintaining structures where applicable, and developing construction waste management plans. However, these mitigation measures may not be feasible or effective for every project. Therefore, this impact would remain significant and unavoidable.

Threshold 4: Would the project comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

Impact UTIL-3 PROPOSED TRANSPORTATION IMPROVEMENTS AND LAND USE DEVELOPMENT PROJECTS ENVISIONED BY THE 2050 MTP/SCS WOULD BE REQUIRED TO COMPLY WITH ALL RELEVANT STATUES AND REGULATIONS RELATED TO SOLID WASTE. THIS IMPACT WOULD BE LESS THAN SIGNIFICANT.

As discussed under Impact UTIL-1, transportation improvements and land use development projects envisioned by the 2050 MTP/SCS would be required to comply with the California Green Building Code and SB 1016, which require that construction operations recycle a minimum of 50 percent of waste generated. Similarly, land use development projects would also be required to comply with federal, State, and local statues and regulations related to solid waste, including a 50 percent diversion rate pursuant to AB 939 and a future 75 percent diversion pursuant to AB 341, as well as local jurisdiction goals and policies for recycling and diversion of solid waste. Therefore, the 2050 MTP/SCS would comply with relevant federal, state, and local statutes and regulations related to solid waste. This impact would be less than significant.

Mitigation Measures

None required.

Threshold 5: Would the project have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Impact UTIL-4 IMPLEMENTATION OF PROPOSED TRANSPORTATION IMPROVEMENTS AND FUTURE PROJECTS INCLUDED IN THE LAND USE SCENARIO ENVISIONED IN THE 2050 MTP/SCS WOULD INCREASE WATER DEMAND IN THE AMBAG REGION SUCH THAT WATER SUPPLIES MAY BE INSUFFICIENT TO SERVE ENVISIONED DEVELOPMENT. IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

Water supply in the AMBAG region consists primarily of imported surface water supply and locally produced groundwater supply. In addition, alternative and expanded water supplies include recycled water, groundwater recharge, and water conservation. Projects implemented under the 2050 MTP/SCS would introduce additional water demands to the AMBAG region. Most transportation improvements involve modification of existing facilities and would not result in a substantial increase in landscaped areas that require irrigation. However, trail and streetscaping projects proposed in the 2050 MTP/SCS, such as the Fort Ord Regional Trail and Greenway (MON-TAMC-010-TAMC) in Monterey County and the West Gateway Improvement Project (SB-COH-A13) in San Benito County, could require water for landscaping. Furthermore, new and extended roadways could include tree and shrub plantings. In addition, future transit projects with restrooms envisioned by the 2050 MTP/SCS would require potable water, such as the King City Multimodal Transit Station (MON-KCY053-CK).

Major 2050 MTP/SCS projects, particularly new and extended roadways, and parking facilities could affect groundwater supplies by incrementally reducing groundwater recharge potential. Increased impermeable surfaces associated with proposed improvements could negatively

impact natural infiltration within existing rights-of-way, however, there would be no effect on groundwater recharge if potential sites are already paved. Also, during grading and general construction activities for projects under the 2050 MTP/SCS, water supply would be needed to provide fugitive dust management. Given the current state of overdraft of many groundwater basins in the study area, and the likelihood that more than one project would be constructed simultaneously in areas with overdrafted basins, the short-term water supply impact during construction of 2050 MTP/SCS transportation projects would be significant.

It is likely that many projects involving landscaping and infill development near transit would be located in urban areas served by overdrafted groundwater basins, including the City of Watsonville and the City of Santa Cruz. Development associated with the land use scenario envisioned in the 2050 MTP/SCS may also impact water supplies requiring additional water for mixed use development and infill, as well as outlying, development. Future development envisioned under the 2050 land use scenario would increase the demand on the region's water supply. Further, increased demand on water supply driven by the increase in population coupled with increasingly common drought conditions would result in insufficient supply. Between 2022 and 2050, the AMBAG region is projected to grow by 47,538 people. Given existing reliance on and overdrafting of groundwater and anticipated continued drought it is possible that there would be insufficient water without new or expanded supply. Therefore, the impact from land use projects would be significant.

As discussed in Section 4.17.2, *Regulatory Setting,* UWMPs for the AMBAG area estimate and pursue the efficient use of available water supplies identifying short-term and long-term water demand management measures. UWMPs are generally updated every five years to account for water demand resulting from the growth envisioned in general plan updates and updated population growth forecasts. Therefore, the current UWMPs applicable to the AMBAG region generally account for the land development envisioned in the 2050 MTP/SCS because it is largely consistent with applicable general plans. In addition, SB 610/221 amended State law to improve the link between information on water supply availability and certain land use decisions made by cities and counties. Further, GSPs prepared under SGMA would be implemented to protect and regulate groundwater in the AMBAG area. These regulatory and planning programs encourage planning for anticipated water usage and thus conservation in the AMBAG area and would include consideration for the water demand anticipated by the 2050 MTP/SCS.

The forecasted AMBAG population growth, land use and transportation projects, although completed in compliance with existing regulations, would generate considerable water demand. Groundwater subbasins are already being overdrawn to support the existing population and California entered a new drought in 2020 after sustaining a five-year drought from 2012 to 2016, and experienced multiple consecutive dry years through 2022, severely straining water supplies. Although the 2023 and 2024 water years brought above-average precipitation, groundwater levels remain below normal in many monitoring wells across the state due to long-term overuse and slow recharge rates (California Water Watch 2025). In addition, although existing regulations would reduce groundwater impacts, some jurisdictions may not have local regulations, or the regulations may not apply to all projects. Therefore, the region may have insufficient water

supplies available to serve MTP/SCS demands and reasonably foreseeable future development during normal, dry, and multiple dry years, and this impact would be significant.

Mitigation Measures

For transportation projects under their jurisdiction, TAMC, SBtCOG, and SCCRTC shall implement, and transportation project sponsor agencies can and should implement, the following mitigation measures developed for the 2050 MTP/SCS program where applicable for transportation projects that have water supply impacts, where feasible and necessary based on project and site specific considerations. Cities and counties in the AMBAG region can and should implement these measures, where relevant to land use projects implementing the 2050 MTP/SCS. Project specific environmental documents may adjust these mitigation measures as necessary to respond to site specific conditions.

UTIL-4(a) General Water Conservation Measures

Agencies implementing land use and transportation projects that could increase water demand shall, or can and should, coordinate with relevant water services to ensure demand can be accommodated and identify a water consumption budget. Any existing water conservation measures that reduce demand for potable water, such as reducing water use for landscape irrigation for transportation projects or use of water-conserving fixtures in envisioned land use projects, should be employed. Reclaimed water should be used when possible.

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies are cities and counties for land use projects. This mitigation measure shall, or can and should, be applied during project permitting and environmental review.

UTIL-4(b) Water Supply for Construction Dust Suppression

Implementing agencies shall, or can and should, ensure that for all 2050 MTP/SCS projects, where feasible, reclaimed and/or desalinated water is used for dust suppression during construction activities. This measure shall, or can and should, be noted on construction plans and shall be spot checked by the implementing agency.

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for transportation and land use projects are RTPAs, transportation project sponsor agencies, and Metropolitan Planning Organizations. This mitigation measure shall, or can and should, be applied during project permitting and environmental review.

UTIL-4(c) Landscape Watering

In jurisdictions that do not already have an applicable local regulatory program related to landscape watering, implementing agencies shall, or can and should, design 2050 MTP/SCS projects that would include landscaping shall be designed with drought tolerant plants and drip irrigation. When feasible, native plant species shall be used. In addition, landscaping associated

with proposed improvements shall be maintained using reclaimed and/or desalinated water when feasible.

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for transportation projects are RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects are cities and counties. This mitigation measure shall, or can and should, be applied during project permitting and environmental review.

UTIL-4(d) Porous Pavement and Bioswale Installation

In jurisdictions that do not already have an appropriate local regulatory program related to porous pavement, implementing agencies for a 2050 MTP/SCS project that involves streetscaping, parking, transit and/or land use improvements shall, or can and should, ensure that porous pavement materials are utilized, where feasible, to allow for groundwater percolation. Additionally, if a project would substantially increase impervious surfaces the sponsor shall ensure that bioswales are installed, where feasible, to facilitate groundwater recharge using stormwater runoff from the project site while improving water quality if not already required by the appropriate jurisdiction's local regulatory programs.

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for transportation projects are RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects are cities and counties. This mitigation measure shall, or can and should, be applied during project permitting and environmental review.

Significance After Mitigation

Implementation of the above measures would reduce impacts from water supply in the AMBAG region. However, the population growth forecast coupled with existing groundwater over-drafting and regular droughts indicate that demand may outpace supply in certain areas. The land use scenario envisioned by the 2050 MTP/SCS along with 2050 MTP/SCS transportation projects would result in the need for additional water supply, even with the implementation of mitigation measures listed above. Given the overdraft conditions of area groundwater basins and other regional water supply concerns, impacts would remain significant and unavoidable. No additional feasible mitigation measures to reduce this impact to less than significant levels are available.

c. Specific MTP/SCS Projects That May Result in Impacts

Some transportation network improvements, such as road widening, extension, or signalization projects, would require increases in utility usage such as water and electricity. Service standards, performance measures, and policies related to utilities are established by local jurisdictions and regulatory agencies. At a regional scale, it is not feasible to quantify separate effects of specific projects on each type of utility in separate jurisdictions, each with a different standard for service.

Therefore, it cannot feasibly be determined which of the 2050 MTP/SCS transportation projects would potentially result in impacts to utilities without project specific design details.

4.17.4 Cumulative Impacts

a. Methodology

The cumulative analysis presented below primarily relies on a projections-based approach, using regional land use and growth forecasts for the AMBAG region and adjoining counties to evaluate cumulative conditions. The project is assessed within the existing and foreseeable future environmental setting, and a determination is made as to whether its incremental contribution would be cumulatively considerable when considered alongside both the overall envisioned land use scenario and specific large-scale planned projects. Refer to Section 6.4, *Cumulative Impacts*, in Chapter 6, *Other CEQA Required Discussions*, for a description of the cumulative impact methodology.

Impact Analysis

Generally, utilities are provided on a local or regional level, and recreational facilities are used locally or regionally. Therefore, the cumulative impact analysis area for utilities and service systems consists of the AMBAG region and the adjoining counties.

Impact UTIL-C-1 DEVELOPMENT IN THE CUMULATIVE IMPACT ANALYSIS AREA WOULD RESULT IN SUBSTANTIAL ADVERSE PHYSICAL IMPACTS ASSOCIATED WITH THE PROVISION OF NEW OR PHYSICALLY ALTERED UTILITY INFRASTRUCTURE, THE CONSTRUCTION OF WHICH COULD CAUSE SIGNIFICANT ENVIRONMENTAL EFFECTS. CUMULATIVE IMPACTS WOULD BE SIGNIFICANT. THE 2050 MTP/SCS CONTRIBUTION TO CUMULATIVE IMPACTS WOULD BE CUMULATIVELY CONSIDERABLE.

Future transportation improvements and land use projects throughout the cumulative impact analysis area would require or result in the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction of which would cause significant environmental effects. This development would also generate solid waste in excess of the capacity of local infrastructure and increase water demand in the AMBAG region such that water supplies may be insufficient to serve envisioned development. Cumulative impacts to utilities and service systems would therefore be significant. The 2050 MTP/SCS would increase demand for services and facilities to the extent that new or expanded facilities would be required, the construction of which would result in significant effects.

Water supply in the cumulative impact analysis area is derived from a variety of sources that vary depending on the location. For example, Santa Clara County derives water from sources including the Santa Clara Subbasin and LLagas Subbasin for groundwater and imported water from the Sacramento-San Joaquin Delta. Some water providers in the AMBAG region, such as the San Benito County Water District, also derive a portion of their water supply from the Sacramento-San Joaquin Delta through the Central Valley Project. Therefore, water demand from development in the AMBAG region would combine with demand from other development in the

cumulative impact analysis area. As in the AMBAG region, both groundwater and surface water supplies in portions of the cumulative impact development area may be limited. For example, according to the City of Santa Cruz Water Department's 2020 UWMP, the Water Department currently has insufficient supply to meet demand during drought years and projects that supplies will remain insufficient through at least 2035 (City of Santa Cruz 2021). Additional development in City of Santa Cruz Water Department service area boundary, including development envisioned in the 2050 MTP/SCS or development on the UC Santa Cruz campus would generate more demand for water. The cumulative development would create additional water demand, which may exceed supply in some localized areas. Cumulative impacts would be significant. The 2050 MTP/SCS may impact water supply in the AMBAG region because of the water required for land use projects and some transportation projects. Even with the implementation of Mitigation Measures UTIL-1(a) through UTIL-4(d), these impacts would be significant and unavoidable.

Overall, cumulative impacts related to utilities and service systems would be significant, and the proposed Plan's contribution to the cumulative utilities and service systems impact would be cumulatively considerable.

4.18 Wildfire

This section analyzes impacts from development and transportation projects facilitated by the 2050 MTP/SCS related to wildfires in the AMBAG region.

4.18.1 Setting

In California, responsibility for wildfire prevention and suppression is shared by federal, State, and local agencies. Federal agencies are responsible for lands in Federal Responsibility Areas. California has identified State Responsibility Areas (SRA) where the state has financial responsibility for wildland fire protection and prevention; incorporated cities and federal ownership are not included. These are managed by the California Department of Forestry and Fire Protection (CAL FIRE). All incorporated areas and other unincorporated lands are classified as Local Responsibility Areas (LRA).

a. Wildfire Behavior and Controlling Factors

Human influence on wildfire includes direct influences, such as the ignition and suppression of fires, and indirect influence through climate change, the alteration of native vegetation, and development patterns. Human-induced wildfire ignitions can change fire regime characteristics in two ways: (1) changing the distribution and density of ignitions and (2) changing the seasonality of burning activity. Human-induced ignition sources include escapes from debris and brush-clearing fires, electrical equipment malfunctions, campfires, smoking, fire play (e.g., fireworks), vehicles, and arson. Consequently, areas near human development more frequently experience fires than very remote or urban areas.

Once a fire is started, the spread and behavior of a fire become a function of fuel characteristics, terrain, and weather conditions. People have intervened deliberately and dramatically in the natural fire regime through fire suppression and, more recently, actions that affect fuel connectivity. Historically, fire suppression was used to prevent and limit wildfires. Over time, this land management practice (combined with forest regrowth after extensive logging in the late 19th century) has led to a buildup of forest fuels and an increase in the occurrence and threat of large, severe fires. Contemporary fire management practices include fuel management activities that are intended to reduce the intensity and severity of wildfires. Reducing fuels through mechanical treatments and prescribed fire have been found to be effective at reducing fire frequency, fire severity, and annual area burned when applied at the landscape scale over an extended period.

Wildfire activity is closely related to temperature and drought conditions, and in recent decades, increasing drought frequency and warming temperatures have resulted in increased fire activity and the largest, most destructive, and deadliest wildfires in California history. Climate change will continue to produce conditions that facilitate a longer fire season, which, coupled with human-caused changes in the seasonality of ignition sources, will produce more, longer, and bigger fires during more times of the year. According to California's Fourth Climate Change Assessment, Statewide Summary Report (Governor's Office of Land Use and Climate Innovation [LCI] 2018), if greenhouse gas emissions continue to rise, the frequency of extreme wildfires burning over

25,000 acres could increase by 50 percent by 2100, and the average area burned Statewide could increase by 77 percent by the end of the century.

b. California Wildfire Hazards

While all of California is subject to some degree of wildfire hazard, specific features make certain areas more hazardous. CAL FIRE is required by law to map areas of significant fire hazards based on fuels, terrain, weather, and other relevant factors (Public Resources Code [PRC] 4201-4204 and California Government Code 51175-89). 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 wildfire risk areas: 1) wildland areas that may contain substantial forest fire risks and hazards and 2) Very High Fire Hazard Severity Zones (FHSZ). Each risk area carries with it code requirements to reduce the potential risk of wildfires. Under State regulations, areas in Very High FHSZs must comply with specific building and vegetation management requirements intended to reduce property damage and loss of life in these areas.

Development that has spread into less densely populated, often hilly, areas has increased the number of people living in heavily vegetated regions that are prone to wildfire. The area where wildlands meet urban development is referred to as the wildland-urban interface (WUI) and is subject to urban wildfire. In recent years, some of the deadliest and most extensive fires in the history of the state have ignited in the WUI and spread to suburban and even urban areas (CAL FIRE 2021). In August 2020, a lightning storm ignited the River Fire in Monterey County and the CZU Lightning Complex Fire in San Mateo and Santa Cruz counties, which spread rapidly toward nearby populations and required extensive evacuation orders. The River Fire burned approximately 40,090 acres, destroyed 30 structures, and damaged 13 structures (CAL FIRE 2020a). The 2020 CZU Lightning Complex Fire burned approximately 86,510 acres across San Mateo County and Santa Cruz County and destroyed 490 structures, damaged 140 structure, and resulted in one fatality (CAL FIRE 2020b). Two days later, on August 18, 2020, the Dolan Fire ignited in Monterey County and burned approximately 124,924 acres, destroyed 14 structures, and injured 19 people (CAL FIRE 2020c). These fires are an example of the major losses that can result from a fire in the WUI.

Throughout the AMBAG region, there is a full range of conditions and fire hazards as indicated in the applicable FHSZ Maps for the region.

Monterey County

According to the CAL FIRE LRA and SRA maps, large portions of the eastern and western edges of the county are mapped as High or Very High FHSZs in SRAs and LRAs (CAL FIRE 2024). Figure 4.18-1 and Figure 4.18-2 show these FHSZs in relation to proposed transportation projects that would be facilitated by the 2050 RTP/SCS.

San Benito County

According to CAL FIRE, most of the western edge of San Benito County is classified as High and Very High FHSZs, with much of the county in the SRA (CAL FIRE 2024). Figure 4.18-3 shows the areas classified as FHSZs within the county in relation to the proposed transportation projects that would be facilitated by the 2050 RTP/SCS.

Santa Cruz County

According to the CAL FIRE, there are areas classified as moderate and high FHSZs within an SRA north of State Route (SR) 1 within the county (CAL FIRE 2024). Figure 4.18-4 shows these FHSZs in relation to the proposed transportation projects that would be facilitated by the 2050 RTP/SCS.

Figure 4.18-1 Northern Monterey County Fire Hazard Severity Zones

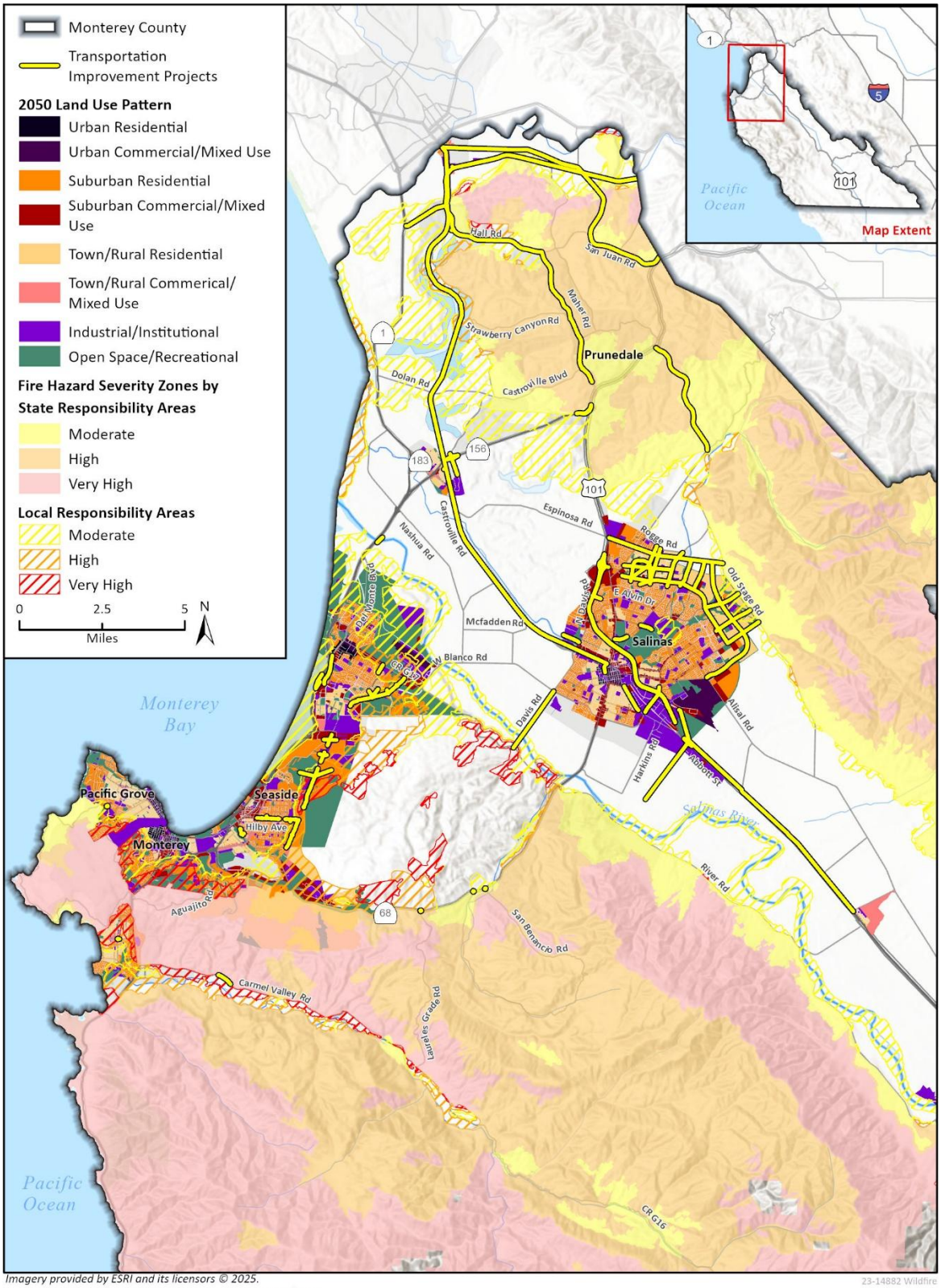


Figure 4.18-2 Southern Monterey County Fire Hazard Severity Zones

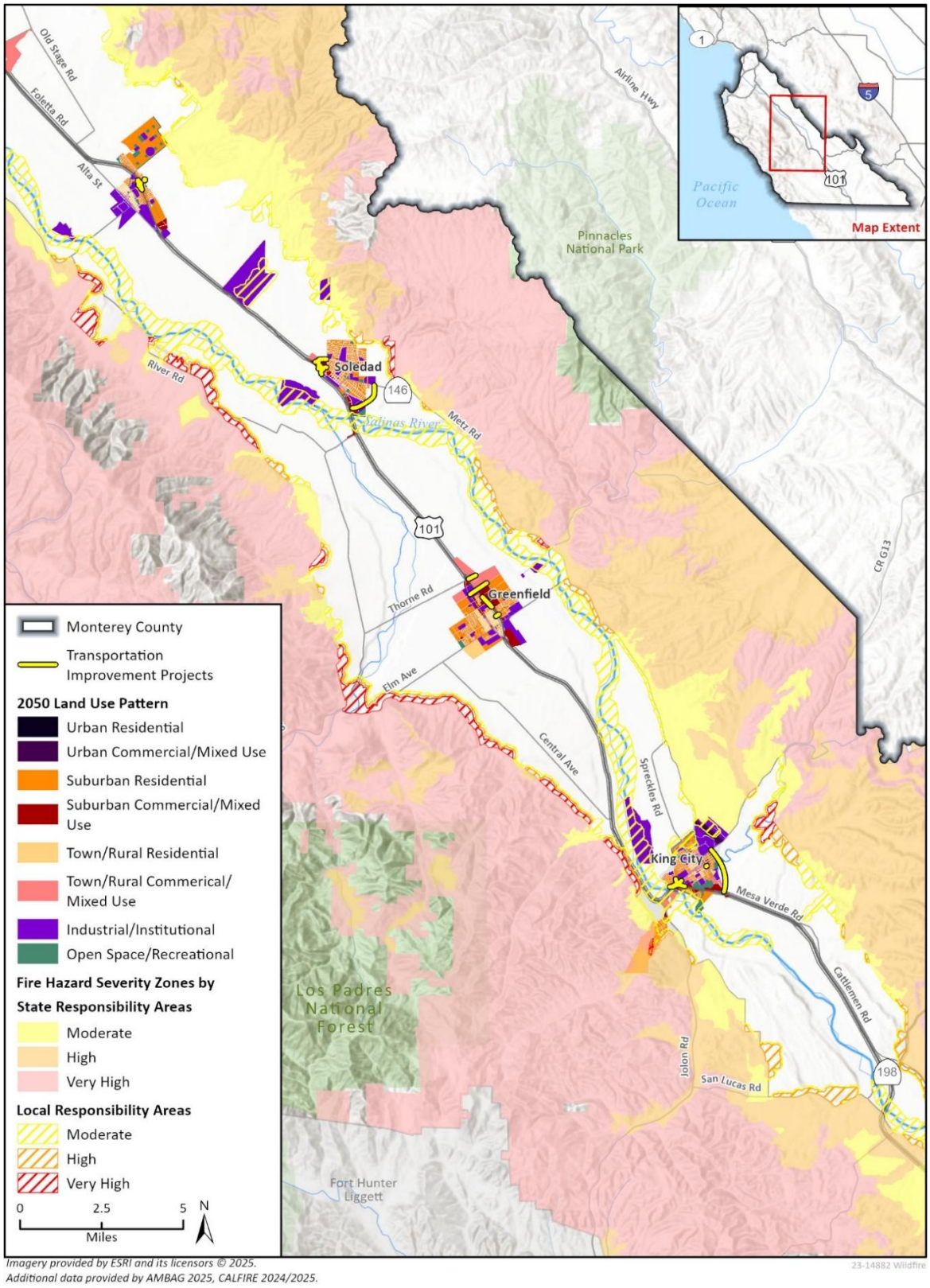


Figure 4.18-3 San Benito County Fire Hazard Severity Zones

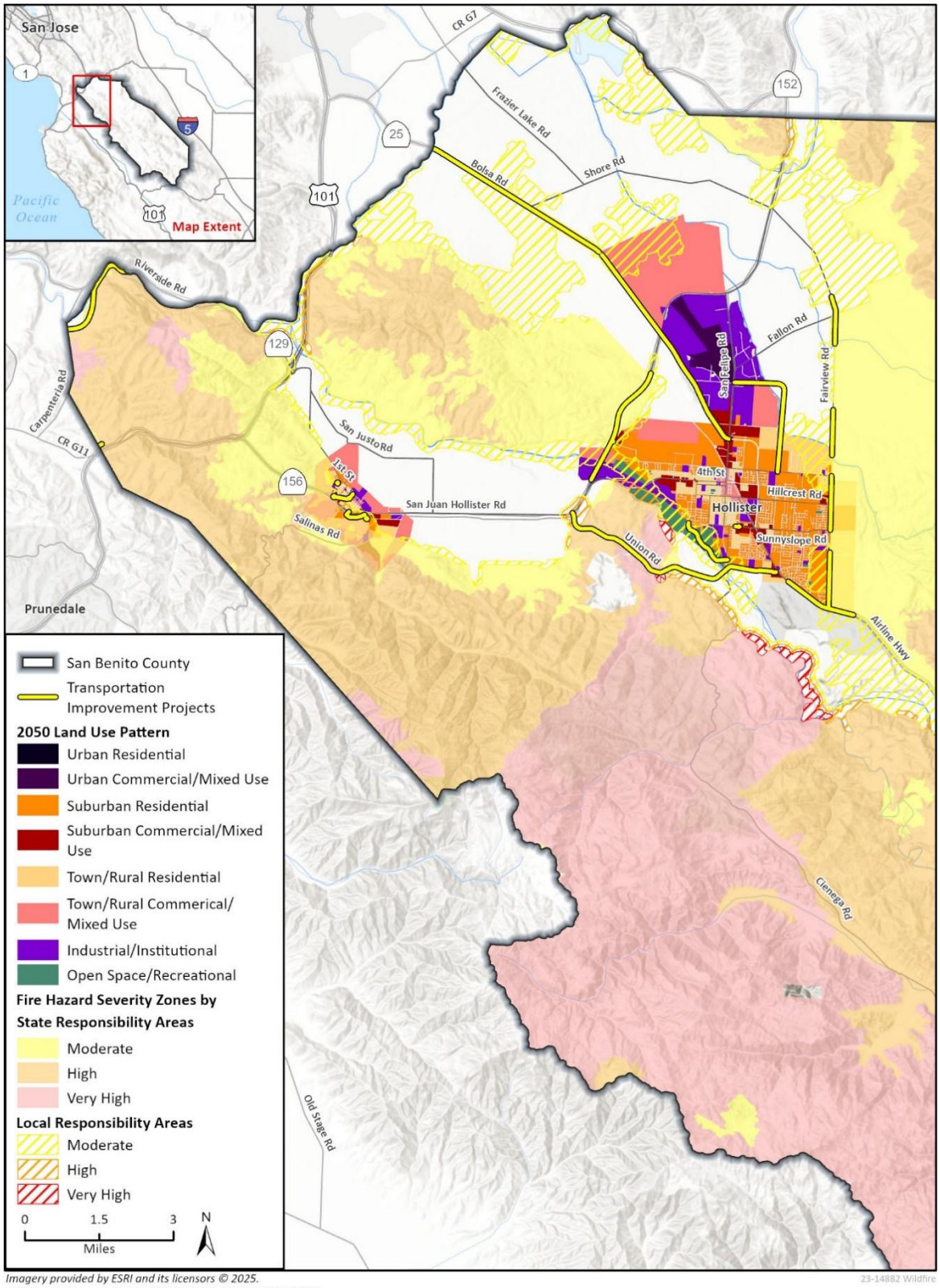
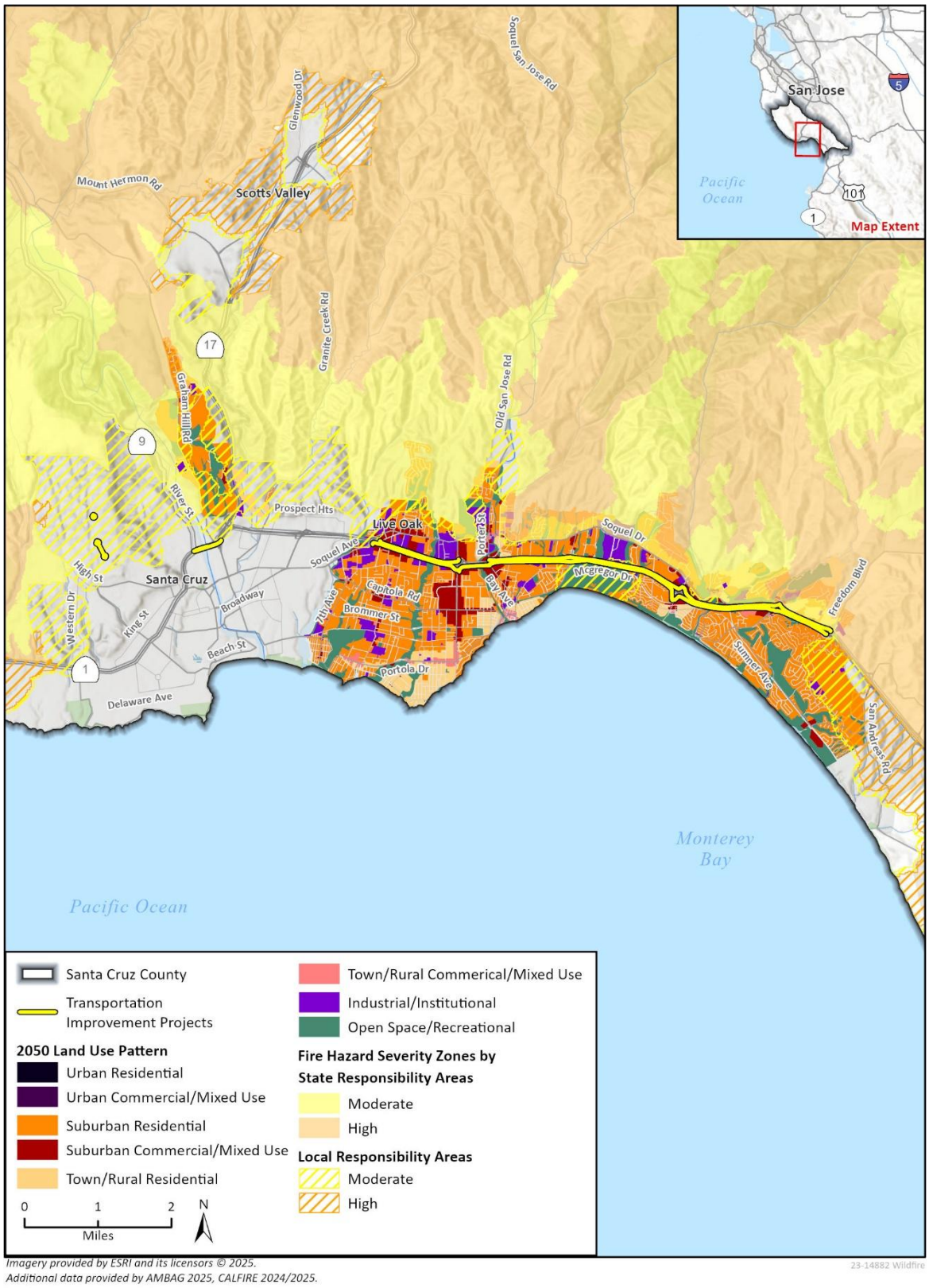


Figure 4.18-4 Santa Cruz County Fire Hazard Severity Zones



4.18.2 Regulatory Setting

a. Federal Laws, Regulations, and Policies

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 three years and is the basis for the California Fire Code (CFC) (also updated triennially). Local jurisdictions, including AMBAG region cities and counties, then adopt the CFC, in some cases with local amendments.

Federal Disaster Mitigation Act

The Disaster Mitigation Act of 2000 provided a new 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. The State of California Multi-Hazard Mitigation Plan (SHMP) complies with this act.

National Fire Plan

The U.S. Department of the Interior’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 funded to enhance the fire protection capabilities of rural fire districts and safe and effective fire suppression in the wildland/urban interface. 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.

b. State Laws, Regulations, and Policies

2024 Strategic Plan for California

The 2024 Strategic Plan prepared by CAL FIRE and the California Natural Resources Agency lays out central goals for reducing and preventing the impacts of fire in the State. The goals are meant to establish, through local, State, federal, and private partnerships, a natural environment that is

more resilient and human-made assets that are more resistant to the occurrence and effects of wildland fire.

In addition to the 2024 Strategic Plan for California, individual CAL FIRE units develop fire plans, which are major strategic documents that establish a set of tools for each CAL FIRE unit for its local area. Updated annually, unit fire plans identify wildfire protection areas, initial attack success, assets and infrastructure at risk, pre-fire management strategies, and accountability within their unit's geographical boundaries. The unit fire plan identifies strategic areas for pre-fire planning and fuel treatment as defined by the people who live and work locally. The plans include contributions from local collaborators and stakeholders and are aligned with other plans for the area.

California Building Code

The California Building Code (CBC) has been codified in the California Code of Regulations as Title 24, Part 2. Title 24 is administered by the California Building Standards Commission, which, by law, is responsible for coordinating all building standards. The purpose of the CBC is to establish minimum standards to safeguard the public health, safety, and general welfare through structural strength, means of egress facilities, and general stability by regulating and controlling the design, construction, quality of materials, use and occupancy, location, and maintenance of all building and structures within its jurisdiction. The 2022 CBC is based on the 2021 International Building Code (IBC) published by the International Code Council, though will be superseded by the 2025 CBC which is expected to become effective in January 2026. In addition, the CBC contains necessary California amendments, which are based on reference standards obtained from various technical committees and organizations, such as the American Society of Civil Engineers (ASCE), the American Institute of Steel Construction, and the American Concrete Institute. ASCE Minimum Design Standard 7-05 (ASCE 7-05) provides requirements for general structural design and includes means for determining earthquake loads, as well as other loads (e.g., flood, snow, wind), for inclusion into building codes. The provisions of the CBC apply to the construction, alteration, movement, replacement, and demolition of every building or structure, or any appurtenances connected or attached to such buildings or structures throughout California. Specifically, Chapter 7A of the California Building Code (California Code of Regulations, Title 24, Part 2) includes specific requirements related to exterior wildfire exposure. These requirements establish minimum standards to protect buildings located in FHSZs within SRAs and WUI Fire Areas. This code includes provisions for ignition-resistant construction standards for new buildings.

California Fire Code

The 2022 CFC (California Code of Regulations, Title 24, Part 9) establishes the minimum requirements consistent with nationally recognized good practices to safeguard the 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 the 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. The 2022 CFC will be superseded by the 2025 CFC which goes into effect January 1, 2026.

Wildland-Urban Interface Code

On September 20, 2007, the Building Standards Commission approved the Office of the State Fire Marshal emergency regulations amending the California Code of Regulations, Title 24, Part 2, known as the CBC. These codes, included in Chapter 7A of the CBC which was updated in 2022, include provisions for ignition-resistant construction standards in the WUI. The 2025 update to the CBC will also include an update to the WUI code, which will go into effect on January 1, 2026.

California Emergency Services Act

The California Emergency Services Act of 2008 merged the duties, powers, purposes, and responsibilities of the California Governor's Office of Emergency Services (Cal OES) and the Governor's Office of Homeland Security into a new cabinet-level agency, the California Emergency Management Agency (Cal EMA). In 2013, the Governor merged the California Emergency Management Agency with the Office of Public Safety Communications and renamed the organization Cal OES. CAL OES is responsible for overseeing and coordinating emergency preparedness, response, recovery, and homeland security activities within the California. Section 8687.7 of the California Disaster Assistance Act required the development of a Standard Emergency Management System (SEMS) program, for managing multiagency and multijurisdictional responses to emergencies in California. The Cal OES Emergency Management Systems Unit is a multi-agency group charged with methodical review, evaluation, and approval of needed improvements to SEMS. State agencies are required to use SEMS and local government entities must use SEMS in order to be eligible for any reimbursement of response-related costs under the State's disaster assistance programs.

Cal OES serves as the lead State agency for emergency management and coordinates the State response to major emergencies in support of local government. SEMS provides the mechanism by which local governments request assistance from Cal OES, and Cal OES maintains oversight of the State's mutual aid system.

State of California Emergency Plan

The Cal OES 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 (Cal OES 2023a).

California Multi-Hazard Mitigation Plan

The California Office of Emergency Services prepares the SHMP, which identifies hazard risks and includes a vulnerability analysis and a hazard mitigation strategy (Cal OES 2023b). The SHMP is required under the Disaster Mitigation Act of 2000 for the State to receive federal funding. The

Disaster Mitigation Act of 2000 requires a State mitigation plan as a condition of disaster assistance.

The SHMP represents the state's primary hazard mitigation guidance document - providing an updated analysis of the state's historical and current hazards, hazard mitigation goals and objectives, and hazard mitigation strategies and actions. The plan represents the state's overall commitment to supporting a comprehensive mitigation strategy to reduce or eliminate potential risks and impacts of disasters in order to promote faster recovery after disasters and, overall, a more resilient state. State Hazard Mitigation Plans are required to meet the Elements outlined in the Federal Emergency Management Agency (FEMA) State Mitigation Plan Review Guide (FEMA 2025).

Cal OES is responsible for the development and maintenance of the State's plan for hazard mitigation. The SHMP was last approved by FEMA as an Enhanced State Mitigation Plan in 2023. The plan is designed to reduce the effects of disasters caused by natural, technological, accidental, and adversarial/human-caused hazards. The SHMP sets the mitigation priorities, strategies, and actions for the state. The plan also describes how risk assessment and mitigation strategy information is coordinated and linked from local mitigation plans into the SHMP, and provides a resource for local planners of risk information that may affect their planning area. The State of California is required to review and revise its mitigation plan and resubmit for FEMA approval at least every five years to ensure continued funding eligibility for certain federal grant programs.

Senate Bill 1241

Senate Bill 1241 (Chapter 311, Statutes of 2012) requires cities and counties to address fire risk in SRAs and Very High FHSZs in the safety element of their general plans. It also requires cities and counties to make certain findings regarding available fire protection and suppression services before approving a tentative subdivision map or parcel map.

Assembly Bill 3074

AB 3074 amends California's defensible space requirements under PRC Section 4291 to enhance wildfire mitigation in SRAs and Very High FHSZ within LRAs. The bill introduces a "Zone 0" ember-resistant zone, requiring the removal of flammable vegetation and materials within five feet of structures to reduce wildfire ignition risks. The California Board of Forestry and Fire Protection is responsible for implementing these regulations, which apply to new construction and, upon regulatory adoption, to existing structures.

SRA Fire Safe Regulations

The SRA Fire Safe Regulations, California Code of Regulations (CCR) Title 14, Division 1.5, Section 1270 et seq. establishes CAL FIRE's basic wildland fire protection standards for new development and is applicable in all SRAs in California—areas where CAL FIRE is responsible for wildfire protection.

Executive Order N-05-19

On January 9, 2019, Governor Gavin Newsom issued Executive Order N-05-19 to address wildfire in California. Executive Order N-05-19 directs CAL FIRE, in consultation with other state agencies and departments, to recommend immediate, medium-term, and long-term actions to help prevent destructive wildfires. In response, CAL FIRE created the Community Wildfire Prevention and Mitigation Report, which contains recommendations to reduce damage from wildfires across the state. Specifically, they focus on reducing wildfire fuel (such as vegetation clearing), long-term community protection (creating defensible space in communities), wildfire prevention, and forest health (CAL FIRE 2024).

c. Local Laws, Regulations, and Policies

City and County General Plans

Local planning policies related to wildfire hazards are established in each jurisdiction's general plan, generally in the Safety Element or equivalent chapter. For emergency services, some of the relevant policies include coordinating with other agencies 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. County and city general plans in the AMBAG region are discussed below.

Monterey County

Monterey County General Plan, Safety Element

Goal S-4 in the Monterey County General Plan Safety Element seeks to minimize risks from fire, including policies that support educating citizens, maintaining a geographic information systems (GIS) layer that shows WUI risks and that is updated periodically (County of Monterey 2010). Policy S-4.9 addresses the construction and maintenance of county roadways in accord with the County Code or with the CFC.

City of Carmel-by-the-Sea General Plan, Environmental Safety Element

The City of Carmel-by-the-Sea's General Plan Environmental Safety Element includes goals and policies aimed at reducing risks to life and property from fire hazards. The City has designated Very High FHSZs primarily on its eastern and northern boundaries, where stricter building requirements apply. In these areas, construction must comply with Chapter 7A of the California Building Code, which governs materials and construction methods for exterior wildfire exposure. Additionally, all roofing materials citywide must meet Class A fire protection standards. Goal G8-2 of the Environmental Safety Element includes several policies related to avoiding and minimizing wildfire hazards, including ensuring adequate water supply for fire emergencies (Policy P8-18), vegetation management for defensible space (P8-20 and P8-21) and hardening structures within fire hazard zones (P8-19) (City of Carmel-by-the-Sea 2003).

City of Del Rey Oaks, Safety Element

The City of Del Rey Oaks General Plan Safety Element outlines goals and policies to reduce risks from fire hazards, particularly in areas adjacent to wildland-urban interfaces. The City emphasizes compliance with state regulations such as the California Building Code and the California Fire Code, and supports coordination with regional fire protection agencies (City of Del Rey Oaks 1997).

City of Gonzales General Plan, Community Health and Safety Element

The City of Gonzales addresses fire safety through its General Plan Community Health and Safety Element, which includes strategies to mitigate fire risks. The Community Health and Safety Element identified that although wildfire hazards in Gonzales are minimal due to the surrounding agricultural areas, the firefighting force consists almost entirely of volunteers. The City maintains policies for reducing fire hazards in developed and agricultural areas (City of Gonzales 2018).

City of Greenfield General Plan, Health and Safety Element

The City of Greenfield's General Plan Health and Safety Element outlines approaches to minimizing fire-related risks. Fire protection is managed locally by the Greenfield Fire Protection District, which oversees prevention and emergency response throughout the planning area. The City requires new developments to meet fire flow standards, ensure adequate emergency access, and incorporate fire-safe design features. Policies also emphasize vegetation management and interagency cooperation to reduce fire hazards. Building and fire codes are enforced to ensure property owners take proactive steps in mitigating fire risks (City of Greenfield 2005).

King City General Plan, Safety Element

King City's General Plan Safety Element integrates fire hazard reduction strategies within its broader conservation and public safety framework. The City emphasizes proactive fire prevention through vegetation management, adequate emergency access, and compliance with fire flow standards, particularly in areas near the Salinas River and adjacent wildland zones. Fire protection is provided by local services, and the City coordinates with regional agencies to enhance preparedness and response capabilities. The Safety Element also incorporates policies from the Riverbed Wildfire Prevention Plan, reflecting a commitment to reducing wildfire risks through land use planning and interagency collaboration (King City 2025).

City of Marina General Plan, Health and Safety Element

The City of Marina's General Plan Health and Safety Element emphasizes compliance with state mandates such as the California Building Code and includes provisions for mapping known fire hazard areas to avoid wildfire risks. Marina supports coordinated emergency planning, including evacuation routes and adequate water supply for fire suppression. The City also promotes land use decisions that consider fire safety, and encourages collaboration with regional agencies to enhance fire prevention and response capabilities (City of Marina 2025).

City of Monterey General Plan, Safety Element

The City of Monterey General Plan Safety Element contains goals, policies, and programs aimed at minimizing loss of life and property from fire, such as Policy a.23 which requires compliance with regulations and standards including the California Building Code, CFC , Board of Forestry Fire Safe Regulations, and California Government Code Sections 51175 and 51189 related to Very High FHSZ, policy a.24 which requires avoidance of new development in Very High Fire Hazard Severity Zones, and policy a.25 which requires a Fire Protection Plan be implemented when development in Very High Fire Hazard Severity Zones cannot be avoided (City of Monterey 2024).

City of Pacific Grove General Plan, Health and Safety Element

The City of Pacific Grove's General Plan Health and Safety Element addresses fire hazards as part of a broader strategy to protect residents and property from natural and human-made risks. The plan identifies both wildland and urban fire threats and emphasizes the importance of integrating fire safety into land use decisions. Pacific Grove supports the use of mitigation measures such as defensible space, ignition-resistant construction, and emergency access planning. Coordination with fire and emergency services is central to the City's approach, ensuring readiness and rapid response in the event of a fire. The Safety Element also reflects CAL FIRE's recommendations for identifying and managing Very High Fire Hazard Severity Zones within the city's jurisdiction (City of Pacific Grove 1994).

City of Salinas General Plan, Safety Element

The City of Salinas addresses fire safety through its General Plan Safety Element and ongoing coordination with the State Fire Marshal's Office. Recent updates have led to the designation of Moderate Fire Hazard Severity Zones within city limits, prompting Salinas to revise local ordinances and planning practices accordingly (City of Salinas 2025). The City emphasizes proactive fire risk reduction through land use planning, infrastructure standards, and emergency preparedness. Salinas supports compliance with state building and fire codes, and works collaboratively with regional agencies to monitor hazard zones and implement mitigation strategies (City of Salinas 2002).

Sand City General Plan, Public Safety and Noise Element

Sand City's General Plan and municipal policies incorporate fire safety measures aimed at protecting public health and property. The City enforces building and fire codes through its Building Department, which oversees plan checks and inspections to ensure compliance with life-safety standards. While Sand City is not located within a designated State Responsibility Area, it maintains local responsibility for fire prevention and suppression. Development projects are reviewed for fire-safe design, including adequate emergency access and water supply infrastructure. The City also coordinates with regional agencies to address broader safety concerns and ensure alignment with state regulations (Sand City 2002).

City of Seaside General Plan, Safety Element

The City of Seaside addresses fire safety through its General Plan Safety Element and local fire prevention programs. Most wildfire risks in Seaside are associated with the adjacent former Fort Ord lands to the east of the city. The Safety Element outlines policies to minimize risks from wildland and urban fires, emphasizing land use planning, emergency access, and infrastructure standards. Pursuant to the City's General Plan and the California Building Code, the City's Fire Department conducts building plan checks, inspections, and public outreach to ensure compliance with fire codes and to promote community preparedness (City of Seaside 2024).

City of Soledad General Plan, Safety Element

The City of Soledad incorporates fire safety into its General Plan through policies that promote hazard mitigation, emergency preparedness, and safe development practices. While the city is not located in a designated State Responsibility Area, it maintains local responsibility for fire protection and collaborates with regional agencies to ensure effective response capabilities. The General Plan emphasizes the importance of integrating fire-safe design into new developments, including adequate emergency access, water supply for suppression, and compliance with state and local fire codes (City of Soledad 2005).

San Benito County

San Benito County General Plan, Health and Safety Element

Goals and policies in the San Benito County General Plan Health and Safety Element seeks to minimize risk and ensure high levels of protection throughout the county. These include policies that address emergency preparedness (HS-1.4, HS-1.6), restrict development in high-risk areas (HS-1.14), all the policies under Goal HS-4 that address fire safety (County of San Benito 2015).

City of Hollister General Plan, Health and Safety Element

The Hollister General Plan also contains objectives, policies, and implementation measures intending to incorporate applicable fire safety standards into new development and to manage vegetation to reduce fire hazards, such as HS1.1, HS1.2, and HS2.3 through 2.6 (City of Hollister 2005).

City of San Juan Bautista General Plan, Public Safety Element

The City of San Juan Bautista incorporates fire safety into its General Plan through policies that address both urban and wildland fire risks. The city is served by the San Juan Bautista Volunteer Fire Department, which maintains a mutual aid agreement with CAL FIRE for wildland fire response in the surrounding hills. The General Plan emphasizes hazard identification, emergency preparedness, and coordination with regional agencies. Land use planning and development review processes consider fire safety standards, including access, water supply, and defensible space requirements, to reduce vulnerability and enhance community resilience (City of San Juan Bautista 2016).

Santa Cruz County

Santa Cruz County General Plan, Public Safety Element

Among other topics, the Santa Cruz County General Plan Safety Element seeks to protect the county from the effects of wildfire (County of Santa Cruz 2024). Policy 6.5.4 addresses development of lands outside the Urban Services Line that include mitigable critical fire hazard areas (fuel clearance), adequate water supply or storage to support firefighting, and a requirement that buildings be located outside any designated Critical Fire Hazard Area, a County-designated area. Policy 6.5.7 requires certification of adequate fire protection prior to any building permit approval.

City of Santa Cruz General Plan

Chapter 8 of the City of Santa Cruz general plan includes goals and policies related to hazards including natural disasters such as wildfire. Policy HZ1.1 requires emergency preparedness measures to be implemented within the city and Policy HZ1.5 requires the reduction of wildfire hazards (City of Santa Cruz 2019).

City of Scotts Valley General Plan

The Scotts Valley General Plan Safety Element addresses wildfire risk mitigation in areas designated as being in a High Fire Hazard Severity Zones (City of Scotts Valley 2023). Policy SN-4.1 emphasizes the importance of coordinating with fire protection agencies to ensure adequate emergency response capabilities and fire prevention measures. Additionally, Policies SN-1.5 through SN-16 establish standards for roadways and emergency access, requirements for fire suppression water availability, the use of fire safety systems and vegetation management requirements.

City of Watsonville Local Hazard Mitigation Plan

The City of Watsonville's 2005 General Plan incorporates the 2020 Local Hazard Mitigation Plan by reference. The Local Hazard Mitigation Plan identifies wildfire as a potential hazard, particularly in the wildland-urban interface areas on the city's periphery (City of Watsonville 2020). The plan outlines strategies to reduce wildfire risk through vegetation management, public education, and coordination with regional fire protection agencies. The local hazard mitigation plan also emphasizes the importance of integrating wildfire risk reduction into land use planning and building code enforcement, particularly in areas identified as having elevated fire hazard potential.

Local Hazard Mitigation Plans

Local jurisdictions develop, adopt, and update local hazard mitigation plans (LHMP) to establish guiding principles for reducing hazard risk, as well as specific mitigation actions to eliminate or reduce identified vulnerabilities. Santa Cruz County (County of Santa Cruz 2021), Monterey County (County of Monterey 2022), and San Benito County (County of San Benito 2022) all have

adopted LHMPs to reduce or eliminate long-term risk to people and property from natural hazards and their effects in the AMBAG region. This includes the unincorporated county, the cities within those counties, and various utility and park districts. Where federal lands neighbor those under local jurisdictions, cooperative agreements are in place that facilitate planning and emergency response. The plans include goals and policies to reduce the fire severity and intensity in the region through wildfire prevention, fuels management, and maintenance of evacuation routes. LHMPs are required to be updated every five years.

4.18.3 Impact Analysis

a. Methodology and Significance Thresholds

The methodology used for the following evaluation is based on a review of CAL FIRE's Fire hazard Severity Zone maps and responsibility areas regarding wildfire conditions in the AMBAG region to determine the potential for implementation of the 2050 MTP/SCS to result in increased wildfire risks. The following analysis is also based on a review of city and county planning documents. This program level analysis is based on an overall understanding of the key fire safety concerns that could result from implementation of the 2050 MTP/SCS. The evaluation of wildfire impacts reasonably assumes that the construction and development under the 2050 MTP/SCS would adhere to the latest federal, State, and local regulations, and conform to the latest required standards in the industry, as appropriate for individual projects.

Appendix G of the *CEQA Guidelines* identifies the following criteria for determining whether a project's impacts would have a significant impact on wildfire:

1. Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires; and
2. If located in or near state responsibility areas or lands classified as Very High FHSZ, would the project:
    a. Substantially impair an adopted emergency response plan or emergency evacuation plan;
    b. Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire;
    c. Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment; and/or
    d. 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.

Potential impacts associated with the proposed circulation and emergency access routes for the 2050 MTP/SCS are discussed in Section 4.15, *Transportation*. Impacts associated with impairment of emergency response and evacuation plans and are not discussed further in this section.

b. Project Impacts and Mitigation Measures

The following section describes wildfire impacts associated with the transportation improvements and future land use scenario in the 2050 MTP/SCS. Table 4.18-1 included in Section 4.18.3(c), below, summarizes the specific transportation projects that may result in wildfire impacts. In general, implementation of proposed transportation improvements and the reasonably foreseeable future development facilitated under the land use scenario envisioned by the 2050 MTP/SCS would result in wildfire impacts as described in the following sections.

Threshold 1: Would the project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

Impact W-1 PROPOSED TRANSPORTATION IMPROVEMENTS AND LAND USE PROJECTS ENVISIONED BY THE 2050 MTP/SCS WOULD BE LOCATED IN OR NEAR VERY HIGH FHSZS, AND EXPOSURE OF PEOPLE OR STRUCTURES TO A SIGNIFICANT RISKS OF LOSS, INJURY, OR DEATH FROM WILDFIRES COULD OCCUR. IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

As shown in Figure 4.18-1 through Figure 4.18-4, CAL FIRE has mapped much of the AMBAG region, including Monterey, San Benito, and Santa Cruz counties, as being in SRAs with large areas classified as Very High FHSZs. The land use scenario envisioned by the 2050 MTP/SCS concentrates the forecasted population and employment growth in urban areas and corridors of the counties, such as incorporated cities, unincorporated towns, and near major roadway corridors, where the risk of wildfire is less than in more rural, forested, or mountainous areas where fuels are abundant and emergency response access is restricted. However, some outlying development would still occur, and as evidenced by the 2018 Camp Fire, the 2017 Tubbs Fire in Sonoma and Napa counties, the 2017 Thomas Fire in Ventura and Santa Barbara counties, and the 2025 Palisades, Eaton, and Hughes Fires in Los Angeles County, urban areas are also susceptible to wildfire, despite the lower degree of typical wildfire fuels.

2050 MTP/SCS transportation improvements, including active transportation (e.g., bicycle facilities), roadway improvements, transportation demand management, and transit improvements, would not involve developing residential uses that would include occupants. While some transportation projects may include office or maintenance structures, occupation would be temporary. Additionally, not all transportation projects in the 2050 MTP/SCS would occur in urbanized areas, and some projects would inevitably be in areas with an increased risk of wildfires. While transportation projects associated with the 2050 MTP/SCS would improve mobility in the AMBAG region, which could facilitate an expedited evacuation or escape during a wildfire, urban and outlying areas are still at risk from wildfire.

In addition, construction activities for transportation and land use projects involving the use of vehicles and heavy machinery could result in the ignition of a wildfire. During construction, heavy equipment and passenger vehicles driving on vegetated areas prior to clearing and grading could increase the risk of fire. Heated mufflers, explosives used during site preparation or line spicing, and improper disposal of cigarettes could potentially ignite surrounding vegetation. The use of heavy equipment, such as bulldozers and graders, has the potential to accidentally ignite a fire

from sparks created when equipment blades strike rocks or metal objects. If noticed by the equipment operator or other project specific personnel, small ignitions can easily be suppressed by the construction equipment and/or on-site fire watch personnel. A fire could also be started by project personnel improperly disposing of burning cigarettes in areas covered with wildland vegetation and within 50 feet of combustible material storage.

Moreover, if the introduction of invasive, non-native plants is not controlled during construction, a project site could progressively become dominated by non-native plants which tend to increase the frequency and severity of wildfires. Based on recent scientific evidence, it is likely that anthropogenic climate change will continue to chronically enhance the potential for western U.S. forest fire activity when fuels are not limiting (LCI 2018). As discussed further in Section 4.8, *Greenhouse Gas Emissions/Climate Change*, increasingly difficult drought conditions and extreme weather events will continue to raise wildfire risk and can result in fast-moving wildfires within the AMBAG region.

New land use development envisioned in the 2050 MTP/SCS would be subject to the latest CFC, which contains safety measures to minimize the threat from wildfires, such as requiring use of ignition-resistant building materials and sealing any gaps around doors, windows, eaves, and vents to prevent intrusion by flame or embers. CCR Title 14 establishes minimum development standards for emergency access, fuel modification, setback, signage, and water supply, which help prevent loss of structures or life by reducing wildfire hazards. The codes and regulations would reduce the risk of loss, injury, or death from wildfire for new development envisioned by the 2050 MTP/SCS, but not entirely.

Land use development envisioned in the 2050 MTP/SCS that would be located within or less than two miles[1] from a Very High FHSZ would cause significant wildfire impacts because existing codes and regulations cannot fully prevent wildfires from damaging structures or populations. These projects would increase the exposure of transportation infrastructure to risk of loss or damage from wildfire. Additionally, fire related impacts may extend far beyond the fire footprint as damage to homes, infrastructure, and ecosystems, and diminished air and water quality could all occur. People residing in new residential development could be exposed to smoke and air pollution from wildfires regardless of their location within urbanized areas or the WUI. Wildfire smoke can be harmful to human health if inhaled.

Requirements to adhere to the local hazard mitigation plan, as well as the local general plan policies and programs aimed at reducing the risk of wildfires through land use compatibility, training, sustainable development, brush management, public outreach, and service standards for fire departments would reduce the risk of wildfire for these projects. These requirements could include land use compatibility, training, sustainable development, brush management, public outreach, and service standards for fire departments. However, even with implementation of these policies and measures, it is not possible to prevent the projects implementing the MTP/SCS from exposing people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires. Therefore, impacts would be significant.

[1] For the purpose of this analysis, two miles is considered “near” an SRA or very high FHSZ.

Mitigation Measure

For transportation projects under their jurisdiction, TAMC, SBtCOG, and SCCRTC shall implement, and transportation project sponsor agencies can and should implement, the following mitigation measures developed for the 2050 MTP/SCS program where applicable for transportation projects that result in impacts related to wildland fire, and where feasible and necessary based on project and site specific considerations. Cities and counties in the AMBAG region can and should implement these measures, where relevant to land use projects implementing the 2050 MTP/SCS. Project specific environmental documents may adjust these mitigation measures as necessary to respond to site specific conditions.

W-1 Wildfire Risk Reduction

If an individual transportation or land use project included in the 2050 MTP/SCS is within or less than two miles from a High or Very High FHSZ in the State Responsibility Area (SRA) as established by California Public Resources Code (PRC) Sections 4201 through 4204, or as High or Very High in the Local Responsibility Area (LRA) designated pursuant to California Government Code, Sections 51175 through 51189, the implementing agency shall require appropriate mitigation to reduce the risk. Examples of mitigation to reduce risk of loss, injury or death from wildlife include, but are not limited to:

- Enforce defensible space regulations compliant with PRC Section 4291 or stricter as designated by the local governing body to keep overgrown and unmanaged vegetation, accumulations of trash and other flammable material away from structures.
- Provide public education about wildfire risk, fire prevention measures, and safety procedures and practices to allow for safe evacuation and/or options to shelter-in-place during a wildfire emergency.
- Ensure sufficient emergency water supply and operations for wildland fire suppression.
- Encourage the development of landscaping maintenance schedules to include removal/ treatment of annual invasive species which may contribute to increased fuel loading.
- Encourage the use of fire-resistant vegetation native to Santa Cruz, Monterey, and San Benito counties and/or the local microclimate of the project site and discourage the use of fire-prone species especially non-native, invasive species.
- Require a fire safety plan be submitted to and approved by the local fire protection agency. The fire safety plan shall include all the fire safety features incorporated into the project and the schedule for implementation of the features. The local fire protection agency may require changes to the plan or may reject the plan if it does not adequately address fire hazards associated with the project as a whole or the individual phase of the project.
- Prohibit certain project construction activities with potential to ignite wildfires during red-flag warnings issued by the National Weather Service for the project site location. Example activities that should be prohibited during red-flag warnings include welding and grinding outside of enclosed buildings.

- Require fire extinguishers to be on site during construction of projects. Fire extinguishers shall be maintained to function according to manufacturer specifications. Construction personnel shall receive training on the proper methods of using a fire extinguisher.
- Encourage the use of external sprinklers for new development mapped within Very High FHSZs.

IMPLEMENTING AGENCIES AND TIMING

Implementing agencies for transportation projects are RTPAs and transportation project sponsor agencies. Implementing agencies for land use projects are cities and counties. This mitigation measure shall, or can and should, be applied during permitting and environmental review and implemented during construction and operation, as applicable.

Significance After Mitigation

With implementation of this mitigation, the risk of injury or death due to wildfires would be reduced due to the creation of defensible space around the project, the prohibition of construction activities during red flag warnings, and the creation of a fire safety plan, among other requirements. Additionally, implementation of Mitigation Measure W-1 would reduce wildfire risk by requiring defensible space, adequate water supply, and the creation of a fire safety plan, among other things, for transportation projects within two miles of a Very High FHSZ. Additionally, it would reduce wildfire risk during construction by limiting construction activities during red flag warnings and requiring fire extinguishers to be on site during project construction. While this mitigation measure would reduce impacts related to wildfire, it is possible that mitigation measures would not prevent a significant risk of wildfires or fully protect people and structures from the risks of wildfires in all cases. Thus, this impact would remain significant and unavoidable. No additional mitigation measures to reduce this impact to less than significant levels are feasible.

Threshold 2: If located in or near state responsibility areas or lands classified as Very High FHSZs, would the project:

a) Substantially impair an adopted emergency response plan or emergency evacuation plan;

b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire;

c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment; and/or

d) 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?

Impact W-2 PROPOSED TRANSPORTATION IMPROVEMENTS AND LAND USE PROJECTS ENVISIONED BY THE 2050 MTP/SCS WOULD BE LOCATED IN OR NEAR VERY HIGH FHSZS. THIS WOULD INCREASE WILDFIRE RISK ASSOCIATED WITH THE CONSTRUCTION OR MAINTENANCE OF INFRASTRUCTURE SUCH AS ROADS, POST-FIRE LANDSLIDES AND FLOODING, AND WILDFIRE RISK TO PEOPLE AND STRUCTURES. IMPACTS WOULD BE SIGNIFICANT AND UNAVOIDABLE.

Emergency Response and Evacuation

Construction of the land use development and transportation projects included in the 2050 MTP/SCS would require temporary road closures that could impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan. Some of the transportation projects may require multiple years to construct. However, standard construction practices include notification of emergency responders where road closures are required. Because road closures are temporary and would be coordinated with emergency responders so that alternative evaluation routes could be developed and employed, construction activities would have a less than significant impact.

The land use projects included the 2050 MTP/SCS emphasize infill and transit oriented development, which would generally focus growth in existing urbanized areas of the AMBAG region. Thus, population density in urbanized areas would increase, which may improve emergency response by eliminating the need to travel to more rural and dispersed locations in the region. Alternatively, large concentrations of people could also cause adverse effects related to the implementation emergency plans because the increased population may overburden adopted evacuation routes and other emergency response resources. However, the management of emergency response and emergency evacuation plans includes regular updates to these plans that incorporate new or proposed developments. Thus, land use projects in the 2050 MTP/SCS would be reflected in the regular and required updates of emergency and evacuation plans applicable to the AMBAG region. In addition, project level CEQA reviews

routinely assure that individual projects do not adversely impact emergency response or evacuation plans.

Additionally, the proposed transportation projects would generally increase mobility and circulation capacity and, thereby, have the potential to improve response times for police, fire, and emergency service providers, especially in heavily congested areas. In addition, as described above, emergency and evacuation plans must be regularly updated to incorporate current conditions. Therefore, potential impacts related to interference with emergency response and evacuation plans would be less than significant.

Exacerbated Fire Risks

There are several instances where the proposed land use pattern the 2050 MTP/SCS may result in growth in or near Very High FHSZs. However, some transportation projects which would be facilitated by the 2050 RTP/SCS would be located in or near Very High FHSZs and substantial wildfire-related impacts could occur. However, fire risks are still present despite the limited regional growth within Very High FHSZs and adherence to CBC standards. The CBC includes specific standards for construction materials and methods for new buildings located in Fire Hazard Severity Zones within SRAs, Local Agency Very-High Fire Hazard Severity Zones, or WUI Fire Areas mapped by CAL FIRE or the local enforcing agency. These regulations have been prepared and adopted for the purpose of establishing minimum wildfire protection standards in conjunction with building, construction, and development in SRA. Title 14 sets forth the minimum development standards for emergency access, fuel modification, setback, signage, and water supply, which are intended to result in development that avoids or minimizes the hazards associated with development of infrastructure in Very High FHSZs. Because the 2050 MTP/SCS plans for the construction and maintenance of associated infrastructure and envisions land development within and near these areas, and due to the unpredictable nature of wildfires in California, the 2050 MTP/SCS could exacerbate wildlife risk associated with those activities. Impacts would be significant.

Landslide Risk

Global climate change will pose an increasing threat to wildland areas and nearby urban environments. The potential for slope failure and landslides can be exacerbated in these regions in the aftermath of a wildfire, even with adherence to the above sited regulations. Hillsides can become denuded of vegetation and become unstable, increasing the potential for landslide risks and associated hazards downslope from such landslides. Potential impacts related to slope stability and landslides are discussed in Section 4.7, *Geology and Soils*. As discussed therein, stable slope conditions vary depending on location of the project within the region and the potential for substantial landslides was found to be higher in the Santa Lucia Mountain Range and across inland Santa Cruz County, as well as near Hollister, Tres Pinos, Paicines, and other areas with steep topography. Some proposed transportation improvements and land use projects envisioned by the 2050 MTP/SCS would be located in areas with steep slopes, and would exacerbate risks to people or structures as a result of post-fire slope instability. This impact would be significant.

Flooding and Pollutant Runoff

Potential impacts related to flooding, runoff, and drainage are discussed in Section 4.10, *Hydrology and Water Quality.* Projects would be required to comply with existing design guidelines and local requirements for post-development peak stormwater flows and Best Management Practices to avoid and/or minimize flooding impacts and impacts to on-site and off-site drainage. Even through adherence to these regulations, impacts associated with exposure of people or structures to downslope or downstream flooding or landslides as a result of runoff due to post-fire slope instability would be significant.

Land use and transportation projects more than two miles from a Very High FHSZs would not require mitigation. However, Mitigation Measure W-1 is provided below to further reduce the risk of wildfire for developments located in or near Very High FHSZs.

Mitigation Measure

W-1 Wildfire Risk Reduction

See Impact W-1 for Mitigation Measure W-1.

IMPLEMENTING AGENCIES AND TIMING

For transportation projects under their jurisdiction, TAMC, SBtCOG and SCCRTC shall implement, and transportation project sponsor agencies can and should implement, Mitigation Measure W-1, discussed under Impact W-1 above, where applicable for transportation projects that result in impacts related to wildland fire, and where feasible and necessary based on project and site specific considerations. Cities and counties in the AMBAG region can and should implement these measures, where relevant to land use projects implementing the 2050 MTP/SCS. Project specific environmental documents may adjust these mitigation measures as necessary to respond to site specific conditions.

Significance After Mitigation

With implementation of Mitigation Measure W-1, the risk of impairing emergency response and evacuation, expose project occupants to wildfire, exacerbating fire risk, or expose project occupants to wildfire-related risks would be reduced due to the creation of defensible space around the project, the prohibition of construction activities during red flag warnings, and the creation of a fire safety plan, among other requirements. While this mitigation measure would reduce impacts related to wildfire, it is possible that mitigation measures would not prevent wildfire risk to people and structures associated with the construction or maintenance of infrastructure such as roads and post-fire landslides and flooding in all cases. Thus, this impact would remain significant and unavoidable. No additional mitigation measures to reduce this impact to less than significant levels are feasible.

c. Specific 2050 MTP/SCS Projects That May Result in Impacts

Table 4.18-1 identifies transportation projects with the potential to cause or contribute to direct or indirect impacts wildfire such as those discussed above. Program-level impact determinations were provided for the overall 2050 MTP/SCS project above. This section is not intended to provide project-specific impact determinations under CEQA. Rather, the transportation projects identified in Table 4.18-1 are representative of those that may result in project-level impacts with or without mitigation and were selected based on their potential scope and likelihood to result in the wildfire impacts identified above. The intent of this summary is to support potential future streamlining efforts as a screening tool to facilitate early identification of projects likely to result in the impacts identified above. Streamlining opportunities are discussed in Section 1.4, *Implementation Issues and Future Environmental Review*, in Chapter 1, *Introduction*.

Table 4.18-1 2050 MTP/SCS Projects That May Result in Increased Wildfire Risk

AMBAG ID	Project	Location	Potential Impact
MON-MYC245-UM-2026	San Juan Road Improvements	Monterey County	W-1, W-2
MON-CAR036-CM-2026	Junipero and Ocean Roundabout	Monterey County	W-1, W-2
MON-SEA041-SE-2026	Canyon Del Rey Corridor Improvements	Monterey County	W-1, W-2
MON-MYC181-UM-2026	G12 Pajaro to Prunedale Corridor – Project Area 1	Monterey County	W-1, W-2
MON-MYC312-UM-2026	G12 Pajaro to Prunedale Corridor Study- Project Area 6	Monterey County	W-1, W-2
MON-MYC238-UM-2026	G12 Salinas Road Improvements – Project Area 5	Monterey County	W-1, W-2
MON-MYC192-UM-2026	Harris Road Widening	Monterey County	W-1, W-2
MON-SOL014-SO-2026	SR 146 Bypass (Pinnacles Parkway)	Monterey County	W-1, W-2
MON-KCY043-CK-2026	Roundabout @ US 101/Broadway St/San Antonio Dr	Monterey County	W-1, W-2
MON-SOL002-SO-2026	US 101 - North Interchange	Monterey County	W-1, W-2
MON-TAMC003-TAMC-2026	Monterey County Rail Extension Kick Start	Monterey County	W-1, W-2
MON-KCY043-CK-2026	Roundabout @ US 101/Broadway St/San Antonio Dr	Monterey County	W-1, W-2
MON-PGV001-PG-2026	Congress - Sunset Roundabout	Monterey County	W-1, W-1
MON-SEA040-SE-2026	General Jim Corridor Improvements	Monterey County	W-1, W-2
SB-SBC-A04-2026	Union Road Widening (East): San Benito Street to Highway 25	San Benito County	W-1, W-2
SB-SBC-A05-2026	Union Road Widening (West) San Benito Street to Highway 156	San Benito County	W-1, W-2
SB-SBC-A83-2026	Fairview Road & Airline Highway/SR 25 Intersection	San Benito County	W-1, W-2
SB-SBC-A84-2026	SR 156 & Buena Vista Road Intersection	San Benito County	W-1, W-2
SB-SBC-A70-2026	Union Road & Fairview Road Intersection	San Benito County	W-1, W-2
SB-SBC-A71-2026	Enterprise Road & Airline Highway (SR 25) Intersection	San Benito County	W-1, W-2
SB-COH-A18-2026	Westside Boulevard Extension	San Benito County	W-1, W-2
SB-COH-A78-2026	Rancho Drive & East Nash (Tres Pinos Road) Intersection	San Benito County	W-1, W-2
SC-CO-P102-USC-2026	Glen Arbor Road Bridge Replacement	Santa Cruz County	W-1, W-2

4.18.4 Cumulative Impacts

a. Methodology

The cumulative analysis presented below primarily relies on a projections-based approach, using regional land use and growth forecasts for the AMBAG region and adjoining counties to evaluate cumulative conditions. The project is assessed within the existing and foreseeable future environmental setting, and a determination is made as to whether its incremental contribution would be cumulatively considerable when considered alongside both the overall envisioned land use scenario and specific large-scale planned projects. Refer to Section 6.4, *Cumulative Impacts*, in Chapter 6, *Other CEQA Required Discussions*, for a detailed description of the cumulative impact methodology.

b. Impact Analysis

A wildfire ignited in the AMBAG region could spread into adjoining counties. Likewise, wildfires ignited in counties adjoining the AMBAG region could spread into the AMBAG region. Therefore, the cumulative impact analysis area for wildfire consists of the AMBAG region and the adjoining counties.

Impact W-C-1 DEVELOPMENT IN THE CUMULATIVE IMPACT ANALYSIS AREA COULD BE LOCATED IN OR NEAR A STATE RESPONSIBILITY AREA OR A VERY HIGH FIRE HAZARD SEVERITY ZONE. AS SIGNIFICANT RISK OF LOSS, INJURY, OR DEATH COULD OCCUR AS A RESULT OF IMPAIRING EMERGENCY RESPONSE AND EVACUATION, EXPOSING PROJECT OCCUPANTS TO WILDFIRE, EXACERBATING FIRE RISK, OR EXPOSING PROJECT OCCUPANTS TO WILDFIRE-RELATED RISKS, IMPACTS RELATED TO WILDFIRE WOULD BE SIGNIFICANT. THE 2050 MTP/SCS CONTRIBUTION TO THIS IMPACT WOULD BE CUMULATIVELY CONSIDERABLE.

The 2050 MTP/SCS is not expected to substantially increase wildfires, but the occurrence of wildfires always exists within the AMBAG region, and the transportation and land use projects under the 2050 MTP/SCS could place people and structures within proximity to a Very High FHSZ. Construction and operation of projects would risk exacerbating these existing fire hazards by creating additional potential sources of fire ignition.

During construction and operation of the 2050 MTP/SCS projects, if one of these cumulative projects were to simultaneously result in a wildland fire ignition during construction, they could combine and increase the frequency of wildland fires beyond existing conditions. This could result in the impairment of emergency response and evacuation plans, exposure of project occupants to wildfire, increased wildfire risk, or exposure of project occupants to wildfire-related risk. The combination of these projects being constructed concurrently could substantially increase the frequency of fire in the area above natural conditions. Cumulative impacts would be significant.

The land use scenario envisioned in the 2050 MTP/SCS that would be located within proximity to a Very High FHSZs would have significant wildfire impacts, as existing codes and regulations cannot fully prevent wildfires from being generated and damaging structures or populations. The

2050 MTP/SCS land use scenario concentrates the forecasted regional population and employment growth in urban areas and corridors of the AMBAG region; however, not all projects and development included in the 2050 MTP/SCS would be infill projects in urbanized areas, and some projects would inevitably be located in areas at risk of wildfires. These projects would increase the potential to ignite fires and therefore risk exacerbating the potential for loss or damage from wildfire. This added risk could start wildfires that could spread outside the AMBAG region impacting adjacent counties and communities. As a result, the 2050 MTP/SCS could result in a cumulatively considerable increase in wildfire risk. Implementation of Mitigation Measure W-1 would minimize the contribution to this cumulative impact. However, the overall cumulative increase in fire frequency would continue to be substantial, and impacts related to the impairment of emergency response and evacuation plans, exposure of project occupants to wildfire, increased wildfire risk, or exposure of project occupants to wildfire-related risk would remain significant and unavoidable.

This page intentionally left blank.

5 MTP Consistency with Other Plans Analysis

The purpose of the 2050 MTP/SCS and county level RTPs is to coordinate and facilitate the planning and programming of transportation facilities and services within the AMBAG region through 2050 in accordance with State and federal regulations.

The Policy Element of the 2050 MTP/SCS states that AMBAG's goals are to ensure that the transportation system planned for the AMBAG region accomplishes the following:

- **Mobility.** Build and maintain a safe and robust multimodal transportation network.
- **Environment.** Create a sustainable and healthy region for all.
- **Communities.** Develop, engage, connect, and sustain communities that are livable and thriving.
- **Economic.** Support a sustainable, efficient, and productive regional economic environment that provides opportunities for all.
- **Equitable.** Plan for people of all ages, abilities, and backgrounds.

In preparation for drafting the 2050 MTP/SCS, AMBAG considered the above referenced strategy areas and goals while collaborating with local jurisdictions to identify a common set of land use PlaceTypes. AMBAG developed the PlaceTypes to provide a common definition of density and character across the 21 jurisdictions in the region. These PlaceType designations are consistent with the general plans for each of the 18 cities and three counties that comprise the AMBAG region and generally match the respective land use policies and objectives contained therein. The PlaceTypes were then used to establish an existing as well as a future land use pattern. The future land use pattern concentrates more growth in commercial and mixed use corridors with high-quality transit rather than in rural areas.

Each of the 18 city and three county general plans include circulation elements that are coordinated and consistent with the respective land use diagrams, goals, policies, and programs. The circulation elements lay out goals, policies and programs describing a broad range of transportation modes and opportunities that, among other things, support the land use goals, policies and programs. The circulation diagrams for the city and county general plans are consistent with the land use diagrams that depict the respective city and county future land use patterns. These circulation diagrams describe the transportation infrastructure requirements necessary to facilitate those growth patterns. The 2050 MTP/SCS is built on and consistent with facilities and infrastructure laid out in the circulation elements of the city and county general plans.

This EIR qualitatively evaluates local and subregional planning efforts and potential impacts of the 2050 MTP/SCS related to inconsistency with policies pertaining to infrastructure improvements intended to improve the regional transportation system. Specific projects included in the 2050 MTP/SCS that may support and encourage land use changes were identified early in the planning process and were assessed for consistency with the following:

- General Plan policies and development controls that require voter approval (such as those set by initiative);
- General Plan policies and development controls that are based on joint-powers agreements (such as regional open space reserves, buffers between communities, or urban service boundaries and urban limit lines); or
- General Plan policies and development controls reflecting infrastructure or potentially significant environmental constraints.

Local jurisdictions are responsible for adopting land use policies as part of their general and community plans and implementing them through local ordinance. AMBAG has no direct control over local land use planning. Nevertheless, AMBAG makes regional efforts to assist local jurisdictions in aligning local land use policies with the proposed 2050 MTP/SCS. Such programs could assist local jurisdictions via technical support and funding. Examples include but are not limited to: funding transit, bicycle and pedestrian infrastructure that supports the increased use of alternative modes; and working with local jurisdictions to update their general plans with policies that are consistent with the 2050 MTP/SCS where appropriate.

As demonstrated in this section, pursuant to CEQA Guidelines Section 15125(d), the 2050 MTP/SCS has no inconsistencies with applicable general plans, regional plans, and specific plans. Consistency with regional plans such as the General Plans prepared for Monterey, San Benito, and Santa Cruz counties is addressed herein. Consistency with transportation planning documents, including regional and local bicycle and pedestrian plans, transit plans and roadway improvement plans are addressed in Section 4.16, *Transportation,* and summarized in this section. In addition, Local Coastal Programs (LCP) consistency is discussed for Monterey and Santa Cruz counties as projects may occur within the coastal zone. As an element of the General Plan, LCPs are intended to demonstrate consistency with the Coastal Act for the portion of the statewide coastal zone located within Monterey County. Each LCP includes both a land use plan (LUP) and an implementation plan that together distill statewide Coastal Act coastal resource policies to the local level.

No Natural Community Conservation Plans or Habitat Conservation Plans pertain to project areas defined in the 2050 MTP/SCS, as described in Section 4.4, *Biological Resources*.

5.1 Monterey County General Plan/Local Coastal Program

The Monterey County 2010 General Plan (Monterey County 2010) includes policies that address the existing and future land use for rural areas within the County that are used predominately for agricultural purposes as well as developed areas within incorporated cities and unincorporated communities. One of the land use planning challenges within Monterey County is that higher quality farmlands are in the valleys where cities have also been established. On the other hand, foothills lining the valleys have unique scenic and environmental characteristics. These conditions require goals and policy statements that strike a balance between providing for growth and development while preserving significant resources countywide.

Monterey County's Land Use Element establishes policies to designate the general distribution and intensity of residential, commercial, industrial, agricultural, public facilities and open space uses. The primary vision of this Element is to create a general framework that encourages growth within or near developed/developing areas to reduce impacts to agricultural production and natural resources, and to avoid impacting public services that currently serve these areas. Areas where development is encouraged include incorporated cities and designated community areas where existing services are available. These areas are subject to additional planning by each incorporated city and within community plans/specific plans adopted by the Board of Supervisors for unincorporated community areas.

The proposed 2050 MTP/SCS encourages urban infill and transit oriented development and the development of transportation infrastructure that would support these uses, as well the overall efficiency of the existing regional transportation network. Projects identified by Transportation Agency for Monterey County (TAMC) that comprise the Regional Transportation Plan for Monterey County emphasize improving existing highway infrastructure, transit services, and related measures that focus potential impacts within existing urbanized areas. This is consistent with Land Use Element policies that avoid or reduce impacts to agricultural production, natural resources, and existing public services within rural areas of Monterey County.

In addition to the Monterey County 2010 General Plan, incorporated cities within Monterey County have adopted General Plans that include similar policies consistent with the goals of the 2050 MTP/SCS. These cities include Carmel-by-the-Sea, Del Rey Oaks, Gonzales, Greenfield, King City, Marina, Monterey, Pacific Grove, Salinas, Sand City, Seaside, Soledad. The General Plans support compact, city-centered growth to reduce pressure on high-quality agricultural lands. Local policies promote multimodal transportation, air quality improvements, and coordinated infrastructure planning to ensure development occurs where public services are available. Environmental goals across these General Plans include protecting biological and cultural resources, advancing water and energy efficiency, and managing hazards and wildfire risks through land use controls and interagency coordination.

The coastal zone within Monterey County is divided into four LCP segments: North County, Del Monte Forest, Carmel Area, and Big Sur Coast. The Monterey County LCP consists of four Land Use Plan (LUP) documents, one for each segment, and the Coastal Implementation Plan, which includes regulations for development in each planning area, zoning ordinances, and maps and appendices. Projects in the 2050 MTP/SCS within the Monterey coastal zone must be consistent with the policies of the Monterey County LCP in order to receive a Coastal Development Permit. Projects occurring within the Monterey County coastal zone would be evaluated for consistency with LCP policies as part of the project specific environmental review (Monterey County, 1982 and 2010).

5.2 San Benito County General Plan

The San Benito County Board of Supervisors adopted the 2035 General Plan in 2015. The San Benito County 2035 General Plan (San Benito County 2015) includes policy statements that address sustainability, environmental protection and economic growth and diversification. The plan was developed in part by input received by stakeholders including residents, businesses,

land owners and decision-makers. The Vision and Guiding Principles chapter of the General Plan update identify the following objectives as they relate to land use and community character:

1. Encourage new growth in existing unincorporated communities, new communities, or clustered developments to preserve prime farmland and rangeland, protect natural habitats, and reduce the financial, social and environmental impacts of urban sprawl.
2. Ensure that there is a mix of residential, commercial, employment, park, open space, school and public land uses to create a sense of place by supporting condensed, pedestrian accessible and transit oriented development.
3. Promote higher residential densities in existing unincorporated urban areas and new communities while encouraging mixed use development.
4. Ensure new development complements and preserves the unique character and beauty of San Benito County.
5. Establish defined boundaries to separate cities and unincorporated communities from prime agricultural land and important natural resources, using such features as agriculture buffers, greenbelts, open space and parks.

The 2050 MTP/SCS is consistent with the land use objectives as it encourages urban infill, high residential densities, and transit oriented development within existing urban centers. As the 2050 MTP/SCS is focused in part on projects within existing urban infill areas, it supports policies within the San Benito County General Plan that are intended to preserve prime farmland and rangeland; protect natural habitats; and provide a mix of urban development areas that support pedestrian accessibility and transit oriented development.

In addition to the San Benito County 2035 General Plan, incorporated cities within San Benito County, Hollister and San Juan Bautista, have adopted General Plans that include similar policies consistent with the goals of the 2050 MTP/SCS. These plans emphasize agricultural preservation, habitat protection, and infill development within areas served by existing infrastructure. General Plan policies also encourage sustainable transportation options, and incorporate environmental goals related to air quality, hazards, and water management.

5.3 Santa Cruz County General Plan/Local Coastal Plan

The Santa Cruz County General Plan/Local Coastal Plan was adopted by the City of Santa Cruz Planning and Community Development Department in 1994 and updated in 2024 (Santa Cruz County 2024). The Plan goals, policies, programs, resource and constraint mapping, along with county implementing ordinances, determine the location and pace of urban development. The intent is to regulate the quality of development and control the pace of development consistent with the availability of public services while protecting the natural resources that maintain and enhance the county's unique environment.

A basic land use policy of the Santa Cruz County General Plan focuses on separating urban and rural areas. This Urban/Rural Boundary – which is defined in the General Plan according to the Urban Services Line and the Rural Services Line established around each incorporated city –

encourages new development within existing urban areas while preserving agricultural land and natural resources in the rural areas.

Within Santa Cruz County, there are existing enclaves in rural areas which are developed at urban densities. Generally, these enclave boundaries are defined by a Rural Services Line. Some urban services are available within these areas. County policy allows the provision of full urban services, including public sanitation facilities, to serve these communities. In areas outside of the Urban Services Line or beyond the Rural Services Line established for these enclave areas, the "Rural Density Matrix" provides for parcel-specific determination of allowable densities based on the availability of services, environmental and site specific constraints and resource protection factors required by the Growth Management System and the General Plan and LCP Land Use Plan.

As commute patterns can have a negative impact on traffic, energy consumption, air quality and related environmental resources, the relationship between jobs and housing is an important topic in the Santa Cruz County General Plan. The General Plan recognizes the various types of commute behavior and includes policies to provide adequate housing opportunities and encourage an employment base that supports a diversity of income levels.

The 2050 MTP/SCS is generally consistent with the broad goals and policies of the Santa Cruz County General Plan/LCP in that both clearly support focused development within existing urban boundaries to preserve natural habitats and agricultural resources. Further, both documents address the importance of maintaining a job/housing balance by, in part, diversifying transportation options as well as supporting efforts focused on reducing regional traffic congestion. Projects in the 2050 MTP/SCS within the Santa Cruz County coastal zone must be consistent with the policies of the Santa Cruz County LCP in order to receive a Coastal Development Permit. Projects within the Santa Cruz County coastal zone will be evaluated for consistency with LCP policies as part of the project specific review.

In addition to the Santa Cruz County General Plan/Local Coastal Plan, incorporated cities within Santa Cruz County (Capitola, Santa Cruz, Scotts Valley, and Watsonville) have adopted General Plans that include similar policies consistent with the goals of the 2050 MTP/SCS. These plans promote sustainable, compact development and environmental stewardship. Local General Plan policies also encourage transit-oriented growth and reduced vehicle emissions while protecting agricultural lands and sensitive habitats. Hazard mitigation and wildfire preparedness are often incorporated into local land use planning priorities, reinforcing efforts to concentrate growth in developed areas while protecting public health.

5.4 AMBAG Region Transit Agency Plans

5.4.1 Monterey-Salinas Transit Business Plan and Short Range Transit Plan

Last adopted in 2005, the *Business Plan and Short Range Transit Plan* is Monterey-Salinas Transit's (MST) primary planning document (MST 2005). The Plan describes the role of public transit in the community including ongoing and anticipated service needs throughout the existing service area as well as in new growth areas that will need transit service in the coming years.

The MST *Business Plan and Short Range Transit Plan* uses two separate systems for performance measurement: one for the Fixed-Route System, and the second for MST RIDES Paratransit. Performance measures for the Fixed-Route System look at various factors of ridership (total customer boardings, ridership per vehicle revenue hour and utilization of lines), service delivery (increased customer satisfaction, strengthen employee developments and satisfaction, enhance support by MST members and other stakeholder, and operate safely, effectively and efficiently), and special services (the MST Trolley—Waterfront Visitors Express, Laguna Seca lines, supplemental service for community events, limited charter service for special events, and Americans with Disabilities Act compliance and accommodations). Performance measures for MST RIDES Paratransit program uses an evaluation system of 20 performance measures to support MST's mission statement, which focuses on "increase customer satisfaction" and "operate safely, effectively and efficiently." These 20 performance measures fall into categories of input (resources: operating expenses, employees), output (service produced: vehicle revenue hours, vehicle revenue miles), end product (service consumed: passengers, passenger revenue), efficiency (input vs. output), service effectiveness (output vs. end product), cost effectiveness (input vs. end product), service quality (miles/road call, accidents per 10,000 miles) and customer satisfaction (telephone and letter).

As part of its ongoing efforts to improve service and respond to changing travel patterns, MST completed a Comprehensive Operational Analysis in 2022 to redesign its bus network. The Comprehensive Operational Analysis provided a framework for evaluating service goals, performance metrics, and trade-offs between ridership and coverage. While the COVID-19 pandemic led to a significant drop in ridership (approximately 64 percent from 2019 to 2020), the Comprehensive Operational Analysis helped MST identify strategies to rebuild service and better align transit with community needs. The Final Network Plan, informed by public input and developed by MST staff and consultants, guides short- and long-term operational improvements. MST continues to implement recommendations from the Comprehensive Operational Analysis to support regional mobility and transit accessibility (MST 2022).

Access to transit service and overall performance of the transit systems would improve with implementation of the 2050 MTP/SCS and related projects. The 2050 MTP/SCS includes projects in Monterey County that would address transit operations, rehabilitation of existing facilities, improvements to Americans with Disabilities Act service, and infrastructure and other benefits including replacement of existing buses and related equipment. Thus, the 2050 MTP/SCS would be consistent with the current *Business Plan and Short Range Transit Plan (*MST 2005).

5.4.2 Santa Cruz METRO Short-Range Transit Plan

The Santa Cruz METRO *2013 Short-Range Transit Plan* update was adopted in May 2014. This update includes an assessment of the strengths and weaknesses of the existing service design for both fixed-route and ParaCruz services; a forecast of future financial and capital needs; and an updated marketing plan. Regarding existing service, the Plan notes that Santa Cruz METRO has an excellent route system with heavy ridership. Several recommendations are included that build

upon the success of the current system and focus on the use of existing resources to simplify services. These include the following:

- Simplifying service frequencies between downtown Santa Cruz and the University of California, Santa Cruz campus;
- Improving speed for more riders in the Watsonville – Cabrillo corridor;
- Consolidating routes to simplify service in Santa Cruz and Mid-County; and
- Creating Transit Emphasis Corridors where service frequencies are at least every 15 minutes during peak times and capital enhancements can be prioritized.

The Santa Cruz METRO fixed route and ParaCruz each have their own measures for performance. For the 33 fixed-route bus lines, which includes four transit centers in the Santa Cruz area, measures tracked weekday and weekend services for the following: total annual ridership by route, averages for number of boardings, daily hours of revenue service, daily trips, daily vehicle miles, boardings per revenue hour, boardings per trip, boardings per mile and on-time performance. These factors are used to calculate productivity of the overall system. METRO ParaCruz tracks operating trends and performance indicators. Operating trends include ridership numbers, revenue hours, and revenue miles. Performance indicators are measured by cost effectiveness (operating cost per passenger, farebox recovery ratio, average revenue per passenger, average subsidy per passenger) and service efficiency (passengers per revenue hour and passengers per revenue mile).

As shown in the performance measures developed for the 2050 MTP/SCS, access to transit service and overall performance of the transit systems would improve with implementation of the 2050 MTP/SCS and related projects. Based on these findings, the 2050 MTP/SCS would be consistent with the Santa Cruz METRO *2013 Short-Range Transit Plan* (METRO 2014).

As part of its efforts to improve service efficiency and address financial sustainability, Santa Cruz METRO conducted a Comprehensive Operational Analysis in 2016. The Comprehensive Operational Analysis evaluated the performance of the existing fixed-route network, identifying strengths and challenges across routes, time periods, and service types. Key metrics such as ridership, productivity, farebox recovery, and subsidy per passenger were analyzed to inform service planning decisions. The analysis revealed opportunities to streamline underperforming routes and enhance service where demand was strongest. Informed by these findings and public input, METRO implemented a system-wide service reduction in September 2016 to address a structural budget deficit while maintaining core mobility for the community. The Comprehensive Operational Analysis continues to serve as a foundation for ongoing service planning and resource allocation (Santa Cruz METRO 2016). In 2023, Santa Cruz METRO began a comprehensive review of where and how often buses run in Santa Cruz County, and whether that should change. The key goals of *Reimagine METRO* include increasing the amount of service provided, making transit service more relevant to the community's needs and desires, adapting to post-COVID travel patterns, and creating a network that is useful and attractive for many people's trips. Service changes as a result of the first phase of Reimagine METRO began in late 2023 and were completed in 2024. Phase 2 efforts are underway.

In addition to the *Reimagine METRO* initiative, Santa Cruz METRO is advancing its Rapid Corridors Planning effort which focuses on enhancing transit service along high-demand corridors. This planning process evaluates potential infrastructure improvements, including dedicated bus lanes, transit signal priority, and upgraded passenger amenities, to improve overall system performance and reliability.

Reimagine METRO and Rapid Corridors represent a strategic addition in METRO's service framework. These initiatives are consistent with the objectives of the 2050 MTP/SCS and emphasize the region's commitment to developing a sustainable, equitable, and efficient public transportation network.

5.4.3 San Benito County Local Transportation Authority Short- and Long-Range Transit Plan

The San Benito County Local Transportation Authority (LTA) adopted *Future Horizons for San Benito County: Short- and Long-Range Transit Plan* in 2016 (LTA 2016). The 2016 Plan provides an evaluation of local fixed route service, intercounty service, and demand response services, as well as an alternatives analysis.

The vision for public transportation in San Benito County is characterized by:

1. Ridership growth;
2. Sustainable, sufficient funding;
3. Reliable, efficient, affordable transportation;
4. Multimodal, sustainable transit oriented development;
5. Positive economic impact in the community; and
6. Healthy environment with improved air quality and reduced congestion.

The focus of the long-range portion of the Plan is to "establish goals and projects for transit growth which connects land use and transportation strategies. The Long Range Transit Plan shall also meet legal mandates for planning and programming set by Senate Bill 375."

The San Benito LTA uses a Performance Measurement system to identify service issues or service needs, with data is collected in relation the LTA's Mission, Vision, and the eight guiding principles. The Plan provides a detailed table organized by goal, objective, measure, service, proposed standard and actual performance. The objectives and their measures include:

- Safe Transit Service (miles between preventable accidents, miles between passenger injuries, on the job injuries, drug and alcohol testing program);
- Productive service (passengers per vehicle revenue hour, by service type);
- Reliable transit service (on-time performance, missed trips); road calls, on time preventative maintenance inspections);
- Effective service (cost per passenger, by service type);
- Affordable service (fare increases);

- Increase use of transit (ridership growth, by type of service);
- Accessibility (frequency of service, coverage, service to key destinations, transfer wait time, new service ridership projections, special services for difficult to service populations);
- High customer satisfaction (ratings, complaints);
- Cost effective use of technology (cost/benefit/urgency analysis);
- Accountability and transparency (performance reporting, financial);
- Leadership with partners, businesses, employers and the community (contacts/meetings per year, community association membership and attendance, industry association membership and attendance, participation in community events);
- Accessibility (annual marketing plan, marketing cost per operating costs, public participation program);
- Staff and drivers project positive quality image (driver turnover rates, hours of sensitivity and customer service training per employee);
- Accurate transit information on a timely basis through multiple channels (onboard, signage and web updates);
- Cost effective service (cost per vehicle service hour, cost per vehicle service mile);
- Use of public funding efficiently (subsidy per passenger, farebox recovery);
- Budget (annual budget, maintain budget); and
- Partnerships with cities and counties (as required).

As demonstrated in the performance measures developed for the 2050 MTP/SCS, access to transit service and overall performance of the transit systems would improve with implementation of the 2050 MTP/SCS and related projects.

The 2050 MTP/SCS includes projects in San Benito County that would in part address needs identified in the short-range transit plan, such as greater connectivity throughout the region, with improved transit service in key corridors. The plan addresses the need for service into Santa Clara County, including Gilroy, to provide access to jobs, education, and healthcare facilities in the Bay Area, as well as to connect with transportation services that extend into Monterey County. Based on these findings, the 2050 MTP/SCS would be considered consistent with the Short- and Long-Range Transit Plan (LTA 2016).

5.5 Local Agency Formation Commissions

Monterey, San Benito, and Santa Cruz counties each have a Local Agency Formation Commission (LAFCO). LAFCOs are independent countywide bodies created pursuant to State law that make decisions about the boundaries of and services provided by cities and special districts, as governed by the Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000 (Government Code Section 56000 et seq.). Statutory purposes of LAFCOs are to encourage the orderly formation and development of local governments, preserve agricultural and open space lands, discourage urban sprawl, and ensure the efficient delivery of government services.

As regulatory agencies, LAFCOs may approve the formation of new cities and special districts, approve changes in boundaries (e.g., annexations, consolidations, mergers, dissolutions), and may allow cities or special districts to provide services outside their boundaries. LAFCOs establish and periodically update the spheres of influence of each city and district, and may initiate proposals to change boundaries based upon the Spheres of Influence or special studies. LAFCOs are also required to prepare Municipal Service Reviews (MSRs) for every city and special district in their jurisdiction that demonstrate the capacity of each organization to provide adequate facilities and services. The MSRs must then be updated every five years. LAFCOs implement the Cortese-Knox-Hertzberg Local Government Reorganization Act, CEQA, open meeting laws, the Revenue and Taxation Code and local policies and procedures.

The transportation projects and land use scenario comprising the 2050 MTP/SCS were developed in consultation with municipalities and other sponsoring agencies within Monterey, San Benito, and Santa Cruz counties, and were coordinated with city and county general plan land use diagrams. The city general plan land use diagrams identify the city spheres of influence (SOI) and confine proposed land uses within their SOIs. County general plan land use diagrams depict land use in unincorporated areas, some of which include areas within city SOIs that has not yet been annexed. County land use diagrams typically show agricultural or open space designations for these areas and presume that any new urban development will occur following annexation.

The county general plans include policies that direct urban growth to within city SOIs. The 2050 MTP/SCS is therefore consistent with and supports city and county policy and programs related to existing and potential future SOIs that effect the location and pace of growth and development in the region, and is consistent with the respective city SOIs.

6 Other CEQA Required Discussions

This section discusses growth inducing changes, irreversible environmental impacts, and significant and unavoidable impacts that would be caused by the 2050 MTP/SCS, as well as the approach to the cumulative impact analysis.

6.1 Growth Inducement

Section 15126.2(e) of the CEQA Guidelines requires a discussion of a proposed project's potential to induce growth. Specifically, an EIR must discuss the ways in which the proposed project could foster economic or population growth. Included in this category are projects that would remove obstacles to population growth. In addition, the EIR must discuss how the project may encourage and/or facilitate other activities that could significantly affect the environment. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

6.1.1 Employment, Household, and Population Growth

According to the Association of Monterey Bay Area Governments (AMBAG) 2022 Regional Growth Forecast, population in the AMBAG region is projected to grow from 766,170 in 2022 to 813,708 by 2050; an increase of approximately six percent. Employment within the region is projected to grow by approximately 27,799 jobs over the same period. As discussed in Section 4.13, *Population and Housing*, the proposed projects implementing the 2050 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) are designed and intended to accommodate projected growth up to the year 2050. The projects under the 2050 MTP/SCS would be phased to respond to growth as it occurs under adopted local general plans. As a result, the 2050 MTP/SCS would not directly induce growth beyond that projected by 2050 and anticipated in local general plans; rather, it is intended to accommodate growth in a way that will help meet objectives described in Chapter 4, Sustainable Community Strategy, of the proposed MTP/SCS.

Employment, population, and household growth would occur within the AMBAG region regardless of whether the 2050 MTP/SCS is implemented. The land use scenario envisioned by the 2050 MTP/SCS would emphasize the development of infill and transit oriented development (TOD) projects within existing urbanized areas; and therefore, may redistribute growth patterns. The location of infill and TOD projects would generally be on properties that have been identified as vacant or underutilized within applicable local jurisdictions. Infill and TOD projects would not necessarily result in significant new population growth within these jurisdictions; rather the 2050 MTP/SCS would accommodate anticipated growth and concentrate it within existing urban cores instead of on the periphery of urban areas or within rural or semi-rural areas. Therefore, direct growth inducing population growth impacts would be less than significant.

Implementation of the 2050 MTP/SCS would create short-term economic growth in the region via construction-related job opportunities. Implementation of the 2050 MTP/SCS would also generate additional employment opportunities for roadway, vehicle, and landscape maintenance and transportation facility clean-up. The employment increase may subsequently increase the demand for support services and utilities, which could generate secondary employment opportunities. This additional economic growth would likely raise the existing revenue base within the region. Although such growth may incrementally increase economic activity in the county, significant physical effects are not likely to result from economic growth generated by the 2050 MTP/SCS.

Furthermore, while development envisioned as part of the 2050 MTP/SCS could result in additional commerce, industry, recreation, public services, and infrastructure throughout the region, this economic activity would be consistent with the AMBAG 2026 Regional Growth Forecast and local general plans. Forecasted growth would be accommodated under the proposed 2050 MTP/SCS; therefore, the Plan would not be growth inducing, but rather it reflects the regulatory mandate to house the forecasted population.

The 2050 MTP/SCS was developed to integrate forecasted population increases, employment opportunities, and housing needs within the AMBAG area. Therefore, the 2050 MTP/SCS is designed to accommodate growth that would occur with or without its adoption; it is not designed, nor is it anticipated to, drive further population growth beyond the levels forecasted.

6.1.2 Removal of Obstacles to Growth

The majority of 2050 MTP/SCS transportation improvements are in existing urbanized areas such as Salinas, Monterey, Hollister, and Santa Cruz; however, projects are also located in rural or semi-rural areas. Such transportation improvements can remove an obstacle to growth by either creating additional roadway capacity (in the case of road widening projects) or providing new or better access to undeveloped areas (in the case of road extensions). New infrastructure may also serve to accelerate or shift planned growth or encourage and intensify unplanned growth. These transportation network improvements would remove obstacles to growth in some areas of the region, which would support additional housing, population, and economic growth, and therefore could be considered growth inducing.

However, the 2050 MTP/SCS transportation improvements are designed to fully support compact development approach outlined in Chapter 4, *Sustainable Community Strategy*, of the 2050 MTP/SCS and fully support the complementary transportation needs of the growing population. The SCS is designed to accommodate growth by encouraging infill and TOD development. The 2050 MTP/SCS transportation improvement projects are intended and designed to support the land use projects established in the SCS. Therefore, the 2050 MTP/SCS is consistent with projected and planned growth. Further, all transportation improvement projects are anticipated by the general plans of the applicable local jurisdictions, as all improvements have been coordinated with the applicable local jurisdiction.

6.2 Significant Irreversible Environmental Changes

Section 15126.2(d) of the CEQA Guidelines requires a discussion of significant irreversible environmental changes that could result from implementation of a proposed project. These may include current or future uses of nonrenewable resources and secondary or growth-inducing impacts that commit future generations to similar uses. CEQA requires that irretrievable commitments of resources be evaluated to ensure that such current consumption is justified.

Many of the adverse impacts that could occur from implementation of the 2050 MTP/SCS are short-term in nature resulting primarily from construction of the proposed transportation projects, urban infill, and TOD projects. Typical construction-related impacts can involve the following issues: noise, air quality, aesthetics, and construction-related erosion and associated water quality impacts. In addition, though such materials would not be used in a wasteful manner, all construction activity would involve the use of non-renewable energy sources, potable water and building materials (see Section 4.6, *Energy*). The use of these resources during construction would increase demand and impact supplies across the AMBAG region.

Long-term irreversible environmental changes are associated with increased asphalt or concrete paving and related direct and cumulative impacts to geology/soils, biological and cultural resources (historic resources); transportation; and hydrology/water quality, as discussed in their respective sections of this EIR. In addition, the 2050 MTP/SCS would result in an overall increase in the urbanized character of the region. This would increase demand for potable water, electricity, and other resources in urban areas. The supply versus demand for these resources is evaluated by service/utility providers; thus, impacts would be determined during project specific review and as part of the overall planning process addressing regional growth. Mitigation measures have been prescribed to minimize these impacts. However, in certain instances, as discussed in Section 6.3 below, impacts could remain significant with implementation of mitigation measures. Significant irreversible environmental changes associated with the projected change in land use and transportation projects in the 2050 MTP/SCS would include those described below. The following issues are addressed in environmental resource sections of Chapter 4, as noted:

- Conversion of agricultural lands, habitat areas, or other undeveloped lands into developed land or transportation uses (see Section 4.2, *Agricultural and Forestry Resources*, and Section 4.4, *Biological Resources*)
- Degradation of ambient air quality through the increase of harmful particulate matter as a result of an increase in PM_{10} and toxic air contaminant emissions (see Section 4.3, *Air Quality*)
- Consumption of significant amounts of nonrenewable energy and other resources, including building materials and fossil fuels, for the construction and operation of new development, infrastructure, or transportation improvements (see Section 4,6, *Energy,* and Section 4.8, *Greenhouse Gas Emissions/Climate Change*)
- Greenhouse Gas (GHG) emissions would contribute to global climate change and conflict with the State's ability to achieve GHG reduction targets (see Section 4.8, *Greenhouse Gas Emissions/Climate Change*)

6.3 List of Significant and Unavoidable Impacts

Significant and unavoidable impacts are those that cannot be mitigated to a less than significant level. Chapter 4 of this EIR identifies significant and unavoidable impacts of the 2050 MTP/SCS. (Significant and unavoidable cumulative impacts are identified in Section 6.4.) As described therein, many impacts identified as significant could be reduced to a less than significant level, but only with adoption of mitigation measures that are outside the control of AMBAG and that may not be feasible for every project. The following are the impacts identified as significant and unavoidable, listed by technical section and impact number.

- Impact AES-1: public views of scenic vistas
- Impact AES-2: designated scenic corridors
- Impact AES-3: degradation of existing visual character
- Impact AES-4: create a new source of substantial light or glare
- Impact AG-1: conversion of Important Farmland to nonagricultural use
- Impact AQ-2: fugitive dust and ozone precursor emissions during construction
- Impact AQ-3: increased PM10 emissions compared to 2022 baseline conditions
- Impact AQ-4: increased VMT and particulate emissions
- Impact AQ-5: exposure of sensitive receptors to substantial hazardous air pollutant concentrations
- Impact BIO-1: substantial adverse impacts on special status plant and animal species
- Impact BIO-2: substantial adverse impacts on sensitive habitats, including federally protected wetlands
- Impact BIO-3: interference with wildlife movement
- Impact CR-1: disturbance of known or unknown historical resources
- Impact CR-2: disturbance of known and unknown archeological resources
- Impact GEO-5: disturbance of known and unknown paleontological resources
- Impact GHG-1: generate temporary short-term GHG emissions
- Impact GHG-4: conflict with the state's ability to achieve Senate Bill 32, Executive Order S-3-05, and Executive Order B-55-18 GHG reduction goals
- Impact HAZ-3: be located on a hazardous materials site
- Impact N-1: temporary noise and vibration level increases above applicable thresholds
- Impact N-2: exposure to excessive vibration levels during construction activities
- Impact N-3: exposure of existing and future sensitive receptors to significant mobile source noise levels
- Impact N-4: placement of sensitive receptors in areas with unacceptable noise levels
- Impact N-5: exposure of sensitive receptors and fragile buildings to excessive vibration levels

- Impact N-6: exposure of people residing or working within two miles of a public airport or public use airport to excessive noise levels
- Impact PSR-1: adverse physical impacts from new or expanded governmental or public facilities
- Impact PSR-3: substantial physical deterioration of parks and recreational facilities
- Impact TCR-1: substantial adverse change in the significance of a tribal cultural resource
- Impact UTIL-1: increased demand for new or expanded utilities facilities
- Impact UTIL-2: increased solid waste generation beyond regional facility capacities
- Impact UTIL-4: increased water demand potentially requiring new or expanded water supplies, entitlements, or facilities
- Impact W-1: exposure of people or structures to significant risks related to wildland fires and fire-related hazards
- Impact W-2: Substantial impairment of an adopted emergency plan, expose project occupants to the uncontrolled spread of wildfire, exacerbate fire risk, and expose people or structures to post-fire risks

6.4 Cumulative Impacts

Cumulative impacts of the 2050 MTP/SCS are discussed in each topical section in Chapter 4 of this EIR. The methodology for cumulative impacts analysis is discussed herein.

CEQA Guidelines Section 15355 defines a cumulative impact as one in which two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts. The individual effects may be changes resulting from a single project or several separate projects. The cumulative impact from several projects is 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.

CEQA Guidelines Section 15130 describes the requirements for the discussion of cumulative impacts in an EIR. It states that an EIR will discuss cumulative impacts of a project when the project's incremental effect is cumulatively considerable. The discussion will reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as much detail as is provided for the impacts attributable to the project alone. In addition, the CEQA Guidelines allow for a project's contribution to be rendered less than cumulatively considerable with implementation of appropriate mitigation.

The geographic scope defines the geographic area within which a proposed project and related projects may contribute to a specific cumulative impact. The geographic scope of the cumulative impact analysis varies depending upon the specific environmental issue being analyzed. The geographic scope for each environmental issue analyzed in this EIR is identified in Table 6-1.

CEQA Guidelines Section 15130(b) presents two possible approaches for analyzing cumulative impacts:

- A list of past, present, and reasonably anticipated future projects producing related or cumulative impacts, including those projects outside the control of the agency; or
- A summary of projections contained in an adopted local, regional, or statewide plan, or related planning document, that describes or evaluates conditions contributing to the cumulative effect. Such plans may include: a general plan, regional transportation plan, or plans for the reduction of greenhouse gas emissions. A summary of projections may also be contained in an adopted or certified prior environmental document for such a plan. Such projections may be supplemented with additional information such as a regional modeling program. Any such document shall be referenced and made available to the public at a location specified by the lead agency.

For the purposes of cumulative analysis in this EIR, the discussion identifies how impacts of the 2050 MTP/SCS could add to impacts of other regional-scale projects. The cumulative impact analysis area is the tri-County AMBAG region and the adjoining counties of San Mateo, Santa Clara, Merced, Fresno, Kings, Kern, and San Luis Obispo. The approach to cumulative analysis is described in detail in the following section.

6.4.1 Approach for Cumulative Analysis

CEQA defines cumulative impacts as "two or more individual effects which, when considered together, are considerable, or which can compound or increase other environmental impacts." Section 15130 of the CEQA Guidelines requires that an EIR evaluate environmental impacts that are individually limited but cumulatively considerable. These impacts can result from the proposed project alone, or together with other projects. The CEQA Guidelines state: "The cumulative impact from several projects is 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" (CEQA Guidelines Section 15355).

Cumulative impacts can result from individually minor but collectively significant projects taking place over time. CEQA does not require an analysis of incremental effects that are not cumulatively considerable nor is there a requirement to discuss impacts which do not result in part from the project evaluated in the EIR.

a. Cumulative Impact Methodology

The 2050 MTP/SCS addresses cumulative conditions within the AMBAG region by design. The Plan area is comprised of 3.3 million acres and includes three counties and 18 cities. It integrates transportation investments with land use strategies for an entire region of the state that shares, or is connected by, common economic, social, and environmental characteristics. As such, the regional environmental analysis of the 2050 MTP/SCS presented throughout this Draft EIR is essentially a cumulative analysis consistent with CEQA requirements. Furthermore, this Draft EIR

contains detailed analysis of regional (cumulative) impacts, which are differentiated from localized impacts that may occur at the county level.

In addition, this EIR analyzes cumulative impacts for each resource area over a larger cumulative impact analysis area. The geographic scope defines the geographic area within which a proposed project and related projects may contribute to a specific cumulative impact in the larger cumulative impact analysis area. The geographic scope of the cumulative impact analysis varies depending upon the specific resource area being analyzed. The geographic scope for each resource area analyzed in this EIR is identified in Table 6-1.

Table 6-1 Cumulative Impact Analysis Geographic Scope

Resource Area	AMBAG Region	Adjacent Jurisdictions (San Mateo, Santa Clara, Merced, Fresno, Kings, Kern, and San Luis Obispo Counties)	State of California
Aesthetics and Visual Resources	X	X	
Agriculture and Forestry Resources	X	X	
Air Quality	X	X	
Biological Resources	X	X	
Cultural Resources	X	X	
Energy	X	X	X
Geology and Soils	X	X	
Greenhouse Gas Emissions	X	X	X
Hazards and Hazardous Materials	X	X	
Hydrology, Water Quality, and Water Supply	X	X	
Land Use and Planning	X	X	
Noise	X	X	
Population and Housing	X	X	
Public Services and Recreation	X	X	
Utilities and Service Systems	X	X	
Transportation	X	X	
Tribal Cultural Resources	X	X	
Wildfire	X	X	

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 combination of the two approaches. The cumulative analysis presented below primarily uses a projections-based approach, with additional consideration of specific large-scale projects consistent with a list approach [see CEQA Guidelines Section 15130(B)(1)]. Under the projections-based approach, land use and growth projections for the region, which are the subject of analysis throughout this Draft EIR, are

combined with the growth projections for the adjoining counties. Adjoining counties are listed as follows:

a. **San Mateo County.** San Mateo County is located north of the Plan area, north of Santa Cruz County along the Pacific coast. San Mateo County encompasses a major portion of the San Francisco Peninsula, covering approximately 554 square miles, including 106 square miles of inland waters and San Francisco Bay tidal areas. The eastern (bayside) portion of the County is comprised of dense urban development, while the western (coast side) is largely undeveloped except for small rural centers (San Mateo County 1986).

b. **Santa Clara County.** Santa Clara County is located northeast of the Plan area, east of Santa Cruz County and north of San Benito County. The County, which encompasses 1,300 square miles, is a major employment center for the region, providing more than 25 percent of all jobs in the Bay Area. The northern portion of the County is extensively urbanized, while the southern portion of the County is predominantly rural (Santa Clara County 1994).

c. **Merced County.** Merced County is located east of the northern portion of the Plan area, east of San Benito County. Merced County encompasses 1,980 square miles, 98 percent of which is unincorporated and sparsely populated (Merced County 2013).

d. **Fresno County.** Fresno County is located east of the Plan area, east of San Benito and Monterey counties. The County contains substantial amounts of agricultural land. However, the Fresno/Clovis metropolitan area is one of the most populous in the state with almost 500,000 residents (Fresno County 2000).

e. **Kings County.** Kings County is located east of the Plan area, east of the southern portion of Monterey County. Kings County is a predominantly agricultural-based County, with 90.2 percent of all land devoted to agricultural uses, with population centered in the cities of Avenal, Corcoran, Hanford and Lemoore (Kings County 2010).

f. **Kern County.** Kern County is located southeast of the Plan area, southeast of the southeastern-most corner of Monterey County. Kern County is California's third largest county in land area, encompassing 8,202 square miles. The County includes 11 incorporated cities, with Bakersfield as the city with the largest population. The remainder of the County is generally characterized as rural (Kern County 2004).

g. **San Luis Obispo County.** San Luis Obispo County is located south of the Plan area, south of Monterey County. The County is largely agricultural, with population concentrated in four regions: North County, North Coast, San Luis Obispo, and South County (San Luis Obispo County 2015).

As shown in Table 6-2, the population for the combined AMBAG region and adjoining counties is projected to increase by approximately 7,800 people by 2050.

Table 6-2 Population, Households and Employment Projections of Cumulative Impact Analysis Area, 2022-2050

Adjoining County	Acreage	Population[1] 2022	Population[1] 2050	Households[1] 2022	Households[1] 2050	Jobs[1] 2022	Jobs[1] 2050
Fresno	3,816,320	1,012,350	1,026,477	324,100	399,000	419,600	512,100
Kern	5,210,240	908,513	992,011	285,700	345,200	347,400	425,700
Kings	890,240	152,023	180,983	44,300	56,400	48,900	63,000
Merced	1,234,560	285,593	329,472	85,600	106,300	85,800	100,000
San Luis Obispo	2,114,560	279,760	255,346	108,800	127,100	124,300	149,100
San Mateo	287,360	739,819	726,366	272,400	313,600	422,600	543,700
Santa Clara	826,240	1,882,601	1,755,455	661,600	776,200	1,145,000	1,304,000
AMBAG Region[2]	3,273,600	766,170	813,708	250,657	285,569	398,536	426,335
Total	**17,653,120**	**6,026,829**	**6,079,818**	**2,033,157**	**2,123,800**	**2,992,136**	**3,523,935**

[1] Caltrans 2023

[2] AMBAG 2024

Based on the numbers shown in Table 6-2, in the cumulative impact analysis area the AMBAG region comprises approximately 12.7 percent of the existing population, 12.3 percent of the existing number of households and 13.3 percent of the existing number of jobs and approximately 18.5 percent of the total acreage. By 2050, this proportion is expected to remain relatively similar (13.4 percent of the population, 13.4 percent of households, and 12.1 percent of jobs). Thus, under both current and forecasted future conditions, the AMBAG region represents a relatively small portion of the growth in the cumulative analysis impact area.

The cumulative analysis for some resource areas also considers specific large-scale projects consistent with a list approach. These cumulative projects include colleges and universities with a population of over 10,000 for the ten-county area. Long-range development plans (LRDPs) for public colleges and universities undergo a separate projection of future growth that is not automatically accounted for in the RTP or General Plan processes. As such, they are considered projects for the purpose of this cumulative analysis. An example is additional development on the University of California (UC) Santa Cruz campus. The UC Santa Cruz 2021 Long Range Development Plan envisions the addition 8,500 students through 2040, which would bring total student enrollment to 28,000. This would be a 43 percent increase in total student enrollment, which is currently approximately 19,500 students. The 2021 Long Range Development Plan also plans for corresponding increases in faculty and staff and physical space to accommodate this growth. The faculty and staff size would increase by 2,200 people, bring total employee number at UC Santa Cruz to 5,000 by 2040 (University of California Santa Cruz 2021). In addition to campus projects, cumulative projects would also include new projects at large military facilities, both inside and outside the AMBAG region, such as U.S. Army Garrison Presidio of Monterey, Fort Hunter Liggett, and Naval Air Station Lemoore. For some resource areas, these projects are

considered in combination with the projections for the ten-county area in this cumulative analysis.

6.4.2 Cumulative Impacts Analysis

Refer to the end of each topical section of Chapter 4 for an analysis of cumulative impacts related to that topic area.

7 Alternatives

As required by Section 15126(d) of the *CEQA Guidelines*, this EIR examines a reasonable range of alternatives to the proposed 2050 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS). Section 15126.6 of the *CEQA Guidelines* requires that an EIR "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 addition, the *CEQA Guidelines* state the following:

- An EIR need not consider every conceivable alternative to a project. Rather, it must consider a reasonable range of potentially feasible alternatives that will foster informed decision making and public participation. An EIR is not required to consider alternatives that are infeasible. The range of potential alternatives to the proposed project shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects. The EIR should briefly discuss the rationale for selecting the alternatives to be discussed. The EIR should also identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process and briefly explain the reasons underlying the lead agency's determination. Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are (i) failure to meet most of the basic project objectives, (ii), infeasibility, or (iii) inability to avoid significant environmental impacts. (*CEQA Guidelines* Section 15126.6(a)(c).)
- "Feasible" means capable of being accomplished within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors. (*CEQA Guidelines* Section 15364.)

The primary objective of the 2050 MTP/SCS is to comply with applicable regulatory requirements, including California Transportation Commission Guidelines and Senate Bill (SB) 375, including SB 375's regional greenhouse gas (GHG) reduction targets. AMBAG's specific objectives for the 2050 MTP/SCS are to additionally ensure that the transportation system planned for the AMBAG region accomplishes the following:

- Serves regional goals, objectives, policies, and plans.
- Responds to community and regional transportation needs.
- Promotes energy efficient, environmentally sound modes of travel, facilities, and services.
- Promotes equity and efficiency in the distribution of transportation projects and services.

The analysis of alternatives focuses on the various land use and transportation scenarios that incorporate different assumptions regarding the combinations of future land uses and transportation system improvements. The 2050 MTP/SCS is specifically intended for the AMBAG region; therefore, an alternative location for the 2050 MTP/SCS is not possible. However, within

the AMBAG region, the 2050 MTP/SCS considers different patterns of land use and transportation investments to accommodate forecasted future growth and regional housing needs.

The alternative land use and transportation scenarios modeled and analyzed by AMBAG are described in Appendix F of the 2050 MTP/SCS and the preferred scenario (proposed project) is described in detail within Chapter 2, *Transportation Investments*, and Chapter 4, *Sustainable Communities Strategy*, of the 2050 MTP/SCS, as well as Chapter 2 of this EIR.

7.1 Alternatives Development and Screening Process

During the development of the 2050 MTP/SCS, AMBAG developed and evaluated scenarios that included various land use assumptions and transportation system improvements and investments to see how each scenario could achieve the GHG targets established by CARB for the AMBAG region, as well as other performance measures. Extensive outreach and coordination with partner agencies, local jurisdictions, key stakeholders, and the public was ongoing throughout the 2050 MTP/SCS planning process through workshops, meetings, surveys, and interactive tools.

This alternatives analysis herein includes the following:

- **Alternative 1: No Project Alternative.** The No Project Alternative is comprised of a land use pattern that reflects existing land use trends and a transportation network comprised of transportation projects that are currently in construction or are funded in the short-range Metropolitan Transportation Improvement Program (AMBAG 2024).
- **Alternative 2: Infill and Transit Focus.** The Infill and Transit Focus Alternative includes a land use pattern comprised of a more compact growth footprint and increased use of transit services to generate an increase in transit ridership and corresponding decrease in vehicle miles traveled (VMT). This would include reducing VMT by locating the places where people work and live within urban centers close to regional transit.
- **Alternative 3: Infill and Operational/Complete Streets.** The Infill and Operational/Complete Streets Alternative includes a land use pattern comprised of a more compact growth footprint and an increase in operational and safety projects to maintain a state of good repair. This alternative would also increase complete street and active transportation projects in local communities.

Each alternative is described and analyzed below to determine whether environmental impacts would be similar to, less than, or greater than those of the 2050 MTP/SCS. As required by CEQA, this section also includes a discussion of the “environmentally superior alternative” among those studied.

7.2 Alternatives Considered but Rejected

The *CEQA Guidelines* state that an EIR should identify any alternatives that were considered by the lead agency but were rejected as infeasible during the scoping process briefly explaining the reasons underlying the lead agency's determination (*CEQA Guidelines* Section 15126.2[c]). Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are (i) failure to meet most of the basic project objectives, (ii), infeasibility, or (iii) inability to avoid significant environmental impacts (*CEQA Guidelines* Section 15126.6[c]).

For this EIR, there were three alternatives that were considered by AMBAG and rejected as infeasible during the scoping process. These alternatives and their reasons for elimination are described below.

7.2.1 Aggressive VMT Reduction Alternative

An aggressive VMT reduction alternative would involve measures to substantially reduce vehicle trip length and frequency in the AMBAG region. Such measures could include but are not limited to a substantial regional shift toward compact, high-density development; expansion of public transit infrastructure, service areas, and service frequencies; and large-scale adoption of telecommuting, active transportation modes, and other trip-reducing strategies. An alternative that would aggressively reduce VMT in the AMBAG region would require a higher level of dense urbanization, transit oriented development, and a reduced reliance on personal vehicles. Due to the nature of the AMBAG region, these types of aggressive VMT reducing measures are infeasible.

First, the region has a high variability in residential density and has a large rural component, with substantially longer trip lengths and therefore higher VMT for those in rural areas. These commuter trips are not easily replaced by transit, as longer transit trip lengths typically require multiple stops and/or transfers, making commuting via transit less attractive. Second, the rural areas of the AMBAG region are also experiencing higher growth in housing and employment than urban areas. Such growth is particularly evident in the eastern and southern sections of the AMBAG region, with employment in the agriculture and service industries. These industries require a high level of in-person work and are therefore not conducive to telecommuting. Third, the region also has high income variability, which further complicates the process of linking the residential and employment zones necessary to provide efficient urban transit and reduce commute trips.

Heavy commuter travel and interregional travel to the San Francisco Bay Area for jobs create a jobs-housing imbalance and results in higher VMT for the AMBAG region. Increasing infill development and higher density in the AMBAG region may have very little impact on those long work trips.

In addition, the region has a rich collection of tourist activities and special events throughout the year, which contributes to higher VMT. Such tourist generated VMT would not decrease through higher density infill development or with transit improvements.

There are also significant agriculture activities from farm workers making seasonal transient (field-to-field) trips and agriculture goods movements. These trips are not conducive to transit and often generate longer trip lengths, and thus higher VMT. The VMT generated by these activities does not respond to VMT reduction strategies such as increased transit or telecommuting.

The region's aging population is expected to grow at a faster rate in the next 20 years, primarily in coastal communities. This population attracts more service trips from rural jurisdictions, resulting in higher VMT and making it difficult to provide efficient urban transit.

Other measures such as higher parking fees as well as tolling highway travel are only feasible in highly urbanized areas where increased transit services are available as an alternative mode. Therefore, an aggressive VMT reduction alternative was not considered feasible, and not selected as an alternative for detailed consideration in this EIR.

7.2.2 Road Pricing Alternative

The California State Transportation Agency (CalSTA) prepared the Climate Action Plan for Transportation Infrastructure (CAPTI) in 2021 and released an updated version, CAPTI 2.0, in January 2025 (CalSTA 2025). CAPTI outlines strategies to reduce GHG emissions from the transportation sector, including efforts to reduce VMT. CAPTI 2.0 continues to support the exploration of road pricing mechanisms, such as VMT fees, as part of a broader strategy to align transportation investments with climate, equity, and health goals. One of the new actions in CAPTI 2.0 is the development of a Statewide Express Mobility Action Plan, which aims to define the role of roadway pricing and embed equity considerations into its implementation (CalSTA 2025).

However, an alternative that aims to reduce VMT through substantially higher VMT fees would not be feasible in the AMBAG region. CAPTI 2.0 acknowledges that VMT pricing strategies are generally only viable in highly urbanized areas with robust public transit systems and high travel demand. In contrast, the AMBAG region is characterized by lower population densities and automobile dependency, where most trips are made by personal automobile on a relatively uncongested roadway network. These conditions do not favor tolling or congestion pricing strategies.

In rural areas, comprising most of the AMBAG region there is often relatively little demand for alternative modes such as transit, cycling, and walking, that would be incentivized by higher VMT fees. These modes are typically only feasible and cost-effective for shorter trips in length and time. Moreover, most alternative modes experience economies of scale—increased demand can lead to improved services. A transportation demand management (TDM) strategy that gives commuters an incentive to rideshare can lead motorists to form carpools, vanpools, or justify transit service.

The 2050 MTP/SCS emphasizes TDM strategies that give automobile owners an incentive to use alternative modes for some of their trips, which can result in a positive cycle of improved service and further increases in demand for alternatives. Informal ridesharing is common in rural

communities and is a particularly important option for non-drivers and lower-income residents. Ridesharing programs can match carpools and organize vanpools. Vanpooling can be particularly effective in rural communities. A bike/transit integration strategy is especially suitable in rural areas since many destinations are too far to easily walk to from a bus stop. In some cases, it is possible to improve freight transport services, including intermodal terminals that allow more freight to be carried by rail rather than truck.

Caltrans research has found that pricing can reduce VMT in highly urbanized areas where robust public transit systems exist, listing major international cities like London, Stockholm, and Singapore as examples (Caltrans 2018). In the United States, several cities or metropolitan areas, such as San Diego and the San Francisco Bay Area, have implemented dynamically priced toll lanes (Federal Highway Administration 2022); in New York City, vehicles entering an established Congestion Relief Zone must pay a toll (City of New York 2025). The AMBAG region does not include large and highly urbanized cities with robust public transit systems, such as London, which has an extensive underground subway and bus network. Large U.S. jurisdictions such as San Francisco and New York City are evaluating and implementing cordon pricing (charging a fee to enter or drive within a congested area) in their jurisdictions where robust public transit systems are present. However, because the AMBAG region does not contain areas with the same high-density land uses and robust transit systems as these large metropolitan cities, and because AMBAG does not have the legal authority to impose VMT fees, this alternative was not considered feasible, and was not selected for detailed evaluation in the EIR.

7.2.3 Financially Unconstrained Alternative

The Financially Unconstrained Alternative was considered but ultimately rejected from detailed analysis due to infeasibility. This alternative would include all potential future transportation projects developed by AMBAG and the Regional Transportation Planning Agencies (RTPAs), including those classified as financially “unconstrained,” without regard to funding availability. While this alternative would result in greater transportation benefits relative to the 2050 MTP/SCS, such as increased roadway capacity and expanded transit service, implementation is not feasible given the fiscal limitations of the AMBAG region.

AMBAG, as the lead agency, is required to develop by federal and state transportation law a financially constrained regional transportation plan that reflects reasonably anticipated funding sources. The Financially Unconstrained Alternative exceeds these limitations by assuming full implementation of all proposed projects, regardless of cost or funding availability. This approach conflicts with the California Transportation Commission’s 2024 RTP Guidelines for Metropolitan Organizations and 2024 RTP Guidelines for Regional Transportation Planning Agencies, which mandate that regional transportation plans be fiscally realistic and based on identified revenues (California Transportation Commission 2024a; 2024b). Without secured or reasonably foreseeable funding, the alternative cannot be implemented and therefore does not meet CEQA’s requirement for a feasible alternative.

For these reasons, the Financially Unconstrained Alternative was not considered feasible, and was not selected for detailed evaluation this EIR.

7.3 Alternative 1: No Project Alternative

7.3.1 Description

The No Project Alternative assumes that the transportation network would be comprised of committed transportation projects fully programmed through construction included in AMBAG's Fiscal Years 2024/25 – 2027/28 Metropolitan Transportation Improvement Program (AMBAG 2024). The growth in population, jobs, and homes would be the same as the growth forecast for the proposed 2050 MTP/SCS. This alternative assumes the same housing and employment growth as the 2050 MTP/SCS. Because the No Project Alternative only includes transportation projects that are fully programmed through fiscal year 2028, this alternative would not respond to community and regional transportation needs after this time. Further, this alternative would not promote energy efficient, environmentally sound modes of travel and would not promote equity and efficiency in the distribution of transportation projects beyond fiscal year 2028. Thus. this alternative would not meet most of the basic project objectives.

7.3.2 Impact Analysis

a. Aesthetics and Visual Resources

Implementation of this alternative would result in fewer visual impacts as compared to the 2050 MTP/SCS, because many of the proposed interchanges, bridges, and roadway extensions, as well as transit and rail facilities, would not be constructed. Nevertheless, many transportation projects would still be constructed under this alternative with the potential to impact scenic vistas on designated scenic highways, along with the gradual transformation toward a more urban/suburban character would occur in many parts of the AMBAG region. In fact, because this alternative would continue current sub-regional growth trends rather than emphasizing an infill approach to land use and housing, more development would occur outside of existing urban areas, which may result in greater impacts to scenic resources and additional sources of light and glare in the less developed portions of the AMBAG region. Thus, impacts related to visual character would be significant and unavoidable for this alternative, as they would be with the 2050 MTP/SCS. The overall level of impact resulting from combined transportation improvement and land use projects would be similar when compared to the 2050 MTP/SCS with some impacts greater while other impacts less, but would remain significant and unavoidable.

b. Agriculture and Forestry Resources

This alternative would result in fewer transportation projects being constructed, including roadway widening and other projects that could directly convert agricultural land to non-agricultural use. However, because this alternative would continue current sub-regional growth trends rather than emphasizing an infill approach to land use and housing, more development would be expected to occur outside of existing urbanized areas, including within areas currently used for agricultural production. Given the extent of Farmland in Monterey, San Benito and Santa Cruz counties, impacts related to converting Farmland to non-agricultural use, conflicts between

urban and agricultural land uses, and conflicts with existing agricultural zoning and/or Williamson Act contracts would be worse under this alternative than for the proposed 2050 MTP/SCS. The 2050 MTP/SCS emphasizes development within existing spheres of influence and community plan areas, whereas the No Project Alternative would allow growth to follow existing trends, potentially increasing pressure on agricultural lands at the urban edge.

Forestland in the AMBAG region is located primarily in the Santa Cruz County area; development under this alternative could extend into forestland and impacts would be worse under this alternative than for the proposed 2050 MTP/SCS. As with agricultural resources, because more development under this alternative would occur outside of existing urbanized areas, impacts to forestland and forestry resources would increase compared to the 2050 MTP/SCS. However, because the No Project Alternative would not result in rezoning of any existing land, including within the Santa Cruz Mountains, and because the majority of timber areas are outside the anticipated land use development areas in Santa Cruz County, this impact would remain less than significant for the No Project Alternative, as it is for the 2050 MTP/SCS.

The overall impact to agriculture and forestry resources resulting from the No Project Alternative would be greater than under the 2050 MTP/SCS, due to the increased likelihood of development occurring in areas currently used for agricultural production and near forested lands, without the land use strategies and mitigation measures embedded in the proposed project.

c. Air Quality

The No Project Alternative assumes the same housing and employment growth as the 2050 MTP/SCS. As discussed in Section 4.3, *Air Quality,* conflicts with or obstruction of the applicable air quality plan are typically determined by consistency with the population forecast or emissions forecast. Therefore, the No Project Alternative would not conflict with or obstruct implementation of the Monterey Bay Air Resources District's 2012-2015 Air Quality Management Plan, as discussed in Section 4.3. Impacts would be similar to implementation of the 2050 MTP/SCS.

Implementation of this alternative would result in reduced short-term air quality impacts from construction activity, as fewer transportation projects would be implemented and therefore less construction activity would occur. As shown in Table 7-1, under the No Project Alternative, ROG, NO_X, PM_{10}, and SO_X emissions would be the same as the 2050 MTP/SCS. CO emissions would be higher compared to the proposed 2050 MTP/SCS (see also Modeling Methodology in Appendix F to the 2050 MTP/SCS).

Table 7-1 Regional Emissions Analysis of the No Project Alternative

Scenario	VMT	ROG Emissions (tons/day)	NO_X Emissions (tons/day)	PM_{10} Emissions (tons/day)	$PM_{2.5}$ Emissions (tons/day)	Total Fugitive PM Emissions (tons/day)[2]	CO Emissions (tons/day)	SO_x Emissions (tons/day)
2050 No Project	18,216,739	1.82	2.54	0.48	0.17	0.59	13.99	0.06
2050 MTP/SCS	18,203,962	1.82	2.54	0.48	0.17	0.59	13.97	0.06

VMT = vehicle miles traveled; ROG = reactive organic gases; NOx = nitrous oxide; PM10 = particulate matter with a diameter of 10 microns or less; CO = carbon monoxide; SOx = sulfur oxide

Source: On-road motor vehicle emissions were calculated by AMBAG using EMFAC2021. Refer to 2050 MTP/SCS Chapter 5 and Appendix G, as well as Appendix E.1. for complete methodology.

The slightly higher CO emissions would be due to slightly higher VMT expected under this alternative (an increase of close to 13,000 VMT per day, an increase of 0.07 percent). The SCS is intended to increase residential and commercial land use capacity within existing transit corridors which would shift a greater share of future growth to these corridors, ultimately increasing density, and improving circulation and multimodal connections. If this alternative were selected, improvements in the transportation infrastructure and infill development projects anticipated under the 2050 MTP/SCS would not occur. Higher VMT due to fewer alternative transportation projects under this alternative would generate higher CO emissions. While the 2050 No Project Alternative would result in slightly higher VMT than the 2050 MTP/SCS, it would also have a lower truck percentage as compared to the 2050 MTP/SCS, resulting in similar NO_x emissions.

Future land use development under this alternative would not be infill or transit oriented development (TOD). As such, the No Project Alternative would not concentrate population adjacent to transit and other transportation facilities that could result in more people being exposed to elevated health risks from Toxic Air Containments (TACs). Accordingly, impacts related to TAC exposure to sensitive receptors would be less under this alternative than under the 2050 MTP/SCS but would remain significant and unavoidable.

Implementation of this alternative would involve less construction activities and operation of fewer transportation projects. Therefore, this alternative would generate fewer potentially objectionable odors than the proposed project. Impacts would be less than significant and reduced compared to the proposed project.

Overall air quality impacts would increase under this alternative when compared to the 2050 MTP/SCS because VMT would be higher under this alternative. Under this alternative, TACs would be reduced due to reduced development near transit and transportation facilities. However, long term operational impacts related exposure of sensitive receptors to substantial hazardous air pollutant concentrations would remain significant and unavoidable, as they would be for the proposed 2050 MTP/SCS.

d. Biological Resources

Implementation of this alternative may result in fewer impacts to biological resources resulting from transportation improvement projects, as fewer roadway extensions, widening projects, and creek crossings would occur under this alternative. As such, this alternative would also result in fewer conflicts with local ordinances and/or policies protecting trees and other biological resources. As discussed in Section 4.4, *Biological Resources,* there are no adopted regional habitat conservation plans or natural community conservation plans in the AMBAG region, and this alternative would similarly not conflict with such a plan. However, because this alternative would continue current sub-regional growth trends rather than emphasizing an infill approach to land use and housing, more development would be expected to occur outside of existing urbanized areas, including in areas providing habitat for special status plant and animal species. Overall impacts to special status plants, animals, wetlands and/or riparian habitat, and wildlife movement outside developed urban areas would therefore be greater than under the 2050 MTP/SCS. Impacts would remain significant and unavoidable, as they would be for the proposed 2050 MTP/SCS.

e. Cultural Resources

As described in Section 4.5, *Cultural Resources,* some of the 2050 MTP/SCS projects may be in proximity to historical resources or include repair or replacement of potentially historical structures (e.g., bridges). As fewer projects would be developed under the No Project Alternative, these impacts would be reduced. In addition, because less infill development would occur under this alternative, fewer impacts involving redevelopment or demolition of existing structures resulting from land use development would occur. Impacts to historic resources would therefore be reduced when compared to the 2050 MTP/SCS. However, project specific impacts may still be significant, as they are for the proposed 2050 MTP/SCS.

Implementation of this alternative would involve less ground disturbance associated with transportation improvements than would occur under the 2050 MTP/SCS. However, because more land use development could occur outside of existing urbanized areas, more ground disturbance would be expected to occur in previously undeveloped areas. As such, the potential for uncovering known or unknown archaeological resources and human remains would increase under this alternative for new development but decrease for transportation projects. The overall level of impact resulting from combined transportation improvement and land use projects would be similar when compared to the 2050 MTP/SCS. Impacts to archaeological resources would remain significant and unavoidable, as they are for the proposed 2050 MTP/SCS.

f. Energy

As this alternative would result in less construction of transportation infrastructure, overall energy use associated with construction activities would be reduced when compared to the 2050 MTP/SCS. However, this alternative would not include many of the capital improvements envisioned under the proposed 2050 MTP/SCS that would improve transportation efficiency and reduce regional energy demand, such as active transportation projects and Complete Streets. Energy use will increase over time as the result of regional socioeconomic (population and

employment) growth, regardless of implementation of the 2050 MTP/SCS. The No Project Alternative would result in similar total and per capita energy use as compared to the 2050 MTP/SCS. As discussed in Section 4.6, *Energy,* the 2050 MTP/SCS would not result in inefficient, unnecessary, or wasteful direct or indirect consumption of energy, and would be consistent with applicable plans for renewable energy or energy efficiency. As the No Project Alternative would be similar in both total and per capita energy use, impacts would be similar when compared to the 2050 MTP/SCS, and impacts related to inefficient, unnecessary, or wasteful direct or indirect energy consumption or plans for renewable energy or energy efficiency would be less than significant, as they are for the proposed 2050 MTP/SCS.

g. Geology, Soils, and Mineral Resources

This alternative would result in fewer transportation infrastructure projects constructed; therefore, this alternative would reduce construction-related erosion and loss of topsoil. As this alternative does not include as many new interchanges, bridges, roads and fixed facilities, there would be less exposure of new structures to hazardous geologic conditions, including liquefaction, expansive soils, landslides, ground-shaking, and flooding. Conversely, if inadequate structures are not replaced, the potential for these existing structures and people using these structures to be harmed by geologic hazards could be greater than under the proposed 2050 MTP/SCS than under the No Project Alternative. Implementation of this alternative would involve less ground disturbance associated with transportation improvements than would occur under the 2050 MTP/SCS. However, because more land use development could occur outside of existing urbanized areas due to growth continuing under the existing land use pattern, more development would be expected to occur in previously undeveloped areas. While development under the No Project Alternative would also be required to comply with the California Building Code and requirements set forth by the Alquist Priolo Zone Act, the No Project Alternative would result in a greater area of land being converted from undeveloped to developed uses that could be located in areas with greater susceptibility to seismic related risks. Impacts related to susceptibility to seismic related risks would be less than significant, as under the 2050 MTP/SCS.

Impacts to paleontological resources would be greater under this alternative compared to the 2050 MTP/SCS, as mitigation for paleontological resources would not be implemented and ground disturbing activities could result in significant and unavoidable impacts, similar to the 2050 MTP/SCS. Projects located within mineral resource zones would be required to comply with the California Surface Mining and Reclamation Act, as would all projects under the 2050 MTP/SCS, and as such impacts would remain less than significant, as under the 2050 MTP/SCS.

Overall, impacts to geology and soils would be slightly greater compared to the 2050 MTP/SCS but would remain less than significant. Impacts to paleontological resources would also be greater and would remain significant and unavoidable.

h. Greenhouse Gas Emissions/Climate Change

The No Project Alternative would result in fewer construction related GHG emissions, as fewer transportation infrastructure projects would be constructed compared to the 2050 MTP/SCS. However, operation of the No Project Alternative would result in conflicts with applicable GHG reduction plans, policies, and regulations, a significant and unavoidable impact. Table 7-2 compares total and per capita GHG emissions for the 2050 No Project and 2050 MTP/SCS scenarios. As shown therein, the No Project Alternative would decrease total GHG emissions from 4,196,719 CO_2e/year for the 2050 MTP/SCS to 4,196,295 MT CO_2e/year – a decrease of 424 MT, or 0.01 percent. The difference is negligible (less than a one percent decrease) such that per capita GHG emissions would be similar as compared to the 2050 MTP/SCS. It should be noted, however, that the results do not account for the TDM, TSM, work from home and enhanced transit services GHG reductions that would be implemented with buildout of the 2050 MTP/SCS. Thus, the modeled 2050 MTP/SCS emissions, which are solely based on VMT, are conservative; actual emissions for the 2050 MTP/SCS would be lower than is shown in Table 7-2. The negligible difference in per capita emissions indicates that per capita light-duty vehicle emissions would also be similar to the 2050 MTP/SCS because the No Project Alternative utilizes the same fleet mix assumptions as the 2050 MTP/SCS. Therefore, the No Project Alternative would achieve the regional SB 375 emission reduction target of six percent by 2035 from 2005 levels, similar to the 2050 MTP/SCS.

Table 7-2 No Project Alternative Net Change in Total GHG Emissions

Scenario	2050 No Project	2050 MTP/SCS
On-Road Mobile Emissions from VMT (MT CO_2e/year)	1,880,108	1,880,532
Land Use Emissions from Table 4.8-1[1](MT CO_2e/year)	2,316,187	2,316,187
Total	**4,196,295**	**4,196,719**
Population (persons)	813,708	813,708
Per Capita (MT CO_2e per service population per year)	5.16	5.16

MT = metric tons; CO_2 = carbon dioxide; CO_2e = carbon dioxide equivalent

[1] Refer to Section 4.8, *Greenhouse Gas Emissions/Climate Change*

Source: Total GHG emissions were calculated by AMBAG. Refer to 2050 MTP/SCS Chapter 5 and Appendix G for complete methodology.

Construction and operation of the No Project Alternative would result in significant and unavoidable impacts, similar to the 2050 MTP/SCS. In addition to the calculation for the 2050 MTP/SCS being conservative, the No Project Alternative would not include the promotion of sustainable modes of travel, clean vehicle technologies and traffic operational improvements (ITS/TSM) within the AMBAG region that would help improve GHG emissions levels from mobile sources substantially. Due to the negligible decrease in total GHG emissions (less than a one percent decrease), the overall impact of this alternative would be similar to what would occur under the 2050 MTP/SCS, and impacts would remain significant and unavoidable.

i. Hazards and Hazardous Materials

This alternative would result in fewer infrastructure projects being constructed, thereby reducing hazardous material use, storage, and transportation resulting from construction of those projects. However, the volume of hazardous materials being transported to support land use development in the region would remain the same, as land use development would continue to occur under this alternative. As future development under the No Project Alternative would be subject to applicable hazardous materials regulations and programs, impacts relating to routine transport, use, or disposal of hazardous materials; risk of upset and accident conditions; emissions within one-quarter mile of a school; airport hazards; and interference with emergency response and evacuation plans would be less than significant, similar to 2050 MTP/SCS. Overall hazards and hazardous materials impacts would be similar under this alternative as under the 2050 MTP/SCS.

j. Hydrology and Water Quality

This alternative would result in fewer transportation infrastructure projects constructed. Therefore, this alternative would reduce water quality impacts resulting from construction-related erosion and sedimentation and would generate less water demand for dust suppression activities for transportation projects. Accordingly, this alternative would generate less demand for groundwater sources, and similar to the 2050 MTP/SCS, would not conflict with a sustainable groundwater management plan. These impacts would remain less than significant pursuant to compliance with existing regulations, as they are for the proposed 2050 MTP/SCS.

As this alternative would continue current sub-regional growth trends rather than emphasizing an infill approach to land use and housing, more development would be expected to occur outside of existing urbanized areas. As such, impervious surfaces would be expected to increase under this alternative. Groundwater recharge rates and drainage patterns may be affected by development that increases the extent of impermeable surfaces, such as concrete and asphalt, which inhibit the infiltration of surface water runoff to the subsurface. Further, as projects would be located in less developed areas, runoff would include fewer urban pollutants such as heavy metals from auto emissions, oil and grease than projects under the 2050 MTP/SCS. However, because more development would occur in and therefore be adjacent to agricultural areas, runoff from those adjacent agricultural areas would contain more fertilizers and pesticides.

While projects under this alternative may require more grading and vegetation removal, including in proximity to creeks, less urban development may result in less disturbance of soils on previously contaminated sites. This may also locate a greater amount of future development in proximity to flood hazard zones. Further, water quality in creeks may be more impacted, but water quality within urban areas may be less impacted. This would result in similar impacts related to consistency with water quality control plans as the proposed 2050 MTP/SCS. Because of these tradeoffs, the No Project Alternative would result in impacts to water quality that are overall comparable to the 2050 MTP/SCS with some impacts greater while other impacts would be less; water quality impacts would remain less than significant, pursuant to compliance with existing regulations, as they are for the proposed 2050 MTP/SCS.

k. Land Use and Planning

As with the 2050 MTP/SCS, this alternative would not be anticipated to divide an established community, as development would occur consistent with existing land use patterns and primarily within existing communities. As noted in Section 4.11, *Land Use and Planning,* the 2050 MTP/SCS includes a list of planned and programmed projects including local and regional capital improvements that have been anticipated or accounted for in local general plans and regional, statewide, and federal transportation improvement programs. In addition, the objective of the 2050 MTP/SCS is to provide for a comprehensive transportation system of facilities and services that meets public need for the movement of people and goods, and that is consistent with the social, economic, and environmental goals and policies of the region. The No Project Alternative would not provide transportation projects anticipated within applicable general plans and transportation improvement programs, nor would it guide development to explicitly meet social, economic, and environmental goals and policies of the region as anticipated under the 2050 MTP/SCS. Due to the more dispersed land use pattern, the amount of undeveloped land impacted would be greater under this alternative.

Although the No Project Alternative would continue existing land use patterns and trends, it would increase the severity of several environmental impacts, as discussed herein. As such, it could result in conflicts with State and local policies and regulations adopted for the purpose of avoiding or mitigating environmental effects. As environmental effects would generally increase under this alternative, the overall impacts on land use would be greater under this alternative when compared to the 2050 MTP/SCS but would remain less than significant.

l. Noise

From a programmatic perspective, fewer transportation infrastructure projects would result in less construction activity under the No Project Alternative. This would reduce temporary noise impacts throughout the AMBAG region. In addition, because the number of infill or TOD projects would be less under the No Project Alternative, construction-related noise impacts on adjacent sensitive receptors would also decrease. However, construction noise would still occur, and impacts would continue to be significant, as they are for the proposed 2050 MTP/SCS.

Although the number of transportation projects would be reduced as compared to the 2050 MTP/SCS, increased traffic volumes resulting from regional growth would continue to occur. Whether noise impacts would be greater or less than those anticipated under the 2050 MTP/SCS remains dependent on site specific considerations that cannot currently be known. Regionally, the difference in VMT between the No Project Alternative and the 2050 MTP/SCS is not enough to noticeably change overall noise levels in the region. Mobile source noise levels resulting from traffic would therefore be similar under the No Project Alternative when compared to the 2050 MTP/SCS and would remain significant and unavoidable.

As most rail and transit improvements planned under the 2050 MTP/SCS would not be implemented under this alternative, the potential for increased rail and transit noise would be reduced under the No Project Alternative but would remain significant and unavoidable. Construction and operation of future development under the No Project Alternative could be located in close proximity to a public airport or private airstrip, as under the 2050 MTP/SCS, and

would result in exposure of people residing or working in the area to excessive noise levels. As under the 2050 MTP/SCS, the No Project Alternative could result in the exposure of people residing or working near public airports or private airstrips to excessive noise levels. However, mitigation of noise near airports would not be implemented under the No Project Alternative. Therefore, impacts would be greater under the No Project Alternative and would remain significant and unavoidable.

Construction of transportation projects or land use projects under the No Project Alternative could result in excessive groundborne vibration. During operation, heavy trucks, buses, trains, and heavy vehicle traffic traveling along new transportation facilities could generate groundborne vibration that exceeds thresholds. Some cities and counties in the AMBAG region include specific regulations in their municipal code to reduce vibration impacts. However, the No Project Alternative would not include mitigation to reduce physical impacts due to vibration and as such, impacts would be greater than under the 2050 MTP/SCS and would remain significant and unavoidable.

Overall, noise-related impacts across the region would be similar to the 2050 MTP/SCS, with some impacts greater and some impacts similar, and would continue to be significant and unavoidable.

m. Population and Housing

The No Project Alternative would result in the same population increase in the region by 2050 as the proposed 2050 MTP/SCS. As such, impacts related to population growth would be similar to the 2050 MTP/SCS and would remain less than significant. As fewer transportation projects would be implemented and land uses would be less dense (thus resulting in less demolition and redevelopment of existing housing), displacement-related impacts would be reduced under this alternative when compared to the 2050 MTP/SCS. This impact would be less than significant. Overall population and housing impacts would be less than the 2050 MTP/SCS.

n. Public Services and Recreation

Implementation of this alternative would result in the same population increase in the region by 2050 as the proposed 2050 MTP/SCS. As such, expected demand on public services and recreation would be similar to the 2050 MTP/SCS and may require new or expanded facilities. Overall, impacts to public services and recreation would be similar as under the 2050 MTP/SCS, and would remain significant and unavoidable.

o. Transportation

Under the No Project Alternative, projects to increase bus capacity on congested facilities and the frequency of bus lines would not be implemented. In addition, the 2050 MTP/SCS projects that are intended to ensure a reliable bus fleet would not be implemented under the No Project Alternative. Without these types of projects, operation of public transit may be unreliable or fail to meet the frequency and performance standards established by MST, Santa Cruz METRO and

San Benito County Express. Thus, compared to the 2050 MTP/SCS, the No Project Alternative would result in greater impacts due to conflicts with programs addressing the circulation system.

This alternative would not include many of the projects envisioned under the proposed 2050 MTP/SCS, including new highway and intersections, bikeway and pedestrian (active transportation), rail, transit, intelligent transportation system/transportation demand management, and aviation projects. Many of these projects are intended to address VMT, and in many cases would serve as mitigation measures to reduce potential impacts associated with planned long-term development.

Overall, VMT within the AMBAG region would increase as a result of regional population growth, with or without the 2050 MTP/SCS. The No Project Alternative would generate 18,216,739 daily VMT in 2050 compared to 18,203,962 daily VMT for the 2050 MTP/SCS – an increase of 12,777 daily VMT, or 0.07 percent. This increase is negligible (less than a one percent change) such that VMT would be similar as compared to the 2050 MTP/SCS. In terms of VMT per capita, both the No Project Alternative and the 2050 MTP/SCS would result in 22.4 VMT per capita (see Table 4.15-5 in Section 4.15, *Transportation*). With a baseline (2022) VMT per capita of 20.9, both the No Project Alternative and the 2050 MTP/SCS would not reduce VMT per capita to 25 percent below 2019 VMT per capita conditions by 2030 or 30 percent below by 2045. While the VMT would be similar under both the 2050 No Project and 2050 MTP/SCS, the VMT estimates do not account for the TDM, TSM, work from home, and enhanced transit services that would be implemented with buildout of the 2050 MTP/SCS. Thus, the modeled 2050 MTP/SCS VMT for the project is conservative; actual VMT for the 2050 MTP/SCS would be lower than is calculated.

Under the No Project Alternative, only transportation projects currently programmed through 2028 would be implemented, and no new roadway capacity increases would occur. As a result, this alternative would not result in the induced travel impacts that are typically associated with capacity increasing roadway projects. However, the No Project Alternative would lack coordinated land use and transportation project planning, which could lead to less efficient development patterns and increased reliance on automobiles over time. Nonetheless, induced travel is more pronounced at the project or corridor level and at the regional scale these effects are often diluted. Similar to the 2050 MTP/SCS, induced travel impacts under the No Project Alternative would be less than significant.

Overall, the No Project Alternative would result in similar VMT and induced travel in the AMBAG region compared to the 2050 MTP/SCS and would increase impacts to transit service. Thus, overall, impacts to transportation would be greater under the No Project Alternative and would remain significant and unavoidable.

This alternative would result in fewer infrastructure projects being constructed, thereby reducing construction-related transportation hazards. Transportation projects currently programmed through 2028 would still be required to conform to the design and safety standards of the public agency responsible for implementation, resulting in similar operational impacts as compared to the 2050 MTP/SCS. However, the No Project Alternative would not implement Complete Streets policies and programs envisioned in the 2050 MTP/SCS, limiting the ability to address existing incompatible uses related to the presence of cyclists and pedestrians on and near roadways. The

No Project Alternative would ultimately result in a less than significant impact related to transportation hazards and incompatible uses, similar to the 2050 MTP/SCS.

Similarly, the No Project Alternative have fewer construction-related disruptions to emergency access, resulting in reduced short-term impacts. Transportation projects currently programmed through 2028 would still be required to conform to the design standards related to emergency vehicle access, resulting in similar operational impacts as compared to the 2050 MTP/SCS. However, the No Project Alternative would not implement upgrades and improvements to existing transportation infrastructure that would benefit emergency vehicle access. Nonetheless, the No Project Alternative would ultimately result in a less than significant impact related to transportation hazards and incompatible uses, similar to the 2050 MTP/SCS.

p. Tribal Cultural Resources

Implementation of this alternative would involve less ground disturbance associated with transportation improvements than would occur under the 2050 MTP/SCS. However, because more land use development could occur outside of existing urbanized areas, more ground disturbance would be expected to occur in previously undeveloped or open space areas. As such, the potential to disturb tribal cultural resources, including ancestral remains and sacred sites, would increase under this alternative.

As with the 2050 MTP/SCS, future projects would be required to comply with AB 52, which would encourage tribal consultation with local California Native American tribes and require the identification of project specific substantial adverse effects on tribal cultural resources and appropriate project specific mitigation measures. If it is determined that a specific project would result in a substantial adverse change in the significance of a tribal cultural resource, the impact would be significant. This significant impact would occur for projects under the No Project Alternative, as it would for the 2050 MTP/SCS. As such, impacts would remain significant and unavoidable, as they would for the 2050 MTP/SCS. Due to the increased potential to disturb tribal cultural resources from development outside of urbanized areas, the overall impact of the No Project Alternative would be greater than under the 2050 MTP/SCS.

q. Utilities and Service Systems

Implementation of this alternative would result in the same population increase in the region by 2050 as the proposed 2050 MTP/SCS. As such, expected demand for utilities and service systems would be similar to the 2050 MTP/SCS and may require new or expanded facilities. Overall, impacts to utilities and service systems would be similar as under the 2050 MTP/SCS, and would remain significant and unavoidable.

Increases to water demand are primarily associated with increased population levels. The No Project Alternative would result in the same population increase in 2050 as the MTP/SCS. However, this alternative would result in less dense land use development, which would result in a less efficient water supply system (e.g., greater areas of irrigated landscaping). As such, future water demand associated with this alternative would be greater than water demand for the 2050

MTP/SCS. This impact, which is significant and unavoidable for the 2050 MTP/SCS, would be greater under the No Project Alternative. Impacts would remain significant and unavoidable.

The No Project Alternative would result in the same population increase in the region by 2050 as the proposed 2050 MTP/SCS resulting in a similar increase in solid waste generation. Fewer transportation infrastructure projects would be constructed, reducing short-term construction-related waste. Transportation projects currently programmed through 2028 would still be required to comply with applicable diversion regulations. Overall, impacts related to solid waste would be similar to the proposed project and would remain significant and unavoidable.

r. Wildfire

The No Project Alternative would allow more housing near wildlands and would increase the vulnerability of people and structures to wildland fire. Under the No Project Alternative, land use development could occur outside of existing urbanized areas and extend into more wildland areas. This impact, which is significant and unavoidable for the 2050 MTP/SCS, would be greater under the No Project Alternative and would remain significant and unavoidable.

7.4 Alternative 2: Infill and Transit Focus

7.4.1 Description

This alternative is intended to reduce VMT by locating the places where people work and live within urban centers and closer to transit. This alternative assumes the same total growth in population, jobs, and housing numbers as the 2050 MTP/SCS but with more compact and mixed land uses. Overall, this alternative incorporates less dispersed land use and development than the proposed MTP/SCS. This alternative includes a more compact growth footprint and increased use of transit service to generate an increase in transit ridership and corresponding decrease in VMT. For instance, this alternative relies on a higher amount of housing, especially near transit than the market currently supports. This alternative assumes more investment (approximately $1 billion more) in transit infrastructure and services and less investment in local streets, roads, and highways compared to the proposed 2050 MTP/SCS. Transportation projects developed under this alternative would include Highway 68 Corridor Transit Improvements (MON-MST0-19-MST-2026), Salinas Bus Rapid Transit (MON-MST-020-MST-2026), and the Monterey Branch Line Passenger Rail (MON-TAMC001-TAMC-2026) in Monterey County, and shuttle services in Hollister and San Juan Bautista (SB-LTA-A70-2026 and SB-LTA-A71-2026) in San Benito County. This alternative would meet most of the basic project objectives, as it would serve regional goals and objectives to increase transit capacity and mobility; respond to community and regional transportation needs; promote energy efficient modes of travel, facilities, and services; and promote equity and efficiency in the distribution of transportation projects and services.

7.4.2 Impact Analysis

a. Aesthetics and Visual Resources

This alternative would include greater development intensities around transit and within urban centers. Higher density housing in transit areas and urban centers would have the potential to impact scenic vistas on designated scenic highways and result in the gradual transformation toward a more urban character in many parts of the AMBAG region, which would concentrate an increase in light and glare in these areas. Land use development envisioned under this alternative would be denser than the proposed 2050 MTP/SCS and would result in greater aesthetic impacts to scenic resources and increased light and glare in the developed portions of the AMBAG region, but less aesthetic impacts to scenic resources and fewer additional sources of light and glare in the less developed portions of the AMBAG region. As land use development would be denser in infill areas, there would be less development in scenic viewshed areas and this alternative would result in fewer changes in character from rural to urban. Impacts to scenic resources would be less under this alternative compared to the 2050 MTP/SCS. Nevertheless, impacts related to visual character would be significant and unavoidable as with the 2050 MTP/SCS.

Implementation of transportation projects under this alternative would result in fewer visual impacts as compared to the 2050 MTP/SCS, because many of the proposed interchanges, bridges and roadway extensions would not be constructed; however, rail facilities, such as the Coast Rail Service and Around the Bay Rail, would be constructed. While the overall level of impact resulting from combined transit improvements and land use projects would be less when compared to the 2050 MTP/SCS, impacts would remain significant and unavoidable.

b. Agriculture and Forestry Resources

Land use development under this alternative would further concentrate higher density housing in transit and urban areas. Impacts from land use projects to agricultural resources would be less than impacts under the 2050 MTP/SCS, as development would not extend into agricultural land to the same extent. This impact would be less than for the proposed 2050 MTP/SCS, but would remain significant and unavoidable because some development on Important Farmland could still occur.

This alternative would result in fewer transportation infrastructure projects being constructed, including roadway widening and other projects that could directly convert agricultural land to non-agricultural use. This alternative would emphasize development of transit and higher density land uses rather than transportation infrastructure projects envisioned under the 2050 MTP/SCS and would result in fewer roadway projects that could extend into agricultural uses. As transit projects would be prioritized, roadway widening would be less likely to occur under this alternative. Mitigation would still be required under this alternative and would further reduce impacts. The impact to agricultural resources resulting from transportation improvements under this alternative would be less than under the 2050 MTP/SCS, but would remain significant and unavoidable because some development on Important Farmland could still occur.

Forestland in the AMBAG region is located primarily in Santa Cruz County. This alternative would result in less dispersed land use and development than the 2050 MTP/SCS. As such, less development would occur in forestland and impacts would be reduced when compared to the 2050 MTP/SCS. Impacts would be less than significant, as they are for the 2050 MTP/SCS.

c. Air Quality

Alternative 2 assumes the same housing and employment growth as the 2050 MTP/SCS. As discussed in Section 4.3, *Air Quality,* conflicts with or obstruction of the applicable air quality plan are typically determined by consistency with the population forecast or emissions forecast. Therefore, Alternative 2 would not conflict with or obstruct implementation of the Monterey Bay Air Resources District's 2012-2015 Air Quality Management Plan, as discussed in Section 4.3. Impacts would be similar to implementation of the 2050 MTP/SCS.

Under this alternative, the land use development pattern would have higher densities in urban areas near transit. As such, more sensitive receptors would be exposed to health risks from TACs during construction or operation. Long term operational impacts related to PM_{10} and exposing sensitive receptors would be similar to the 2050 MTP/SCS, as shown in Table 7-3. As a result, exposure to substantial hazardous air pollutant concentrations would remain significant and unavoidable, as under the 2050 MTP/SCS. Similarly, because implementation of this alternative would result in higher densities in urban areas near transit, more sensitive receptors would be exposed objectionable odors during construction or operation; this impact would also remain significant and unavoidable, as under the 2050 MTP/SCS.

Implementation of this alternative would reduce short-term air quality impacts from construction activity. As shown in Table 7-3, operational CO emissions would be slightly lower compared to the proposed 2050 MTP/SCS due to a decrease in VMT (see also Modeling Methodology in Appendix F to the 2050 MTP/SCS). ROG, NO_x, $PM_{10,}$ and SO_x emissions would be similar to the 2050 MTP/SCS.

Table 7-3 Regional Emissions Analysis for Alternative 2

Scenario	VMT	ROG Emissions (tons/day)	NO_X Emissions (tons/day)	PM_{10} Emissions (tons/day)	$PM_{2.5}$ Emissions (tons/day)	Total Fugitive PM Emissions (tons/day)[2]	CO Emissions (tons/day)	SO_x Emissions (tons/day)
2050 MTP/SCS	18,203,962	1.82	2.54	0.48	0.17	0.59	13.97	0.06
Alternative 2	18,198,933	1.82	2.54	0.48	0.17	0.59	13.96	0.06

VMT = vehicle miles traveled; ROG = reactive organic gases; NO_x = nitrous oxide; PM_{10} = particulate matter with a diameter of 10 microns or less; CO = carbon monoxide; SO_x = sulfur oxide

Source: On-road motor vehicle emissions were calculated by AMBAG using EMFAC2021. Refer to 2050 MTP/SCS Chapter 5 and Appendix G, as well as Appendix E.1. for complete methodology.

The slightly lower emissions would be due to slightly lower VMT expected under this alternative. Impacts would remain significant and unavoidable, as under the 2050 MTP/SCS. Overall, air

quality impacts would therefore be similar under this alternative when compared to the 2050 MTP/SCS.

d. Biological Resources

This alternative would further emphasize an infill approach to land use and housing. As with the proposed 2050 MTP/SCS, development would primarily occur in already urbanized areas and would result in less development of areas that provide habitat for special status plant and animal species. Implementation of this alternative would also reduce impacts to biological resources resulting from transportation improvement projects, as fewer roadway extensions, widening projects and creek crossings would occur under this alternative. Thus, Alternative 2 would result in fewer conflicts with local ordinances and/or policies protecting trees and other biological resources. As discussed in Section 4.4, *Biological Resources,* there are no adopted regional habitat conservation plans or natural community conservation plans in the AMBAG region, and this alternative would similarly not conflict with such a plan. Overall impacts to special status plants, animals, wetlands and/or riparian habitat, and wildlife movement outside developed urban areas would therefore be reduced when compared the 2050 MTP/SCS. However, impacts would remain significant and unavoidable.

e. Cultural Resources

As described in Section 4.5, *Cultural Resources,* some of the 2050 MTP/SCS projects may be located in proximity to historical resources or include repair or replacement of potentially historical structures (e.g., bridges). Under this alternative, many of the transportation projects that would include repair or replacement of potentially historic resources would still occur, such as the Gonzales River Road Bridge Replacement and Johnson Road Bridge Replacement in Monterey County. Land use development under this alternative would be more compact, which would result in greater impacts as there is greater potential to redevelop and demolish historic structures in urbanized areas.

Ground disturbance activities under Alternative 2 would be less than under the 2050 MTP/SCS. As such, the potential for uncovering known or unknown archaeological resources and human remains as a result of land use development would be reduced under this alternative. Implementation of this alternative would also involve less ground disturbance associated with transportation improvements than would occur under the 2050 MTP/SCS, as fewer road widening projects and other ground-disturbing transportation infrastructure projects would be developed. As such, impacts to archaeological resources would be reduced when compared to the 2050 MTP/SCS. Although overall archaeological resources impacts would be reduced, the potential would remain for unearthing known or previously unidentified resources. As such, impacts would remain significant and unavoidable.

f. Energy

This alternative assumes a more compact land use pattern than the 2050 MTP/SCS by prioritizing development closer to urban centers and transit. Energy use will increase over time as the result

of regional socioeconomic (population and employment) growth, regardless of implementation of the 2050 MTP/SCS. Therefore, impacts on energy from the land use pattern under this alternative would be similar to the 2050 MTP/SCS.

The Infill and Transit Focus Alternative would rely on telecommuting which would result in increased energy use in areas slated for development but would reduce energy use in office development areas. In addition, an emphasis on telecommuting would reduce the number of people driving to and from office areas. As a result, and as shown in Table 7-3, this alternative would result in slightly lower daily VMT than the 2050 MTP/SCS. Lower VMT would result in a corresponding reduction in the consumption of fuel, which is a form of energy consumption. However, the reduction in daily VMT per capita would be negligible (less than one percent) such that the Infill and Transit Focus Alternative would result in similar total and per capita energy use as compared to the 2050 MTP/SCS.

As discussed in Section 4.6, *Energy,* the 2050 MTP/SCS would not result in inefficient, unnecessary, or wasteful direct or indirect consumption of energy, and would be consistent with applicable energy conservation policies. As this alternative would result in less construction of transportation infrastructure, such as roadway widening, overall energy use associated with transportation construction activities would be reduced when compared to the 2050 MTP/SCS. This alternative would not include many of the capital improvements envisioned under the proposed 2050 MTP/SCS that would improve transportation efficiency and reduce regional energy demand. Because this alternative would reduce vehicular travel, energy use would be slightly reduced. Impacts related to inefficient, unnecessary, or wasteful direct or indirect energy consumption would be slightly reduced when compared to the 2050 MTP/SCS and would similarly remain less than significant.

g. Geology, Soils, and Mineral Resources

Similar to the proposed 2050 MTP/SCS, this alternative would replace inadequate existing structures, such as existing buildings and bridges, and would reduce the potential for these existing structures and people using these structures to be harmed by geologic hazards and would be the same as the proposed 2050 MTP/SCS. Development under the Infill and Transit Focus Alternative would also be required to comply with the California Building Code and requirements set forth by the Alquist Priolo Zone Act. The land use development pattern under this alternative would be higher density, which would increase seismic hazards and potential risks to people. Overall, seismic related impacts would be similar to the 2050 MTP/SCS. Implementation of mitigation measures, as under the 2050 MTP/SCS, would still be required and impacts would remain significant and unavoidable.

Impacts related to erosion and loss of topsoil would be less than significant pursuant to compliance with existing regulations, similar to the 2050 MTP/SCS. As this alternative does not include as many new interchanges, bridges, roads and fixed facilities, there would be less exposure of new structures to hazardous geologic conditions, including liquefaction, expansive soils, landslides, ground-shaking and flooding. Implementation of this alternative would also involve less ground disturbance associated with transportation improvements than would occur under the 2050 MTP/SCS, as construction of infrastructure for transit would disturb a smaller

area. Development under the Infill and Transit Focus Alternative would also be required to comply with the California Building Code and requirements set forth by the Alquist Priolo Zone Act. Therefore, impacts would be less compared to the 2050 MTP/SCS and would remain less than significant.

Impacts to paleontological resources would be less under this alternative compared to the 2050 MTP/SCS as development outside of urbanized areas would be less, but would still result in significant and unavoidable impacts, similar to the 2050 MTP/SCS. Projects located within mineral resource zones would still be required to comply with the California Surface Mining and Reclamation Act, as would all projects under the 2050 MTP/SCS, and as such impacts would remain less than significant, as under the 2050 MTP/SCS. Therefore, impacts to geology, soils, and mineral resources would be reduced compared to the 2050 MTP/SCS and would remain less than significant. Impacts to paleontological resources would be significant and unavoidable but would be reduced under this alternative.

h. Greenhouse Gas Emissions/Climate Change

As this alternative would result in less construction of highway transportation infrastructure, such as the construction of new interchanges and roadway widening, overall GHG emissions associated with construction activities would be less when compared to the 2050 MTP/SCS. This alternative was designed to reduce VMT by providing or promoting transit, and it did so by eliminating many roadway improvement projects Table 7-4 compares the total GHG emissions and the per capita GHG emissions for Alternative 2 and the 2050 MTP/SCS.

Table 7-4 Alternative 2 Net Change in Total GHG Emissions

Scenario	Alternative 2	2050 MTP/SCS
On-Road Mobile Emissions from VMT (MT CO_2e/year)	1,880,076	1,880,532
Land Use Emissions from Table 4.8-1[1] (MT CO_2e/year)	2,316,187	2,316,187
Total	**4,196,263**	**4,196,719**
Population (persons)	813,708	813,708
Per Capita (MT CO_2e per service population per year)	5.16	5.16

MT = metric tons; CO_2 = carbon dioxide; CO_2e = carbon dioxide equivalent

[1]Refer to Section 4.8, *Greenhouse Gas Emissions/Climate Change*

Source: Total GHG emissions were calculated by AMBAG. Refer to 2050 MTP/SCS Chapter 5 and Appendix F for complete methodology.

As shown in Table 7-4, Alternative 2 would decrease total GHG emissions from 4,196,719 MT CO_2e/year for the 2050 MTP/SCS to 4,196,263 MT CO_2e/year, a decrease of 456, or 0.01 percent. Per capita emissions would remain at approximately 5.16 MT CO_2e per service population per year. The decrease in total GHG emissions is negligible (less than a one percent change) such that GHG impacts would be similar compared to the 2050 MTP/SCS. The negligible difference in per capita emissions indicates that per capita light-duty vehicle emissions would also be similar to

the 2050 MTP/SCS because Alternative 2 utilizes the same fleet mix assumptions as the 2050 MTP/SCS. Therefore, Alternative 2 would achieve the regional SB 375 emission reduction target of six percent by 2035 from 2005 levels, similar to the 2050 MTP/SCS. Nonetheless, impacts would remain significant and unavoidable.

i. Hazards and Hazardous Materials

This alternative would result in fewer highway infrastructure projects being constructed, thereby reducing hazardous material use, storage and transportation resulting from construction of those projects. However, the volume of hazardous materials being transported to support land use development in the region would remain the same. Because the Infill and Transit Focus Alternative would be subject to existing regulations and programs, impacts relating to routine transport, use, or disposal of hazardous materials; risk of upset and accident conditions; emissions within one-quarter mile of a school; airport hazards; and interference with emergency response and evacuation plans would be less than significant, similar to 2050 MTP/SCS. Overall hazards and hazardous materials impacts would be similar under this alternative as under the 2050 MTP/SCS.

j. Hydrology and Water Quality

This alternative would further emphasize an infill approach to land use and housing. As such, land development would result in fewer impervious surfaces than would be expected under the 2050 MTP/SCS and would generate less demand for groundwater sources. Accordingly, similar to the 2050 MTP/SCS, Alternative 2 would not conflict with a sustainable groundwater management plan. However, infill development would generate runoff that would include urban pollutants such as heavy metals from auto emissions, oil, and grease, similar to projects under the 2050 MTP/SCS. Nonetheless, impacts to water quality would be less than those of the 2050 MTP/SCS because less development would occur that would result in additional impervious surfaces. Infill development would generate runoff that would include urban pollutants similar such as heavy metals from auto emissions, oil, and grease, similar to the 2050 MTP/SCS. Therefore, impacts to water quality would be similar to water quality impacts of the 2050 MTP/SCS.

This alternative would result in similar transportation infrastructure projects being constructed as the 2050 MTP/SCS. Therefore, this alternative would result in similar water quality impacts resulting from construction-related erosion and sedimentation and would generate the same water demand for dust suppression activities. These impacts would remain less than significant pursuant to compliance with existing regulations, similar to the 2050 MTP/SCS.

Transportation improvements under this alternative, as under the 2050 MTP/SCS, would result in an increase of overall impervious surface area throughout the AMBAG region. New bridges and rail projects would result in new impervious surfaces in the region that would generate significant adverse impacts to surface water quality and could result in development in proximity to flood hazard zones. Pollutants and chemicals from urban activities would potentially flow into nearby bodies of water and could result in adverse impacts to water quality. Construction projects that would disturb more than one acre, such as new bridges, would be subject to regulations under a National Pollutant Discharge Elimination System (NPDES) permit. As such,

compliance with regulations under the NPDES permit would reduce impacts from new impervious surfaces created from new transportation projects to less than significant. Operation of this alternative, as under the 2050 MTP/SCS, would be required to implement best management practices as listed in the NPDES program to reduce post project stormwater flows to be the same or less than pre project stormwater flows. Transportation projects under this alternative would be required to comply with applicable regulations such as NPDES permits to reduce discharge of pollutants and as such, impacts would be less than significant. The Infill and Transit Focus Alternative would be anticipated to result in impacts to water quality that are overall comparable to the 2050 MTP/SCS; water quality impacts would remain less than significant, pursuant to compliance with existing regulations.

Overall hydrology and water quality impacts would be similar under the Infill and Transit Focus Alternative as the 2050 MTP/SCS, and impacts would remain significant and unavoidable.

k. Land Use and Planning

As noted in Section 4.11, *Land Use and Planning,* the 2050 MTP/SCS includes a list of planned and programmed projects including local and regional capital improvements that have been anticipated or accounted for in local general plans and regional, statewide, and federal transportation improvement programs.

Development under this alternative would be concentrated in urbanized areas. As such, the land use pattern under this alternative would not result in the physical division of communities and impacts would be similar to the 2050 MTP/SCS.

Development under this alternative could conflict with land use plans, policies, and programs and would continue to require mitigation. As such, implementation of this alternative would conflict with State and local policies and regulations adopted for the purpose of avoiding or mitigating environmental effects.

The Infill and Transit Focus Alternative would not provide roadway capital improvements anticipated within applicable general plans and transportation improvement programs; however, it would result in greater potential to guide development to meet social, economic, and environmental goals and policies of the region as anticipated under the 2050 MTP/SCS.

Under this alternative, impacts related to physically dividing an established community would be similar and impacts due to a conflict with any land use plan, policy, or regulation would be greater when compared to the 2050 MTP/SCS and would remain less than significant.

l. Noise

This alternative assumes the same growth in population, jobs, and housing numbers, and a more compact land use pattern than the 2050 MTP/SCS. Noise impacts from land use development would therefore be similar to the 2050 MTP/SCS under this alternative.

From a programmatic perspective, this alternative would result in less construction activity. This would reduce temporary noise impacts throughout the AMBAG region.

Although roadway transportation projects would not be prioritized in this alternative and noise would generally be reduced as compared to the 2050 MTP/SCS, cumulative regional traffic volumes would increase regardless of implementation of the 2050 MTP/SCS or this alternative. Whether noise impacts would be greater or less than those anticipated under the 2050 MTP/SCS remains dependent on site specific considerations that cannot currently be known. Regionally, the difference in VMT between the 2050 MTP/SCS and the Infill and Transit Focus Alternative is not enough to noticeably change overall noise levels in the region. Mobile source noise levels resulting from traffic would be slightly less under the Infill and Transit Focus Alternative than the 2050 MTP/SCS as this alternative would result in less VMT.

As additional transit improvements would be implemented under this alternative, the potential for increased transit noise would be increased under the Infill and Transit Focus Alternative.

Construction and operation of future development under this alternative could be located in close proximity to a public airport or private airstrip, as under the 2050 MTP/SCS, and would result in exposure of people residing or working in the area to excessive noise levels. As under the 2050 MTP/SCS, this alternative could result in the exposure of people residing or working near public airports or private airstrips to excessive noise levels. Mitigation measures identified in Section 4.12, *Noise,* would continue to be required under this alternative and impacts would be similar as under the 2050 MTP/SCS and would remain significant and unavoidable.

Construction of transportation projects or land use projects under this alternative could result in excessive groundborne vibration. During operation, heavy trucks, buses, trains, and heavy vehicle traffic traveling along new transportation facilities could generate groundborne vibration that exceeds thresholds. Some cities and counties in the AMBAG region include specific regulations in their municipal code to reduce construction vibration impacts. As under the 2050 MTP/SCS, this alternative would include mitigation to reduce physical impacts due to vibration and as such, impacts would be similar to the 2050 MTP/SCS and would remain significant and unavoidable.

Overall, noise-related impacts across the region would be similar to the 2050 MTP/SCS, and would continue to be significant and unavoidable.

m. Population and Housing

The Infill and Transit Focus Alternative would result in the same population increase in the region by 2050 as the proposed 2050 MTP/SCS. As such, impacts related to population growth would be to the same as for the 2050 MTP/SCS and would continue to be less than significant. Temporary displacement as a result of more infill projects could occur; however, this displacement would be offset by an increase in housing units. Compliance with regulations under the Federal Uniform Relocation and Real Property Acquisition Policies Act would further reduce impacts to less than significant, as under the 2050 MTP/SCS. Overall population and housing impacts would be similar to the 2050 MTP/SCS.

n. Public Services and Recreation

Implementation of this alternative would result in the same population increase in the region by 2050 as the proposed 2050 MTP/SCS. As such, expected demand on school services and

recreation would be similar to the 2050 MTP/SCS, and may require the construction of new or expanded facilities to meet demand and avoid accelerated physical deterioration. This impact would remain significant and unavoidable, as it is for the 2050 MTP/SCS. Higher density housing in transit and urban areas would reduce impacts related to the provision of fire, police, and other public services, since such services already exist in these areas. Overall, impacts to public services would remain significant and unavoidable.

o. Transportation

This alternative incorporates less dispersed land use development and a more compact growth footprint, but has increased use of transit service to generate an increase in regional and interregional transit ridership and corresponding decrease in VMT. Alternative 2 would generate 18,198,933 daily VMT in 2050 compared to 18,203,962 daily VMT for the 2050 MTP/SCS – a decrease of 5,029, or 0.03 percent. This decrease is negligible (less than a one percent change) such that VMT would be similar to the 2050 MTP/SCS, and neither the Alternative 2 nor the 2050 MTP/SCS would reduce VMT per capita to 25 percent below 2019 VMT per capita conditions by 2030 or 30 percent by 2045. Overall, impacts related to VMT would be similar under this alternative and would remain significant and unavoidable.

Alternative 2 would further emphasize an infill approach to land use and housing such that development would primarily occur in already urbanized areas. Therefore, fewer roadway extensions and widening projects would occur under this alternative. Accordingly Alternative 2 would result in reduced impacts related to induced travel, which is typically associated with roadway capacity increase.

Similar to the proposed project, land use and transportation improvement projects developed under this alternative would result in short-term construction related impacts related to hazards, incompatible uses, and emergency access. Projects under this alternative would be required to conform to the design, safety, and emergency access standards of the public agency responsible for implementation. Alternative 2 would result in less than significant impacts related to transportation hazards and emergency access, similar to the 2050 MTP/SCS.

p. Tribal Cultural Resources

Implementation of this alternative would involve less ground disturbance associated with land use and transportation improvement projects than would occur under the 2050 MTP/SCS due to the more compact land uses in urbanized areas and less roadway investments. As such, the potential to disturb tribal cultural resources, including ancestral remains and sacred sites, would decrease under this alternative. Future projects would still be required to comply with AB 52, which would encourage tribal consultation with local California Native American tribes and require the identification of project specific substantial adverse effects on tribal cultural resources and appropriate project specific mitigation measures. If it is determined that a specific project would result a substantial adverse change in the significance of a tribal cultural resource, the impact would be significant. This significant impact would occur for projects under the Infill and Transit Focus Alternative, as it would for the 2050 MTP/SCS. Therefore, impacts would be

significant and unavoidable, as they would be for the 2050 MTP/SCS, but would be reduced compared to the 2050 MTP/SCS due to the reduced level of ground disturbance outside of urban areas.

q. Utilities and Service Systems

Implementation of this alternative would result in the same population increase in the region by 2050 as the proposed 2050 MTP/SCS, resulting in a similar increase in solid waste generation. Land use and transportation infrastructure projects constructed under this alternative would be required to comply with applicable diversion regulations. Overall, impacts related to solid waste would be similar to the proposed project and would remain significant and unavoidable.

Expected demand on utilities and service systems would also be similar to the 2050 MTP/SCS, and may require the construction of new or expanded facilities to meet demand. This impact would remain significant and unavoidable, as it is for the 2050 MTP/SCS. This alternative would further emphasis on transit projects and higher density, infill housing. Higher density housing in transit and urban areas would reduce impacts related to the provision of utilities, since services already exist in these areas. Thus, impacts related to utilities would be reduced compared to the 2050 MTP/SCS, but would remain significant and unavoidable.

Increases in water demand are primarily associated with increased population levels. This alternative assumes the same population growth and a more compact land use pattern that would increase density compared to the 2050 MTP/SCS. Water supply system demands would be similar as population growth would be the same. Demand would increase in urbanized areas where water infrastructure already exists. As such, future water demand associated with this alternative would be similar to water demand of the 2050 MTP/SCS. This impact, which is significant and unavoidable for the 2050 MTP/SCS, would be similar under this alternative, and mitigation measures under the 2050 MTP/SCS would still apply. Impacts would remain significant and unavoidable.

r. Wildfire

The land use pattern under this alternative would focus on higher density housing in urban areas which would reduce the amount of land development within and near wildland urban interface areas. Although there is still the potential for development under this alternative to result in exacerbated wildfire risk, this impact would be reduced under Alternative 2. Exacerbated wildfire risk would result in additional impacts related to flooding, landslides, and other associated hazards. Under this alternative, mitigation would still be required; however, impacts would still be significant and unavoidable, as under the 2050 MTP/SCS.

The proposed 2050 MTP/SCS would focus housing on infill and TOD areas and would decrease the vulnerability of people and structures to wildland fire by reducing development in urban wildland interface areas. While development of both land use and transportation structures under this alternative would still be required to comply with the California Fire Code, and mitigation would still be required, impacts under this alternative would remain significant and unavoidable as potential risks from wildfire cannot be feasibly reduced to less than significant.

Overall, wildfire impacts would be similar to the 2050 MTP/SCS and would remain significant and unavoidable.

7.5 Alternative 3: Infill and Operational/Complete Streets

7.5.1 Description

The Infill and Operational/Complete Streets Alternative is intended to reduce VMT. It includes a land use pattern comprised of a more compact growth footprint with higher densities in urban areas similar to Alternative 2 and an increase in operational and safety projects to maintain a state of good repair. This alternative would also increase Complete Streets and active transportation projects in local communities. Overall, projects implemented under Alternative 3 would be smaller in scale, resulting in a smaller footprint than the projects envisioned under Alternative 2 and the 2050 MTP/SCS. This alternative assumes the same total growth in population, jobs, and housing numbers as the 2050 MTP/SCS.

Compared to the 2050 MTP/SCS, this alternative focuses more on prioritizing transportation investments toward all active transportation and Complete Streets projects, as well as operational improvement projects. Active transportation projects would include construction of bicycle lanes and bicycle/pedestrian amenities. The goal of this alternative is to build these projects first and to use as much of the transportation funding available for these alternative transportation modes projects. Examples of active transportation projects developed under this alternative (and not developed under the proposed project) would include bicycle lanes and pedestrian facilities, such as the planned Carmel to Pebble Beach Bike/Pedestrian Facility (MON-CAR002-CM-2026), various bike lanes planned for Greenfield and King City, and Soledad's citywide bike and pedestrian facility improvements in Monterey County (MON-SOL075-SO-2026). Additional projects would include installation of bike lanes and bike routes throughout San Benito County, and multimodal transportation improvements and bike lanes throughout Santa Cruz, Capitola, and the Pajaro River Bike Path System in Santa Cruz County.

This alternative includes $1 billion more funding for active transportation, Complete Streets, and operational transportation projects than the proposed 2050 MTP/SCS. These include active transportation projects that were not included in the proposed 2050 MTP/SCS as well as additional Complete Streets and operational transportation projects. This alternative includes fewer highway projects than the proposed 2050 MTP/SCS. This alternative would meet most of the basic project objectives as it would serve regional goals and objectives to increase transit capacity and mobility; respond to community and regional transportation needs; promote energy efficient modes of travel, facilities, and services; and promote equity and efficiency in the distribution of transportation projects and services.

7.5.2 Impact Analysis

a. Aesthetics and Visual Resources

Implementation of this alternative would result in construction of fewer proposed interchanges, bridges, and roadway extensions, as well as fewer regional transit and rail facilities. However, this alternative would still include alternative transportation projects such as the bicycle/pedestrian crossing over State Route 1 in Santa Cruz. In addition, many capital improvements for alternative transportation modes would still be constructed under this alternative with the potential to impact scenic vistas on designated scenic highways, along with the gradual transformation toward a more urban/suburban character would occur in many parts of the AMBAG region. Therefore, impacts to scenic resources and scenic vistas on designated scenic highways would be similar as compared to the proposed 2050 MTP/SCS.

Land use development envisioned under this alternative would be more compact and concentrated in urbanized areas and would result in greater aesthetic impacts to scenic resources and increased light and glare in the developed portions of the AMBAG region, but less aesthetic impacts to scenic resources and fewer additional sources of light and glare in the less developed portions of the AMBAG region. Nonetheless, impacts related to visual character would remain significant and unavoidable under this alternative, as they are with the proposed 2050 MTP/SCS.

b. Agriculture and Forestry Resources

This alternative would result in fewer transportation infrastructure projects being constructed, including roadway widening and other projects that could directly convert agricultural land to non-agricultural use. This alternative would emphasize alternative modes of transportation rather than vehicular transportation infrastructure projects and would result in fewer roadway projects that could extend into agricultural uses. As alternative transportation projects would be prioritized, roadway widening would be less likely to occur under this alternative.

Land use development under this alternative, as with the 2050 MTP/SCS, would use an infill approach to land use and housing. However, land use development under this alternative would be more compact and concentrated in urbanized areas, reducing impacts to agricultural resources compared to the 2050 MTP/SCS. Given the extent of Important Farmland in Monterey, San Benito and Santa Cruz counties, land use impacts related to converting Important Farmland to non-agricultural use, conflicts between urban and agricultural land uses, and conflicts with existing agricultural zoning and/or Williamson Act contracts would be similar but less than the proposed 2050 MTP/SCS.

Forestland in the AMBAG region is primarily located in Santa Cruz County. This alternative would result in fewer transportation projects near forestry resources, as fewer roadway projects would be developed. Land use projects under this alternative would be more compact and concentrated in urbanized areas compared to the 2050 MTP/SCS. Overall, impacts to forestry resources and land use pattern resulting from transportation projects would be slightly less than impacts under the 2050 MTP/SCS. Impacts would remain significant and unavoidable, as they are for the 2050 MTP/SCS.

c. Air Quality

This alternative assumes the same growth in population, jobs, and housing numbers, and a more compact land use pattern than 2050 MTP/SCS. As discussed in Section 4.3, *Air Quality,* conflicts with or obstruction of the applicable air quality plan are typically determined by consistency with the population forecast or emissions forecast. Therefore, Alternative 3 would not conflict with or obstruct implementation of the Monterey Bay Air Resources District's 2012-2015 Air Quality Management Plan, as discussed in Section 4.3. Impacts would be similar to implementation of the 2050 MTP/SCS. However, implementation of this alternative would result in slightly lower air pollutant emissions. As shown in Table 7-5, ROG and CO emissions would be slightly lower under Alternative 3, compared to the proposed 2050 MTP/SCS (see also Modeling Methodology in Appendix F to the 2050 MTP/SCS).

Table 7-5 Regional Emissions Analysis for Alternative 3

Scenario	VMT	ROG Emissions (tons/day)	NO_X Emissions (tons/day)	PM_{10} Emissions (tons/day)	$PM_{2.5}$ Emissions (tons/day)	Total Fugitive PM Emissions (tons/day)[2]	CO Emissions (tons/day)	SO_x Emissions (tons/day)
2050 MTP/SCS	18,203,962	1.82	2.54	0.48	0.17	0.59	13.97	0.06
Alternative 3	18,188,800	1.81	2.54	0.48	0.17	0.59	13.96	0.06

VMT = vehicle miles traveled; ROG = reactive organic gases; NO_x = nitrous oxide; PM_{10} = particulate matter with a diameter of 10 microns or less; CO = carbon monoxide; SO_x = sulfur oxide

Source: On-road motor vehicle emissions were calculated by AMBAG using EMFAC 2021. Refer to 2050 MTP/SCS Chapter 5 and Appendix, as well as Appendix E.1. G for complete methodology.

The lower emissions would be due to lower VMT expected under this alternative. This alternative was designed to reduce VMT by providing or promoting active transportation and operational transportation investments. As such, the overall VMT within the AMBAG region would slightly decrease under Alternative 3, as described further under *Transportation* below. Impacts related to air quality would be significant and unavoidable, as under the 2050 MTP/SCS.

Under this alternative, the land use development pattern would have higher densities in urban areas. As such, more sensitive receptors would be exposed to health risks from TACs during construction or operation. Similarly, because implementation of this alternative would result in higher densities in urban areas, more sensitive receptors would be exposed to objectionable odors during construction or operation; this impact would also remain significant and unavoidable, as under the 2050 MTP/SCS.

d. Biological Resources

This alternative would further emphasize an infill approach to land use and housing. As with the proposed 2050 MTP/SCS, development would primarily occur in already urbanized areas and would result in less development of areas that provide habitat for special status plant and animal

species. Implementation of this alternative may result in less impact to biological resources resulting from transportation improvement projects, as fewer roadway extensions, widening projects and creek crossings would occur under this alternative. As such, this alternative would also result in fewer conflicts with local ordinances and/or policies protecting trees and other biological resources. Furthermore, as discussed in Section 4.4, *Biological Resources,* there are no adopted regional habitat conservation plans or natural community conservation plans in the AMBAG region, and this alternative would similarly not conflict with such a plan. Overall impacts to special status plants, animals, wetlands and/or riparian habitat, and wildlife movement outside developed urban areas would therefore be reduced compared to the 2050 MTP/SCS. Impacts would remain significant and unavoidable, as they would be for the proposed 2050 MTP/SCS.

e. Cultural Resources

As described in Section 4.5, *Cultural Resources,* some of the 2050 MTP/SCS transportation improvements may be located in proximity to historical resources or include repair or replacement of potentially historic structures (e.g., bridges). Under this alternative, many of the projects that would include repair or replacement of potentially historical resources would still occur. However, fewer of these projects would occur under this alternative. Land use development under this alternative would be more compact, which would result in greater impacts as there is greater potential to redevelop and demolish historic structures in urbanized areas.

Implementation of this alternative would involve ground disturbance activities associated with walking, bicycling, and transit improvements. However, the overall level of disturbance would be less than what would occur under the 2050 MTP/SCS because some transportation projects, such as roadway widenings, would not be constructed, and land use development would also be less compared to the 2050 MTP/SCS. As such, the potential for uncovering known or unknown archaeological resources and human remains would be reduced under this alternative for new land development and for transportation projects. Although overall archaeological resources impacts would be reduced, the potential would remain for unearthing known or previously unidentified resources. As such, impacts would remain significant and unavoidable.

f. Energy

This alternative assumes a more compact land use pattern than the 2050 MTP/SCS. Energy use will increase over time as the result of regional socioeconomic (population and employment) growth, regardless of implementation of the 2050 MTP/SCS. Therefore, impacts on energy from the land use pattern under this alternative would be similar to the 2050 MTP/SCS.

As this alternative would result in less construction of highway transportation infrastructure, such as the construction of new interchanges and roadway widening, overall energy use associated with construction activities would be less when compared to the 2050 MTP/SCS. As a result, and as shown in Table 7-5, this alternative would result in slightly lower daily VMT than the 2050 MTP/SCS. Lower VMT would result in a corresponding reduction in the consumption of fuel, which is a form of energy consumption. However, the reduction in daily VMT per capita would

be negligible (less than one percent) such that the Infill and Operational/Complete Streets Alternative would result in similar total and per capita energy use as compared to the 2050 MTP/SCS.

As discussed in Section 4.6, *Energy,* the 2050 MTP/SCS would not result in inefficient, unnecessary, or wasteful direct or indirect consumption of energy, and would be consistent with applicable energy conservation policies. This alternative would not include many of the larger capital improvements envisioned under the proposed 2050 MTP/SCS that would improve transportation efficiency and reduce regional energy demand. Because this alternative would reduce vehicular travel, energy use would be slightly reduced. Impacts related to inefficient, unnecessary, or wasteful direct or indirect energy consumption would be slightly reduced when compared to the 2050 MTP/SCS and would similarly remain less than significant.

g. Geology, Soils, and Mineral Resources

Similar to the proposed 2050 MTP/SCS, this alternative would replace inadequate existing structures, such as existing buildings and bridges, and would reduce the potential for these existing structures and people using these structures to be harmed by geologic hazards and would be the same as the proposed 2050 MTP/SCS. Development under this alternative would also be required to comply with the California Building Code and requirements set forth by the Alquist Priolo Zone Act. The land use development pattern under this alternative would be higher density, which would increase seismic hazards and potential risks to people. Overall, seismic related impacts would be similar to the 2050 MTP/SCS. Implementation of mitigation measures, as under the 2050 MTP/SCS, would still be required and impacts would remain significant and unavoidable.

Impacts related to erosion and loss of topsoil would be less than significant pursuant to compliance with existing regulations, similar to the 2050 MTP/SCS. As this alternative does not include as many new interchanges, bridges, roads and fixed facilities, there would be less exposure of new structures to hazardous geologic conditions, including liquefaction, expansive soils, landslides, ground-shaking, and flooding. Implementation of this alternative would also involve less ground disturbance for transportation improvements and land use development than would occur under the 2050 MTP/SCS, and construction of infrastructure and buildings would disturb a smaller area. Development under the Infill and Operational/Complete Streets Alternative would also be required to comply with the California Building Code and requirements set forth by the Alquist Priolo Zone Act. Therefore, impacts would be less compared to the 2050 MTP/SCS and would remain less than significant.

Impacts to paleontological resources would be reduced under this alternative compared to the 2050 MTP/SCS because this alternative would involve less construction-related ground disturbance and would include more land use development in urbanized areas that are already developed with buildings and infrastructure. Mitigation measures provided to reduce impacts to paleontological resources for the 2050 MTP/SCS would also be required to be implemented for this alternative. Impacts would remain significant and unavoidable, similar to the 2050 MTP/SCS. Projects located within mineral resource zones would still be required to comply with the

California Surface Mining and Reclamation Act, as would all projects under the 2050 MTP/SCS, and as such impacts would remain less than significant, as under the 2050 MTP/SCS.

Overall, impacts to geology, soils, and mineral resources would be slightly less compared to the 2050 MTP/SCS and would remain less than significant. Impacts to paleontological resources would be significant and unavoidable but would be reduced under this alternative.

h. Greenhouse Gas Emissions/Climate Change

The Infill and Operational/Complete Streets Alternative would result in fewer impacts associated with GHG emissions during construction activities for transit projects as the scale of construction would be smaller. Table 7-6 compares the total GHG emissions and the per capita GHG emissions for Alternative 3 and the 2050 MTP/SCS. As shown therein, Alternative 3 would decrease total GHG emissions from 4,196,719 MT CO_2e/year for the 2050 MTP/SCS to 4,195,452 MT CO_2e/year, a decrease of 1,267, or 0.03 percent. Per capita emissions would remain at 5.16 MT CO_2e per service population per year. The decrease in total GHG emissions is negligible (less than a one percent change) such that GHG impacts would be similar as compared to the 2050 MTP/SCS. The negligible difference in per capita emissions indicates that per capita light-duty vehicle emissions would also be similar to the 2050 MTP/SCS because Alternative 3 utilizes the same fleet mix assumptions as the 2050 MTP/SCS. Therefore, Alternative 3 would achieve the regional SB 375 emission reduction target of six percent by 2035 from 2005 levels, similar to the 2050 MTP/SCS. Nonetheless, impacts would remain significant and unavoidable, as they are for the 2050 MTP/SCS.

Table 7-6 Alternative 3 Net Change in Total GHG Emissions

Scenario	Alternative 3	2050 MTP/SCS
On-Road Mobile Emissions from VMT (MT CO_2e/year)	1,879,264	1,880,532
Land Use Emissions from Table 4.8-1[1] (MT CO_2e/year)	2,316,187	2,316,187
Total	**4,196,452**	**4,196,719**
Population (persons)	813,708	813,708
Per Capita (MT CO_2e per service population per year)	5.16	5.16

MT = metric tons; CO_2 = carbon dioxide; CO_2e = carbon dioxide equivalent

[1]Refer to Section 4.8, *Greenhouse Gas Emissions/Climate Change*

Source: Total GHG emissions were calculated by AMBAG. Refer to 2050 MTP/SCS Chapter 5 and Appendix F for complete methodology.

i. Hazards and Hazardous Materials

This alternative would result in fewer highway projects being constructed, thereby reducing hazardous material use, storage and transportation resulting from construction of larger scale transportation projects. However, the volume of hazardous materials being transported to support land use development in the region would remain the same. As the Infill and Operational/Complete Streets Alternative would be subject to existing regulations and programs, impacts relating to routine transport, use, or disposal of hazardous materials; risk of upset and

accident conditions; emissions within one-quarter mile of a school; airport hazards; and interference with emergency response and evacuation plans would be less than significant, similar to 2050 MTP/SCS.

j. Hydrology and Water Quality

This alternative would further emphasize an infill approach to land use and housing. As such, land development would result in fewer impervious surfaces than would be expected under the 2050 MTP/SCS and would generate less demand for groundwater sources. Accordingly, similar to the 2050 MTP/SCS, Alternative 3 would not conflict with a sustainable groundwater management plan. However, infill development would generate runoff that would include urban pollutants such as heavy metals from auto emissions, oil, and grease, similar to projects under the 2050 MTP/SCS. Nonetheless, impacts to water quality would be less than those of the 2050 MTP/SCS because less development would occur that would result in additional impervious surfaces. Infill development would generate runoff that would include urban pollutants similar such as heavy metals from auto emissions, oil, and grease, similar to the 2050 MTP/SCS. Therefore, impacts to water quality would be similar to water quality impacts of the 2050 MTP/SCS.

This alternative would result in less ground disturbance from transportation infrastructure projects than the 2050 MTP/SCS because this alternative would not include construction of some transportation projects, including roadway widening projects and roadway extension projects. Rather this alternative would prioritize active transportation and complete streets projects within existing communities. Therefore, this alternative would result in less development in proximity to flood hazard zones, less water quality impacts resulting from construction-related erosion and sedimentation and would generate less water demand for dust suppression activities. These impacts would be less than significant pursuant to compliance with existing regulations, similar to the 2050 MTP/SCS.

Transportation improvements under this alternative, as under the 2050 MTP/SCS, would result in an increase of overall impervious surface area throughout the AMBAG region compared to existing conditions. Compared to the 2050 MTP/SCS, this alternative would result in less roadway impervious surface area. Nonetheless, new transportation projects would still result in new impervious surfaces in the region that would generate significant adverse impacts to surface water quality. Pollutants and chemicals from urban activities would potentially flow into nearby bodies of water and could result in adverse impacts to water quality. Construction projects that would disturb more than one acre, such as roadway widening and new roadways, would be subject to regulations under the NPDES permit. As such, compliance with regulations under the NPDES permit would reduce impacts from new impervious surfaces created from new transportation projects to less than significant.

Operation of this alternative, as under the 2050 MTP/SCS, would be required to implement best management practices as listed in the NPDES program to reduce post project stormwater flows to be the same or less than pre project stormwater flows. Transportation projects under this alternative would be required to comply with applicable regulations such as NPDES permits to reduce discharge of pollutants and as such, impacts would be less than significant. The Infill and

Operational/Complete Streets Alternative would be anticipated to result in impacts to water quality that is less compared to the 2050 MTP/SCS. Water quality impacts would remain less than significant, pursuant to compliance with existing regulations.

Overall, hydrology and water quality impacts would be similar under the Infill and Operational/Complete Streets Alternative as the 2050 MTP/SCS.

k. Land Use and Planning

As noted in Section 4.11, *Land Use and Planning,* the 2050 MTP/SCS includes a list of planned and programmed projects including local and regional capital improvements that have been anticipated or accounted for in local general plans and regional, statewide, and federal transportation improvement programs.

Development under this alternative would be concentrated in urbanized areas and would consist of primarily infill projects. As such, the land use pattern under this alternative would not result in the physical division of communities and impacts would be similar to the 2050 MTP/SCS.

Development under this alternative could conflict with land use plans, policies, and programs and would continue to require mitigation. As such, implementation of this alternative would conflict with State and local policies and regulations adopted for the purpose of avoiding or mitigating environmental effects.

The objective of the 2050 MTP/SCS is to provide for a comprehensive transportation system of facilities and services that meets public need for the movement of people and goods, and that is consistent with the social, economic, and environmental goals and policies of the region. The Infill and Operational/Complete Streets Alternative would prioritize capital improvements associated with alternative transportation modes and would include vehicular capital improvements, as funding allows. Thus, the Infill and Operational/Complete Streets Alternative would not provide all possible vehicular capital improvements anticipated within applicable general plans and transportation improvement programs.

Under this alternative, impacts related to physically dividing an established community would be similar and impacts due to a conflict with any land use plan, policy, or regulation would be greater when compared to the 2050 MTP/SCS and would remain less than significant.

l. Noise

This alternative assumes the same growth in population, jobs, and housing numbers, and a more compact land use pattern than the 2050 MTP/SCS. Noise impacts from land use development would therefore be similar to the 2050 MTP/SCS under this alternative.

From a programmatic perspective, smaller transportation infrastructure projects would result in less construction activity under the Infill and Operational/Complete Streets Alternative. This would reduce temporary noise impacts throughout the AMBAG region. In addition, noise from infill or TOD projects would be similar under the Infill and Operational/Complete Streets Alternative and construction-related noise impacts on adjacent sensitive receivers would also be similar. Impacts from noise would continue to be significant, as under the 2050 MTP/SCS.

Although the scale of transportation projects would be reduced as compared to the 2050 MTP/SCS, traffic volumes would increase and would result from regional growth that would continue to occur. Whether noise impacts would be greater or less than those anticipated under the 2050 MTP/SCS remains dependent on site specific considerations that cannot currently be known. Regionally, the difference in VMT between the 2050 MTP/SCS and the Infill and Operational/Complete Streets is not enough to noticeably change overall noise levels in the region. Mobile source noise levels resulting from traffic would also be similar under the Infill and Operational/Complete Streets Alternative as a reduction in traffic volumes cannot be reasonably assumed as a result of construction of alternative modes of transportation infrastructure when compared to the 2050 MTP/SCS. Impacts would remain significant, as under the 2050 MTP/SCS.

Construction and operation of future development under this alternative could be located in close proximity to a public airport or private airstrip, as under the 2050 MTP/SCS, and would result in exposure of people residing or working in the area to excessive noise levels. As under the 2050 MTP/SCS, this alternative could result in the exposure of people residing or working near public airports or private airstrips to excessive noise levels. Mitigation measures identified in Section 4.12, *Noise,* would continue to be required under this alternative. Impacts would be similar as under the 2050 MTP/SCS and would remain significant and unavoidable.

Construction of transportation projects or land use projects under this alternative could result in excessive groundborne vibration. During operation, heavy trucks, buses, trains, and heavy vehicle traffic traveling along new transportation facilities could generate groundborne vibration that exceeds thresholds. Some cities and counties in the AMBAG region include specific regulations in their municipal code to reduce construction vibration impacts. As under the 2050 MTP/SCS, this alternative would include mitigation to reduce physical impacts due to vibration and as such, impacts would be similar to the 2050 MTP/SCS and would remain significant and unavoidable.

Overall, noise-related impacts across the region would be similar to the 2050 MTP/SCS, and would continue to be significant and unavoidable.

m. Population and Housing

The Infill and Operational/Complete Streets Alternative would result in the same population increase in the region by 2050 as the proposed 2050 MTP/SCS. As such, impacts related to population growth would be to the same as for the 2050 MTP/SCS and would continue to be less than significant. Temporary displacement as a result of more infill projects could occur; however, this displacement would be offset by an increase in housing units. Compliance with regulations under the Federal Uniform Relocation and Real Property Acquisition Policies Act would further reduce impacts to less than significant, as under the 2050 MTP/SCS. Overall population and housing impacts would be similar to the 2050 MTP/SCS.

n. Public Services and Recreation

Implementation of this alternative would result in the same population increase in the region by 2050 as the proposed 2050 MTP/SCS. As such, expected demand on school services would be similar to the 2050 MTP/SCS and may require the construction of new or expanded facilities to

meet demand. This impact would continue to be significant and unavoidable, as it is for the 2050 MTP/SCS. This alternative would emphasize infill development, which would reduce impacts related to the provision of fire, police, and other public services since services already exist in these areas, as well as active transportation projects, some of which would serve as a new recreational resource, thereby decreasing demand and associated impacts to existing recreational facilities than compared to the 2050 MTP/SCS. This impact would be less than significant. Overall, impacts to public services and recreation would be reduced compared to the 2050 MTP/SCS, and would remain significant and unavoidable.

o. Transportation

Transit ridership under Alternative 3 is similar to transit ridership with the 2050 MTP/SCS (23,416 vs. 23,420, respectively), therefore, this alternative would not result in a significant impact due to conflicts with any programs addressing the circulation system and would not substantially disrupt transit service. As such, impacts would be less than significant, similar to the 2050 MTP/SCS.

Alternative 3 would generate 18,188,800 daily VMT in 2050 compared to 18,203,962 daily VMT for the 2050 MTP/SCS - an decrease of 15,162 VMT, or 0.08 percent. This decrease is negligible (less than a one percent change) such that VMT would be similar as compared to the 2050 MTP/SCS, and neither Alternative 3 nor the 2050 MTP/SCS would reduce VMT to 25 percent below 2019 VMT per capita conditions by 2030 or 30 percent by 2045.

Alternative 3 would prioritize transportation investments toward all active transportation and Complete Streets projects. Therefore, fewer roadway extensions and widening projects would occur under this alternative. Accordingly Alternative 3 would result in reduced impacts related to induced travel, which is typically associated with roadway capacity increase.

Overall, the Infill and Operational/Complete Streets Alternative would result in similar daily VMT in the AMBAG region compared to the 2050 MTP/SCS. Thus, overall, impacts related to VMT and induced travel would be similar under the Infill and Operational/Complete Streets Alternative, and impacts would remain significant and unavoidable.

Similar to the proposed project, land use and transportation improvement projects developed under this alternative would result in short-term construction related impacts related to hazards, incompatible uses, and emergency access. Projects under this alternative would be required to conform to the design, safety, and emergency access standards of the public agency responsible for implementation. Alternative 3 would result in less than significant impacts related to transportation hazards and emergency access, similar to the 2050 MTP/SCS.

p. Tribal Cultural Resources

Under this alternative, land use development would occur in infill areas similar to the 2050 MTP/SCS. However, higher density development within already urbanized areas would reduce ground disturbance, as less disturbance would occur outside these areas. Implementation of this alternative would also involve less ground disturbance associated with transportation improvements than would occur under the 2050 MTP/SCS. As such, the potential to disturb tribal

cultural resources, including ancestral remains and sacred sites, would decrease under this alternative. Future projects would be required to comply with AB 52, which would encourage tribal consultation with local California Native American tribes and require the identification of project specific substantial adverse effects on tribal cultural resources and appropriate project specific mitigation measures. If it is determined that a specific project would result a substantial adverse change in the significance of a tribal cultural resource, the impact would be significant. This significant impact would occur for projects under the Infill and Operational/Complete Streets Alternative, as it would for the 2050 MTP/SCS. Therefore, impacts would be significant and unavoidable, as they would be for the 2050 MTP/SCS, but would be reduced compared to the 2050 MTP/SCS due to the reduced level of ground disturbance outside of urban areas.

q. Utilities and Service Systems

Implementation of this alternative would result in the same population increase in the region by 2050 as the proposed 2050 MTP/SCS, resulting in a similar increase in solid waste generation. Land use and transportation infrastructure projects constructed under this alternative would be required to comply with applicable diversion regulations. Overall, impacts related to solid waste would be similar to the proposed project and would remain significant and unavoidable.

Expected demand on utilities and service systems would also be similar to the 2050 MTP/SCS and may require the construction of new or expanded facilities to meet demand. Higher density housing in transit and urban areas would reduce impacts related to the provision of utilities, since services already exist in these areas. Thus, impacts related to utilities would be reduced compared to the 2050 MTP/SCS, but would remain significant and unavoidable."

Increases in water demand are primarily associated with increased population levels. This alternative assumes the same population growth as the 2050 as the MTP/SCS. Therefore, water supply system demands would be similar. As such, future water demand associated with this alternative would be similar to water demand of the 2050 MTP/SCS. This impact, which is significant and unavoidable for the 2050 MTP/SCS, would be similar under the Infill and Operational/Complete Streets Alternative, and mitigation measures under the 2050 MTP/SCS would still apply. Impacts would remain significant and unavoidable.

r. Wildfire

The land use pattern under this alternative would focus on higher density housing in urban areas which would reduce the amount of land development within and near wildland urban interface areas. Although there is still the potential for development under this alternative to result in exacerbated wildfire risk, this impact would be reduced under Alternative 3. Exacerbated wildfire risk would result in additional impacts related to flooding, landslides, and other associated hazards. Under this alternative, mitigation would still be required, and impacts would remain significant and unavoidable, as under the 2050 MTP/SCS.

Under the Infill and Operational/Complete Streets Alternative, transportation projects would not involve developing residential uses that would include occupants. While some transportation projects may include office or maintenance structures, occupation would be temporary and

would not be situated in very high Fire Hazard Severity Zones. Development of these structures, under this alternative, would still be required to comply with the California Fire Code, and mitigation would still be required. Transportation projects generally do not require fuel breaks or involve infrastructure that could potentially exacerbate wildfire. Therefore, even though fewer transportation projects would be constructed under this alternative compared to the 2050 MTP/SCS, wildfire impacts would be similar. Impacts would remain significant and unavoidable with mitigation, as under the 2050 MTP/SCS.

7.6 Comparison of Alternative Impacts; Environmentally Superior Alternative

CEQA Guidelines Section 15126.6 requires that an EIR identify the environmentally superior alternative among the alternatives analyzed. Section 15126.6(d)(2) states that if the No Project Alternative is identified as the environmentally superior alternative, the EIR shall also identify an environmentally superior alternative from among the other alternatives analyzed. This section compares the impacts of the three alternatives under consideration to those of the 2050 MTP/SCS, in compliance with the *CEQA Guidelines*.

Table 7-7 shows whether each alternative would have impacts that are less than, similar to, or greater than the 2050 MTP/SCS for each of the issue areas studied. Relative cumulative impacts of the alternatives for each resource topic would be similar to direct impacts for that resource topic. In no case would an alternative change the significance level of a 2050 MTP/SCS impact. Compared to the 2050 MTP/SCS, the No Project Alternative (Alternative 1) would have greater overall impacts to aesthetics and visual resources; agriculture and forestry resources; biological resources; geology, soils, and mineral resources; land use and planning; noise; transportation tribal cultural resources; and wildfire, as shown in Table 7-7. It would also fail to meet most basic project objectives. Therefore, Alternative 1 is not the environmentally superior alternative.

Based on the above analysis and summary in Table 7-7, both the Infill and Transit Focus Alternative (Alternative 2) and the Infill and Operational/Complete Streets Alternative (Alternative 3) would result in a higher density land use development pattern and a more compact growth footprint than the 2050 MTP/SCS with an emphasis on concentrating development in urban centers. Both Alternative 2 and Alternative 3 would result in reduced overall impacts to aesthetics and visual resources; agriculture and forestry resources; biological resources; cultural resources; energy; geology, soils, and mineral resources; tribal cultural resources; and wildfire. Overall, Alternative 2 and Alternative 3 would both result in 27 reduced impacts when considering individual thresholds of significance. Further, both Alternative 2 and Alternative 3 would also meet most of the basic project objectives as they would serve regional goals and objectives to increase mobility, respond to community and regional transportation needs, and promote energy efficient modes of travel, facilities, and services.

While Alternative 2 and Alternative 3 would result in similar reductions in environmental impacts compared to the 2050 MTP/SCS, for the purpose of this analysis, Alternative 3 is considered the environmentally superior alternative. Compared to Alternative 2, it places even greater emphasis on implementing active transportation projects, including operational and complete streets

projects. Consequently, projects implemented under Alternative 3 would be smaller in scale during both construction and operation, resulting in a smaller footprint than the transit and highway projects envisioned under both the 2050 MTP/SCS and Alternative 2. This smaller footprint would consequently reduce impacts related to aesthetics and visual resources; agriculture and forestry resources; biological resources; cultural resources; energy; geology, soils, and mineral resources; tribal cultural resources; and wildfire to a greater extent than Alternative 3. Therefore, although Alternative 2 and Alternative 3 would reduce the same number of impacts when compared to the 2050 MTP/SCS, Alternative 3 would result in a greater reduction than Alternative 2. For this reason, Alternative 3 is considered the environmentally superior alternative.

Table 7-7 Impact Comparison of Alternatives

Impacts	2050 MTP/SCS	Alternative 1: No Project Alternative	Alternative 2: Infill and Transit Focus	Alternative 3: Infill and Operational/ Complete Streets
Aesthetics and Visual Resources				
Impact AES-1: Have a substantial adverse effect on a scenic vista	SU	<	<	<
Impact AES-2: Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings and historic buildings within a state scenic highway	SU	=	<	=
Impact AES-3: In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site or its surroundings; in urbanized areas, conflict with applicable zoning and other regulations governing scenic quality	SU	>	<	<
Impact AES-4: Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area	SU	>	<	<
Agriculture and Forestry Resources				
Impact AG-1: 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 nonagricultural use; or Conflict with existing zoning for agricultural use, or a Williamson Act contract; 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	SU	>	<	<
Impact AG-2: Conflict with existing zoning 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)): and Result in the loss of forest land or conversion of forest land to non-forest use	LTS	>	<	<

Impacts	2050 MTP/SCS	Alternative 1: No Project Alternative	Alternative 2: Infill and Transit Focus	Alternative 3: Infill and Operational/ Complete Streets
Air Quality				
Impact AQ-1: Conflict with or obstruct implementation of the applicable air quality plan	LTS	=	=	=
Impact AQ-2: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (construction)	SU	<	<	<
Impact AQ-3: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (operations)	SU	>	<	<
Impact AQ-4 & 5: Expose sensitive receptors to substantial pollutant concentrations	SU	<	>	>
Impact AQ-6: Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people	LTS	<	>	>
Biological Resources				
Impact BIO-1: Have substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service	SU	>	<	<
Impact BIO-2: Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service; and 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	SU	>	<	<
Impact BIO-3: 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	SU	>	<	<
Impact BIO-4: Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance	LTS	<	<	<

Impacts	2050 MTP/SCS	Alternative 1: No Project Alternative	Alternative 2: Infill and Transit Focus	Alternative 3: Infill and Operational/ Complete Streets
Impact BIO-5: Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan	LTS	=	=	=
Cultural Resources				
Impact CR-1: Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5	SU	<	>	>
Impact CR-2: Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5	SU	=	<	<
Impact CR-3: Disturb any human remains, including those interred outside of formal cemeteries	LTS	=	<	<
Energy				
Impact E-1: Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation	LTS	=	<	<
Impact E-2: Conflict with or obstruct a state or local plan for renewable energy or energy efficiency	LTS	=	<	<
Geology, Soils, and Mineral Resources				
Impact GEO-1: Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, strong seismic ground shaking, seismic-related ground failure, including liquefaction, or landslides	LTS	>	=	=
Impact GEO-2: Result in substantial soil erosion or the loss of topsoil	LTS	<	<	<
Impact GEO-3: 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, subsidence, liquefaction, or collapse; or Be located on expansive soil, creating substantial risks to life or property	LTS	>	<	<

Impacts	2050 MTP/SCS	Alternative 1: No Project Alternative	Alternative 2: Infill and Transit Focus	Alternative 3: Infill and Operational/ Complete Streets
Impact GEO-4: 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	=	=	=
Impact GEO-5: Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature	SU	>	<	<
Impact GEO-6: 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 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	=	=	=
Greenhouse Gas Emissions/Climate Change				
Impact GHG-1: Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. An increase that exceeds the following threshold would be considered a significant impact: a) A net increase in GHG emissions by 2050 compared to existing baseline conditions	SU	=	=	=
Impact GHG-2: Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment. An increase that exceeds the following threshold would be considered a significant impact: a) A net increase in GHG emissions by 2050 compared to existing baseline conditions	LTS	=	=	=
Impact GHG-3: Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. Any conflict with the following thresholds would be considered a significant impact: a) Conflict with regional SB 375 per capita passenger vehicle CO_2 emission reduction targets of 6 percent by 2035 from 2005 levels.	LTS	=	=	=

Impacts	2050 MTP/SCS	Alternative 1: No Project Alternative	Alternative 2: Infill and Transit Focus	Alternative 3: Infill and Operational/ Complete Streets
Impact GHG-4: Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. Any conflict with the following thresholds would be considered a significant impact: b) Conflict with state's ability to achieve SB 32 GHG reduction target, which aims to reduce statewide emissions to 40 percent below 1990 levels by 2030, and the AB 1279 GHG reduction target, which aims to reduce statewide emissions to 85 percent below 1990 levels by 2045 c) Conflict with applicable local GHG reduction plans	SU	=	=	=
Hazards and Hazardous Materials				
Impact HAZ-1: Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials; or Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment	LTS	=	<	<
Impact HAZ-2: Emit hazardous emissions or handles hazardous or acutely hazardous materials, substances or waste within one-quarter mile of an existing or proposed school	LTS	=	=	=
Impact HAZ-3: Be located on a site which is included on a list of hazardous materials compiled by the Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment	SU	=	=	=
Impact HAZ-4: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, result in a safety hazard or excessive noise for people residing or working in the project area	LTS	=	=	=
Impact HAZ-5: Impair implementation or physically interfere with an adopted emergency response plan or emergency evacuation plan	LTS	=	=	=

Impacts	2050 MTP/SCS	Alternative 1: No Project Alternative	Alternative 2: Infill and Transit Focus	Alternative 3: Infill and Operational/ Complete Streets
Hydrology and Water Quality				
Impact HYD-1: Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality; or Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: a) Result in substantial erosion or siltation on- or off-site	LTS	<	<	<
Impact HYD-2: Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin	LTS	<	<	<
Impact HYD-3: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: b) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site c) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff	LTS	>	=	=
Impact HYD-4: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would d) Impede or redirect flood flows; and In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation	LTS	>	=	<
Impact HYD-5: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan	LTS	=	=	=

Impacts	2050 MTP/SCS	Alternative 1: No Project Alternative	Alternative 2: Infill and Transit Focus	Alternative 3: Infill and Operational/ Complete Streets
Land Use and Planning				
Impact LU-1: Physically divide an established community	LTS	=	=	=
Impact LU-2: Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation (including, but not limited to, the General Plan, Local Coastal Program, or Zoning Ordinance) and result in a physical change to the environment not already addressed in other resource chapters of this EIR	LTSM	>	>	>
Noise				
Impact N-1: Generation of a substantial temporary or permanent increase in ambient 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; and Generation of a substantial absolute noise increase over existing noise levels (construction)	SU	<	<	<
Impact N-2: Generation of excessive ground-borne vibration or ground-borne noise levels (construction)	SU	>	=	=
Impact N-3: Generation of a substantial temporary or permanent increase in ambient 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; and Generation of a substantial absolute noise increase over existing noise levels (transportation operations)	SU	=	>	=
Impact N-4: Generation of a substantial temporary or permanent increase in ambient 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; and Generation of a substantial absolute noise increase over existing noise levels (land use operations)	SU	<	=	=
Impact N-5: Generation of excessive ground-borne vibration or ground-borne noise levels (operations)	SU	>	=	=

Impacts	2050 MTP/SCS	Alternative 1: No Project Alternative	Alternative 2: Infill and Transit Focus	Alternative 3: Infill and Operational/ Complete Streets
Impact N-6: For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels	SU	>	=	=
Population and Housing				
Impact POP-1: 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)	LTS	=	=	=
Impact POP-2: Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere	LTS	<	=	=
Public Services and Recreation				
Impact PSR-1: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: a. Fire protection, b. Police services, d. Parks, or e. Other public facilities	SU	=	<	<
Impact PSR-2: Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: c. Schools	LTS	=	=	=

Impacts	2050 MTP/SCS	Alternative 1: No Project Alternative	Alternative 2: Infill and Transit Focus	Alternative 3: Infill and Operational/ Complete Streets
Impact PSR-3: Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated; or Include recreational facilities or require construction or expansion of recreational facilities which might have an adverse physical effect on the environment	SU	=	=	<
Transportation				
Impact TRA-1: Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Any increase in the following performance indicators would be considered a significant impact: a. Percent of jobs within of ½ mile of a high-quality transit corridor; b. Substantially disrupt transit service; or c. Result in inconsistencies with adopted bicycle and pedestrian facilities plans	LTS	>	=	=
Impact TRA-2: Conflict with or be inconsistent with *CEQA Guidelines* section 15064.3, subdivision (b) in either of the following manners: a. A change in vehicle miles traveled per capita in the region that fails to reach 15 percent below existing VMT per capita conditions would be considered a significant impact; or b. A substantial increase in induced travel due to roadway capacity expansions would be considered a significant impact	LTS	=	=	=
Impact TRA-3: Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)	LTS	=	=	=
Impact TRA-4: Result in inadequate emergency access	LTS	=	=	=

Impacts	2050 MTP/SCS	Alternative 1: No Project Alternative	Alternative 2: Infill and Transit Focus	Alternative 3: Infill and Operational/ Complete Streets
Tribal Cultural Resources				
Impact TCR-1: Cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074 that is listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k); and Cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code Section 21074 that is 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 Public Resources Code Section 5024.1	SU	>	<	<
Utilities and Service Systems				
Impact UTIL-1: Require or result in the relocation or construction of new or expanded water, wastewater treatment, or stormwater drainage, electric power, natural gas, or telecommunications facilities, the construction of which could cause significant environmental effects; Result in a determination by the wastewater treatment provider which serves or may serve the project that has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments	SU	=	<	<
Impact UTIL-2: 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	SU	=	=	=
Impact UTIL-3: Not comply with federal, state and local statutes and regulations related to solid waste	LTS	=	=	=
Impact UTIL-4: Have insufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years	SU	>	=	=
Wildfire				
Impact W-1: Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires	SU	>	<	<

Impacts	2050 MTP/SCS	Alternative 1: No Project Alternative	Alternative 2: Infill and Transit Focus	Alternative 3: Infill and Operational/ Complete Streets
Impact W-2: If located in or near state responsibility areas or lands classified as very high fire hazard severity zones: a) Substantially impair an adopted emergency response plan or emergency evacuation plan; b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire; c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment; and/or d) 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	SU	>	=	=
Impact Comparison		**< 12** **= 31** **> 22**	**< 27** **= 33** **> 5**	**< 27** **= 33** **> 5**

Note: Comparison of impacts is based on the overall impact of the alternative on the resource or issue.

SU = significant and unavoidable impacts; LTSM = less than significant impact after implementation of mitigation measures; LTS = less than significant impacts; NI = no impact

< Alternative impacts would be less than those of the 2050 MTP/SCS

= Alternative would result in impacts similar to the 2050 MTP/SCS

> Alternative impacts would be greater than those of the 2050 MTP/SCS

This page intentionally left blank.

8 References

8.1 Bibliography

Executive Summary

Association of Monterey Bay Area Governments (AMBAG). 2024. 2024. Final DRAFT 2026 Regional Growth Forecast. https://ambag.org/sites/default/files/2024-10/Final%20Draft%202026%20RGF_092024_Combined.pdf (accessed September 2025).

Introduction

No references cited in this section.

Project Description

Association of Monterey Bay Area Governments (AMBAG). 2022. Final 6th Cycle Regional Housing Needs Allocation Plan, 2023-2031. https://www.ambag.org/sites/default/files/2022-09/PDFA_AMBAG%20RHNA%202023-2031_Final%20Plan_091522V4.pdf (accessed May 2025).

_____. 2024. Final Draft 2026 Regional Growth Forecast. https://ambag.org/sites/default/files/2024-05/All%20Draft_RGF%20%26%20SGF%20Profiles_042624.pdf (accessed April 2025).

California Air Resources Board (CARB). 2021. SB 375 Regional Greenhouse Gas Emissions Reduction Targets. https://ww2.arb.ca.gov/our-work/programs/sustainable-communities-program/sb-375-regional-targets. (accessed April 2025).

California Department of Finance. 2024. E-5 Population and Housing Estimates for Cities, Counties, and the State. https://dof.ca.gov/forecasting/demographics/estimates/ (accessed April 2025).

California Transportation Commission. 2024a. 2024 Regional Transportation Plan Guidelines for Metropolitan Planning Organizations. https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/division-transportation-planning/regional-and-community-planning/sustainable-transportation-planning-grants/adopted-2024-rtp-guidelines-for-mpos-2-a11y.pdf. (accessed April 2025).

_____. 2024b. 2024 Regional Transportation Plan Guidelines for Regional Transportation Planning Agencies. https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/division-transportation-planning/regional-and-community-planning/sustainable-transportation-planning-grants/adopted-2024-rtp-guidelines-for-rtpas-2-a11y.pdfYp (accessed April 2025).

Council of San Benito County Governments (SBtCOG). 2022. 6th Cycle San Benito County Draft Regional Housing Needs Allocation (RHNA) Plan. http://sanbenitocog.org/wp-content/uploads/2022/12/FINAL-RHNA-Plan-6th-Cycle-San-Benito-Region.pdf (accessed May 2025).

Environmental Setting

Association of Monterey Bay Area Governments (AMBAG). 2024. Final DRAFT 2026 Regional Growth Forecast. https://ambag.org/sites/default/files/2024-10/Final%20Draft%202026%20RGF_092024_Combined.pdf (accessed May 2025).

Monterey, County of. 2010. 2010 Monterey County General Plan. https://www.countyofmonterey.gov/government/departments-a-h/housing-community-development/planning-services/current-planning/general-info/2010-monterey-county-general-plan-adopted-october-26-2010 (accessed May 2025).

San Benito, County of. 2015. San Benito County 2035 General Plan. https://www.sanbenitocountyca.gov/home/showpublisheddocument/5859/637347294134470000 (accessed May 2025).

Santa Cruz, County of. 2024. Santa Cruz County General Plan and Local Coastal Program. https://cdi.santacruzcountyca.gov/Portals/35/CDI/Planning/Policy/GeneralPlanTownPlans/General%20Plan%20Chapters/GP_Ch5_ARC_Certified_Clean_032724_Final.pdf?ver=RvaB0VGtjs6oG9HHp2mmmw%3d%3d&timestamp=1712076387340. (accessed May 2025).

Aesthetics

California Department of Transportation (Caltrans). 2007. Wild and Scenic Rivers and Management Agencies. https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/ser/wild-and-scenic-designation-and-agencies-a11y.pdf. (accessed October 2025).

_____. 2025. List Of Eligible And Officially Designated State Scenic Highways. https://dot.ca.gov/programs/design/lap-landscape-architecture-and-community-livability/lap-liv-i-scenic-highways. (accessed May 2025).

Federal Highway Administration (FHWA). 2021. 2021 Summary of Designated Byways. https://www.fhwa.dot.gov/hep/scenic_byways/designations/. (accessed May 2025).

Monterey, County of. 2010. Monterey County General Plan Figures https://www.countyofmonterey.gov/government/departments-a-h/housing-community-development/planning-services/current-planning/general-info/2010-monterey-county-general-plan-adopted-october-26-2010. (accessed May 2025).

_____. 2016. *Design Guidelines for Exterior Lighting*. Adopted by Board of Supervisors January 26, 2016. https://www.co.monterey.ca.us/home/showdocument?id=10737. (accessed April 2021).

_____. 2020. General Plan Conservation and Open Space Element. https://www.countyofmonterey.gov/home/showdocument?id=120722. (accessed May 2025).

San Benito, County of. 2015. San Benito General Plan: Chapter 8-13: Scenic Resources. https://www.cosb.us/home/showpublisheddocument?id=5859. (accessed May 2025).

_____. 2025. San Benito County Code of Ordinances, Chapter 19.31 (Development Lighting). http://library.amlegal.com/nxt/gateway.dll/California/sanbenitocounty_ca/sanbenitocountycaliforniacodeofordinance?f=templates$fn=default.htm$3.0$vid=amlegal:sanbenitocounty_ca. (accessed May 2025).

Santa Cruz, County of. 2024. Santa Cruz County General Plan and Local Coastal Program. https://cdi.santacruzcountyca.gov/Portals/35/CDI/Planning/Policy/GeneralPlanTownPlans/General%20Plan%20Chapters/GP_Ch5_ARC_Certified_Clean_032724_Final.pdf?ver=RvaB0VGtjs6oG9HHp2mmmw%3d%3d&timestamp=1712076387340. (accessed May 2025).

_____. 2017. Santa Cruz County Code of Ordinances, Section 13.10 (Zoning Regulations). https://www.codepublishing.com/CA/SantaCruzCounty/#!/SantaCruzCounty13/SantaCruzCounty1310.html#13.10. (accessed May 2025).

Seaside, City of. 2025. Municipal Code. Chapter 17.30.070: Outdoor Lighting. https://www.codepublishing.com/CA/Seaside/html/Seaside17/Seaside1730.html#17.30.070. (accessed July 2025).

Agriculture and Forestry Resources

California Department of Conservation (DOC). 2016. Farmland Mapping and Monitoring Program. http://www.conservation.ca.gov/dlrp/fmmp. (accessed May 2025).

_____. 2019a. California Farmland Conversion Report 2016-2018. https://www.conservation.ca.gov/dlrp/fmmp/Documents/fmmp/pubs/2016-2018/FCR/FCR_1618_Report.pdf (accessed May 2025).

_____. 2020a. Table A-21 Monterey County 2018-2020 Land Use Conversion. https://www.conservation.ca.gov/dlrp/fmmp/Pages/Monterey.aspx (accessed October 2025).

_____. 2020b. Table A-28 San Benito County 2018-2020 Land Use Conversion. https://www.conservation.ca.gov/dlrp/fmmp/Pages/SanBenito.aspx (accessed October 2025).

_____. 2020c. Table A-36 Santa Cruz County 2018-2020 Land Use Conversion. https://conservation.ca.gov/dlrp/fmmp/Pages/SantaCruz.aspx (accessed October 2025).

_____. 2025. Important Farmland Categories. https://www.conservation.ca.gov/dlrp/fmmp/Pages/Important-Farmland-Categories.aspx (accessed May 2025).

California Department of Forestry and Fire Protection (CAL FIRE). 2025. Timber Harvesting Plans. https://caltreesplans.resources.ca.gov/Caltrees/Report/ShowReport.aspx?module=TH_Document&reportID=492&reportType=LINK_REPORT_LIST (accessed May 2025).

_____. 2019. California's Forests and Rangelands: 2017 Assessment. https://34c031f8-c9fd-4018-8c5a-4159cdff6b0d-cdn-endpoint.azureedge.net/-/media/calfire-website/what-we-do/fire-resource-assessment-program---frap/assessment/forest-and-range-2017-assessment.pdf (accessed May 2025).

Gonzales, City of. 2011. City of Gonzales 2010 General Plan. https://gonzalesca.gov/sites/default/files/2018-09/Gonzales%20General%20Plan%20June%202018.pdf (accessed May 2025).

Greenfield, City of. 2005. City of Greenfield General Plan. https://www.ci.greenfield.ca.us/180/General-Plan (accessed May 2025).

Hollister, City of. 2005. City of Hollister General Plan. https://files.hollister.ca.gov/DS%20Documents/Planning/General%20Plan/Complete_General_Plan.pdf (accessed May 2025).

Monterey, County of. 2010. 2010 Monterey County General Plan. https://www.countyofmonterey.gov/government/departments-a-h/housing-community-development/planning-services/current-planning/general-info/2010-monterey-county-general-plan-adopted-october-26-2010 (accessed May 2025).

_____. 2023. County of Monterey Crop and Livestock Report. https://www.countyofmonterey.gov/home/showpublisheddocument/132827/638798007408370000 (accessed May 2025).

Resource Conservation District of Santa Cruz County (RCDSC). 2021. Verbal phone conversation with Forest Health and Wildfire Resiliency Program Specialist, Matt Abernathy on October 1, 2021.

Salinas, City of. 2002. City of Salinas General Plan. https://www.cityofsalinas.org/files/sharedassets/city/v/1/residents/documents/generalplan.pdf (accessed May 2025).

San Benito, County of. 2015. San Benito County 2035 General Plan. https://www.sanbenitocountyca.gov/home/showpublisheddocument/5859/637347294134470000 (accessed May 2025).

_____. 2023. San Benito County Crop Report 2023. https://www.sanbenitocountyca.gov/home/showpublisheddocument/12989/638603483978900000 (accessed May 2025).

San Juan Bautista, City of. 2015. City of San Juan Bautista 2035 General Plan. https://cms6.revize.com/revize/sanjuanbautistaca/document_center/San%20Juan%20Bautista%202035%20General%20Plan/San-Juan-Bautista-2035-General-Plan-FINAL-2-3-16.pdf (accessed May 2025).

Santa Cruz, City of. 2012. City of Santa Cruz 2030 General Plan. https://www.cityofsantacruz.com/home/showpublisheddocument/71130/638452552594870000 (accessed May 2025).

Santa Cruz, County of. 2017. Commercial Cannabis Cultivation and Manufacturing Regulations and Licensing Program Draft EIR. https://www.sccoplanning.com/Portals/2/County/Planning/env/Cannabis_EIR/Individual%20EIR%20Sections%20PDF%20Files/3.2_AgTimber_CannabisEIR_Draft.pdf. (accessed May 2025).

_____. 2023. Santa Cruz County 2023 Crop Report. https://www.agdept.com/Portals/10/2023%20CROP%20REPORT.pdf?ver=OJVcPVEWwWY_utqWZr_EGQ%3d%3d&timestamp=1726834235741 (accessed May 2025).

_____. 2024. County of Santa Cruz General Plan. https://cdi.santacruzcountyca.gov/Planning/PolicyPlanning/General,TownVillagePlans.aspx (accessed May 2025).

Soledad, city of. 2005. City of Soledad General Plan. https://www.cityofsoledad.com/general-plan/ (accessed August 2025).

Watsonville, City of. 1994. City of Watsonville 2005 General Plan. https://www.watsonville.gov/DocumentCenter/View/179/03-Growth-and-Conservation-PDF (accessed May 2025).

Air Quality

Association of Monterey Bay Area Governments (AMBAG). 2014. Regional Travel Demand Model. Available at https://www.ambag.org/program/modeling (accessed July 2025).

_____. 2024. 2024. Final DRAFT 2026 Regional Growth Forecast. https://ambag.org/sites/default/files/2024-10/Final%20Draft%202026%20RGF_092024_Combined.pdf (accessed July 2025).

California Air Resources Board (CARB). 2005. Air Quality and Land Use Handbook: A Community Health Perspective. April. https://ww2.arb.ca.gov/sites/default/files/2023-05/Land%20Use%20Handbook_0.pdf (accessed July 2025).

_____. 2017. California's 2017 Climate Change Scoping Plan. November 2017. https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/scoping_plan_2017.pdf (accessed July 2025).

_____. 2024. Ambient Air Quality Standards. https://ww2.arb.ca.gov/sites/default/files/2024-08/AAQS%20Table_ADA_FINAL_07222024.pdf (accessed July 2025).

_____. 2025a. Top 4 Measurements and Days Above the Standard. https://www.arb.ca.gov/adam/topfour/topfour1.php (accessed July 2025).

_____. 2025b. California Emission Projection Analysis Model (CEPAM) 2019v1.04. https://ww2.arb.ca.gov/applications/cepam2019v1-04-standard-emission-tool (accessed July 2025).

_____. 2025c. Overview: Diesel Exhaust & Health. https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health (accessed July 2025).

_____. 2025d. Brake & Tire Wear Emissions. https://ww2.arb.ca.gov/resources/documents/brake-tire-wear-emissions (accessed August 2025).

Hollister, City of. 2005. City of Hollister General Plan. December. https://www.hollister.ca.gov/government/departments/development_services/planning/general_plan.php. (accessed September 2025).

Monterey Bay Air Resources District (MBARD). 2008. CEQA Air Quality Guidelines. February. https://www.mbard.org/files/0ce48fe68/CEQA+Guidelines.pdf (accessed July 2025).

_____. 2017a. 2012-2015 Air Quality Management Plan (AQMP). https://www.mbard.org/files/6632732f5/2012-2015-AQMP_FINAL.pdf (accessed July 2025).

_____. 2017b. Air Quality and Planning. https://www.mbard.org/air-quality-and-planning (accessed July 2025).

_____. 2024. Advisory Committee Meeting, February 1, 2024. https://www.mbard.org/files/bdf3049e4/9+Annual+Air+Monitoring+Report+2023_Attach.pdf (accessed July 2025).

_____. 2025. Receive Presentation on Calendar Year 2024 Air Monitoring Activities. February 19, 2025. https://www.mbard.org/files/5db547d5d/23+Air+Monitoring+Division+Annual+Report+2024.pdf (accessed July 2025).

Monterey, City of. 2019. City of Monterey General Plan. Adopted January 2005. Amended June 2019. https://files.monterey.gov/Document%20Center/CommDev/Planning/General-Plan/19_0604-General-Plan.pdf (accessed July 2025).

Monterey, County of. 2010. 2010 Monterey County General Plan. https://www.countyofmonterey.gov/government/departments-a-h/housing-community-development/planning-services/current-planning/general-info/2010-monterey-county-general-plan-adopted-october-26-2010 (accessed July 2025).

Salinas, City of. 2002. City of Salinas General Plan. September. https://www.salinas.gov/Residents/Community/Vision-Salinas/General-Plan-Info. (accessed September 2025).

San Benito, County of. 2015. San Benito County 2035 General Plan. Adopted July 21, 2015. https://www.sanbenitocountyca.gov/home/showpublisheddocument/5859/637347294134470000 (accessed July 2025).

Santa Cruz, City of. 2012. 2030 General Plan. https://www.cityofsantacruz.com/home/showpublisheddocument/71130/638452552594870000 (accessed July 2025).

Santa Cruz, County of. 2022. 2024 County of Santa Cruz General Plan / Local Coastal Program. https://cdi.santacruzcountyca.gov/Planning/PolicyPlanning/General,TownVillagePlans.aspx (accessed July 2025).

Watsonville, City of. 1994. 2005 General Plan. https://www.watsonville.gov/160/2005-General-Plan (accessed July 2025).

United States Environmental Protection Agency (U.S. EPA). 2025a. "Criteria Air Pollutants." https://www.epa.gov/criteria-air-pollutants (accessed July 2025).

_____. 2025b. "Sulfur Dioxide Basics." https://www.epa.gov/so2-pollution/sulfur-dioxide-basics (accessed August 2025).

Biological Resources

California Department of Fish and Wildlife (CDFW). 2014. California Wildlife Habitat Relationships. California Interagency Wildlife Task Group.

_____. 2025a. California Natural Diversity Database (CNDDB). Rarefind V 5.3.0. (online). https://wildlife.ca.gov/Data/CNDDB/Maps-and-Data (accessed May 2025).

_____. 2025b. Biogeographic Information and Observation System (BIOS). https://apps.wildlife.ca.gov/bios/. (accessed May 2025).

_____. 2025c. California Natural Community List. Thursday, February 27, 2025.

California Department of Forestry and Fire Protection's (CAL FIRE). 2024. Fire and Resource Assessment Program. https://www.fire.ca.gov/what-we-do/fire-resource-assessment-program (accessed July 2025).

California Native Plant Society (CNPS). 2025a. A Manual of California Vegetation, online Edition. California Native Plant Society, Sacramento, California.

_____. 2025b. Rare Plant Program. Inventory of Rare and Endangered Plants of California (online edition, v9.5.1). https://www.rareplants.cnps.org. (accessed May 2025).

Federal Geographic Data Committee (FGDC). 2008. National Vegetation Classification Standard, Version 2 FGDC-STD-005-2008. Vegetation Subcommittee, FGDC Secretariat, U.S. Geological Survey. Reston, VA. 55 pp. + Appendices.

Jennings M.D., D. Faber-Langendoen, O.L. Loucks, R.K. Peet, and D. Roberts. 2009. Standards for associations and alliances of the US National Vegetation Classification. Ecological Monographs 79:173–199.

Mayer, K. E., and W. F. Laudenslayer. 1988. A Guide to Wildlife Habitats of California. California Department of Fish and Game, Sacramento, CA. https://wildlife.ca.gov/Data/CWHR/Wildlife-Habitats (accessed June 2025).

Monterey, County of. 2010. 2010 Monterey County General Plan. https://www.countyofmonterey.gov/government/departments-a-h/housing-community-development/planning-services/current-planning/general-info/2010-monterey-county-general-plan-adopted-october-26-2010 (accessed July 2025).

National Marine Fisheries Service (NMFS). 1999. Designated Critical Habitat: Central California Coast and southern Oregon/Northern California Coasts Coho Salmon; Final Rule. (64 FR 24049; 05/05/1999)

_____. 2025. National NMFS ESA Critical Habitat Mapper. https://www.fisheries.noaa.gov/resource/map/national-esa-critical-habitat-mapper (accessed June 2025).

Penrod, K., R. Hunter, and M. Merrifield. 2001. Missing Linkages: Restoring Connectivity to the California Landscape, Conference Proceedings. Cosponsored by California Wilderness Coalition, The Nature Conservancy, U.S. Geological Survey, Center for Reproduction of Endangered Species, and California State Parks.

San Benito County. 2015. San Benito County 2035 General Plan. http://cosb.us/wp-content/uploads/Adopted-2035-GPU.pdf. (accessed June 2021).

Santa Cruz County. 1994. Santa Cruz County General Plan and Local Coastal Program. http://www.sccoplanning.com/Portals/2/County/userfiles/106/GP%20Chapter%201.pdf . (accessed June 2021).

State Water Resources Control Board (SWRCB). 2021. State Policy for Water Quality Control: State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State. Adopted April 2, 2019 and Revised April 6, 2021.

Titus, R. G., D. C. Erman, and W. M. Snider. History and status of steelhead in California coastal drainages south of San Francisco Bay. In draft for publication as a Department of Fish and Game, Fish Bulletin.

_____. 2051a. National Wetlands Inventory. https://www.fws.gov/program/national-wetlands-inventory/wetlands-mapper (accessed May2025).

_____. 2025b. Information, Planning and Conservation System (IPaC). https://ecos.fws.gov/ipac/. (accessed May 2025).

_____. 2025c. Critical Habitat Mapper. https://ecos.fws.gov/ecp/report/table/critical-habitat.html (accessed May 2025).

Cultural Resources

Bean, Walton 1968. *California: An Interpretive History*. McGraw-Hill, San Francisco.

Breschini, Gary S. and Trudy Haversat. 2001. A Brief Overview of the Esselen Indians of Monterey County. http://www.mchsmuseum.com/esselen.html. (Accessed August 2025).

Broadbent, Sylvia M. 1972. The Rumson of Monterey: *An Ethnography from Historical sources. Contributions of the University of California Archaeological Research Facility*. Pp. 14:45-94.

California Office of Historic Preservation. 2021. Landmarks by County. [website] http://ohp.parks.ca.gov/ListedResources/. Accessed August 2025

Kroeber, Alfred L 1925. *Handbook of the Indians of California*. Bulletin 78, Bureau of American Ethnology, Smithsonian Institution. Government Printing Office, Washington, D.C. Reprinted 1976 by Dover Publications, Inc., New York.

Skowronek, Russell K. 1998. Sifting the Evidence: Perceptions of Life at the Ohlone (Costanoan) Missions of Alta California. Ethnohistory 45: 675-708.

Taylor, Suzanne Pierce. 2013. The Salinan People. Mission San Miguel. http://www.missionsanmiguel.com/history/salinans.html. (accessed August 2025).

Energy

Association of Monterey Bay Area Governments (AMBAG). 2013. Electric Vehicle Infrastructure for the Monterey Bay Area. Available online at: https://ambag.org/sites/default/files/2019-12/Electric%20Vehicle%20Infrastructure%20for%20the%20Monterey%20Bay%20AreaFNL%20DELIVERABL.pdf. (accessed August 2025).

_____. 2023. Central Coast Zero-Emission Vehicle Strategy (CCZEVS). https://ambag.org/sites/default/files/2023-05/Central%20Coast%20Zero%20Emission%20Vehicle%20Strategy%20Executive%20Summary%20PDF_AReport.pdf (accessed August 2025).

California Department of Transportation (Caltrans). 1983. Energy and Transportation Systems Handbook. July 1983.

California Air Resources Board (CARB). 2022. 2022 Scoping Plan for Achieving Carbon Neutrality. November 16. Available at: https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp.pdf (accessed July 2025).

California Energy Commission (CEC). 2012. 2012 Bioenergy Action Plan. Available at: https://resources.ca.gov/CNRALegacyFiles/docs/energy_and_climate_change/2012_Bioenergy_Action_Plan.pdf (accessed August 2025).

_____. 2022. Monterey Bay PEV Readiness Plan. Available online at: https://www.energy.ca.gov/sites/default/files/2022-04/CEC-600-2022-057.pdf (accessed August 2025).

_____. 2023. 2023 Integrated Energy Policy Report. Available at: https://www.energy.ca.gov/sites/default/files/2024-05/2023_Integrated_Energy_Policy_Report_Highlights_ADA.pdf (accessed August 2025)

_____. 2025a. Total System Electric Generation. Available at: https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2023-total-system-electric-generation (accessed August 2025)

_____. 2025b. California Natural Gas Consumption dashboard. Available at: https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/california-energy-consumption-dashboards-1 (accessed August 2025)

_____. 2025c. California Electricity Consumption dashboard. Available at: https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/california-energy-consumption-dashboards-0 (accessed August 2025)

_____. 2025d. California's Oil Refineries, Locations and Capacities. Available at: https://www.energy.ca.gov/data-reports/energy-almanac/californias-petroleum-market/californias-oil-refineries. (accessed August 2025)

_____. 2025e. 2010-2023 CEC-A15, California Annual Retail Fuel Outlet Report Results. Available at: https://www.energy.ca.gov/media/3874. (accessed August 2025)

California Geologic Energy Management Division (CalGEM). 2022. 2022 State Oil and Gas Supervisor's Report. Available at: https://www.conservation.ca.gov/calgem/Documents/CalGEM%20Supervisor%20Annual%20Report%202022%20FINAL.pdf (accessed August 2025).

Central Coast Community Energy (3CE) 2022. Monterey Bay Community Power Authority 2022 Integrated Resource Plan. Available at: https://3cenergy.org/wp-content/uploads/2022/11/ccce_irp_public_v1.pdf (accessed August 2025).

Monterey, City of. 2005. City of Monterey General Plan. Available at: https://www.landwatch.org/pages/issuesactions/monterey/Monterey-GP-2005.pdf. (accessed August 2025).

Monterey, County of. 2010. 2010 Monterey County General Plan. https://www.countyofmonterey.gov/government/departments-a-h/housing-community-development/planning-services/current-planning/general-info/2010-monterey-county-general-plan-adopted-october-26-2010 (accessed August 2025).

Pacific Gas & Electric (PG&E). 2022. 2022 Integrated Resource Plan. Available at: https://www.pge.com/assets/pge/docs/about/doing-business-with-pge/2022-PGE-Integrated-Resource-Plan.pdf (accessed August 2025).

San Benito, County of. 2015a. San Benito County 2035 General Plan. Available at: https://www.cosb.us/departments/resource-management-agency/building-planning/general-plan/2035-general-plan-background-materials-and-historical-documents. (accessed August 2025)

_____. 2015b. 2035 San Benito County General Plan Update Revised Draft Environmental Impact Report. SCH No. 2011111016. March 16, 2015. Available at: https://www.cosb.us/home/showpublisheddocument/1722/637205737479570000(accessed August 2025)

Santa Cruz, City of. 2020. Prohibition Of Natural Gas Infrastructure In New Buildings. https://lpdd.org/wp-content/uploads/2020/04/Santa-Cruz-NG-Ban.pdf. (accessed August 2025).

Santa Cruz, County of. 2022. Santa Cruz County General Plan and Local Coastal Program. Available at: https://cdi.santacruzcountyca.gov/Planning/PolicyPlanning/General,TownVillagePlans.aspx (accessed August 2025)

United States Census Bureau. 2025. Demographic Data for California, San Benito, Santa Cruz, and Monterey County. https://data.census.gov/profile/California?g=040XX00US06 (accessed August 2025).

United States Department of Energy (U.S. DOE). 2025. Alternative Fueling Station Location. Available at: https://afdc.energy.gov/stations/. (accessed August 2025)

United States Energy Information Administration (U.S. EIA). 2020a. California State Profile and Energy Estimates. Available at: https://www.eia.gov/state/?sid=CA#tabs-3. (accessed August 2025)

_____. 2025b. United States Overview, State Profiles and Energy Estimates. Available at: https://www.eia.gov/state/?sid=US (accessed August 2025).

_____. 2025c California State Profile and Energy Estimates, Table CT7. Transportation sector energy consumption estimates, 1960-2023, California. Available at: https://www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_use/tra/use_tra_CA.html&sid=CA (accessed August 2025)

_____. 2023. State Energy Data 2023: Consumption, Table C1 Energy Consumption Overview. Available at: https://www.eia.gov/state/seds/sep_sum/html/pdf/sum_btu_1.pdf. (accessed August 2025).

Geology, Soils, and Mineral Resources

California Department of Conservation (DOC). 1987. Mineral Land Classification: Aggregate Materials in the San Francisco – Monterey Bay Area: Special Report 146, Part IV. Accessed June 2025.

_____. 2021. Special Report 251: Update of the Mineral Land Classification for Construction Aggregate Resources in the Monterey Bay Production-Consumption Region. Accessed June 2025.

California Department of Transportation (Caltrans). 2010. Memo to Designers 20-1: Seismic Design Methodology. July 2010. Accessed June 2025.

California Geological Survey (CGS). 2018. Special Publication 42 Earthquake Fault Zones A Guide for Government Agencies, Property Owners / Developers, and Geoscience Practitioners for Assessing Fault Rupture Hazards in California. Accessed June 2025.

_____. 2024. California Earthquake Hazards Zone Application. Accessed July 2025.

_____. 2025a. California Seismic Hazard Zones. Accessed June 2025.

_____. 2025b. Alquist-Priolo Earthquake Fault Zones. Accessed July 2025.

Capitola, City of. 2019. Capitola General Plan. Accessed June 2025.

Carmel-by-the-Sea, City of. 2009. General Plan: Environmental Safety Element. Accessed June 2025.

Hollister, City of. 2005. City of Hollister General Plan. https://files.hollister.ca.gov/DS%20Documents/Planning/General%20Plan/Complete_General_Plan.pdf (accessed June 2025).

Monterey, City of. 2024. Monterey 2031 General Plan Update: Safety Element. Accessed June 2025.

Monterey, County of. 2010. 2010 Monterey County General Plan. https://www.countyofmonterey.gov/government/departments-a-h/housing-community-development/planning-services/current-planning/general-info/2010-monterey-county-general-plan-adopted-october-26-2010 (accessed May 2025).

_____. 2022. Monterey County Multi-Jurisdictional Hazard Mitigation Plan Volume 1. Accessed June 2025.

_____. 2025. County Code. Accessed June 2025.

Greater Monterey County Regional Water Management Group (RWMG). 2018. Integrated Regional Water Management Plan for the Greater Monterey County Region Section B Greater Monterey County Region Description. Accessed June 2025

San Benito, County of. 2015a. Final Environmental Impact Report 2035 San Benito County General Plan Update: Geology, Soils, and Mineral Resources. Accessed June 2025.

_____. 2015b. 2035 General Plan. Accessed June 2025.

_____. 2024. Code of Ordinances. Accessed June 2025.

Santa Cruz, City of. 2019. 2030 General Plan. Accessed June 2025.

Santa Cruz, County of. 2021. Local Hazard Mitigation Plan 2021-2026. Accessed June 2025.

_____. 2024a. Santa Cruz County General Plan/ Local Coastal Program: Chapter 6 Public Safety. Accessed June 2025.

_____. 2024b. Santa Cruz County General Plan/ Local Coastal Program: Chapter 5 Agriculture, Natural Resources and Conservation Element. Accessed June 2025.

_____. 2025. County Code. Accessed June 2025.

Santa Cruz County Regional Transportation Commission (SCCRTC). 2013. Final Environmental Impact Report for the Monterey Bay Sanctuary Scenic Trail Network Master Plan. Accessed June 2025.

United States Geological Survey (USGS). 2000. Land Subsidence in the United States. Accessed June 2025.

_____. 2019. Land Subsidence. Accessed June 2025.

University of California Museum of Paleontology (UCMP). 2025. UCMP Specimen Search. Accessed June 2025.

Greenhouse Gas Emissions/Climate Change

Association of Environmental Professionals. 2016. Field Guide to New CEQA Greenhouse Gas Thresholds and Climate Action Plan Targets for California. October. https://califaep.org/docs/AEP-2016_Final_White_Paper.pdf (accessed July 2025).

Association of Monterey Bay Area Governments (AMBAG). 2022. 2045 MTP/SCS Greenhouse Gas Emissions Forecast Inventory – Land Use Sources. February 2022. https://www.ambag.org/sites/default/files/2022-06/AMBAG%202045%20MTP%20SCS%20RTP%20FEIR%20Appendix%20June%202022-PDF-A.pdf (accessed July 2025).

_____. 2018. 2040 Metropolitan Transportation Plan/Sustainable Communities Strategy and Regional Transportation Plans for Monterey, San Benito and Santa Cruz Counties Final Environmental Impact Report. June. https://www.ambag.org/sites/default/files/2020-05/AMBAG_2040MTP-SCS_FinalEIR_withAppendices_PDFA.pdf. (accessed July 2025).

CARB. 2008. Climate Change Scoping Plan. December 2008. https://ww2.arb.ca.gov/sites/default/files/classic//cc/scopingplan/document/adopted_scoping_plan.pdf (accessed July 2025).

_____. 2014. First Update to the Climate Change Scoping Plan. May. https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf (accessed July 2025).

_____. 2017a. Short-Lived Climate Pollutant Reduction Strategy. March 2017. https://ww2.arb.ca.gov/sites/default/files/2020-07/final_SLCP_strategy.pdf (accessed July 2025).

_____. 2017b. California's 2017 Climate Change Scoping Plan. November 2017. https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/scoping_plan_2017.pdf (accessed July 2025).

_____. 2021. EMFAC2021 Volume I – User Guide. January. https://ww2.arb.ca.gov/sites/default/files/2021-01/EMFAC202x_Users_Guide_01112021_final.pdf (accessed July 2025).

_____. 2022. 2022 Scoping Plan for Achieving Carbon Neutrality. November 16. Available at: https://ww2.arb.ca.gov/sites/default/files/2022-11/2022-sp.pdf (accessed July 2025).

_____. 2024. California Greenhouse Gas Emissions for 2000 to 2022 Trends of Emissions and Other Indicators. September. https://ww2.arb.ca.gov/sites/default/files/2024-09/nc-2000_2022_ghg_inventory_trends.pdf (accessed July 2025).

_____. 2025. Advanced Clean Cars II. https://ww2.arb.ca.gov/our-work/programs/advanced-clean-cars-program/advanced-clean-cars-ii (accessed September 2025).

California Climate Change Center (CCCC). 2006. Climate Scenarios for California. https://research.fit.edu/media/site-specific/researchfitedu/coast-climate-adaptation-library/united-states/west-coast-amp-hawaix27i/california---statewide/CCCC.--2006.--Climate-Scenarios-for-California.pdf (accessed July 2025).

California Department of Food and Agriculture. 2020. "California Agricultural Production Statistics." https://www.cdfa.ca.gov/statistics/ (accessed July 2025).

California Department of Water Resources. 2018. Indicators of Climate Change in California. May 2018. https://oehha.ca.gov/media/downloads/climate-change/report/2018caindicatorsreportmay2018.pdf (accessed July 2025).

California State Transportation Agency (CalSTA). 2021. CAPTI: Climate Action Plan for Transportation Infrastructure. July 2021. https://calsta.ca.gov/-/media/calsta-media/documents/capti-july-2021-a11y.pdf. (accessed July 2025).

_____. 2025. CAPTI 2.0 Climate Action Plan for Transportation Infrastructure. January 2025. https://calsta.ca.gov/-/media/calsta-media/documents/capti-2025-a11y.pdf (accessed September 2025).

Capitola, City of. 2015. Climate Action Plan. Adopted October 22, 2015. http://www.cityofcapitola.org/sites/default/files/fileattachments/community_development/page/3953/capitola_climate_action_plan.pdf. (accessed July 2025).

Carmel-by-the-Sea, City of. 2022. City of Carmel-by-the-Sea Climate Action Plan. July 2022. https://ci.carmel.ca.us/sites/main/files/file-attachments/climate_adaptation_plan_appendixa_climate_action_plan_prefinal_042822.pdf?1656630014 (accessed July 2025).

Gonzales, City of. 2018. Gonzales Climate Action Plan. Updated in August 2018. https://gonzalesca.gov/sites/default/files/2018-11/Adopted%202018%20Gonzales%20CAP%20Update.pdf. (accessed July 2025).

Greenfield, City of. 2025. General Plan Update. https://ci.greenfield.ca.us/565/General-Plan-Update (accessed July 2025).

Griggs, et al. 2017. Rising Seas in California: An Update on Sea Level Rise Science. April 2017. https://www.opc.ca.gov/webmaster/ftp/pdf/docs/rising-seas-in-california-an-update-on-sea-level-rise-science.pdf (accessed July 2025).

Hollister, City of. 2021. Hollister General Plan Update 2040, Climate Action Plan, and Sphere of Influence Amendments and Annexations EIR. [website]. April. https://ceqanet.opr.ca.gov/2021040277. (accessed July 2025).

_____. 2024. City of Hollister Climate Action Plan. October 2024. https://hollister2040.org/wp-content/uploads/2024/10/Hollister_CAP-October-2024.pdf (accessed September 2025).

Intergovernmental Panel on Climate Change (IPCC). 2014. Climate Change 2014 Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland. https://www.ipcc.ch/site/assets/uploads/2018/02/SYR_AR5_FINAL_full.pdf (accessed July 2025).

_____. 2021. Climate Change 2021 The Physical Science Basis. August. https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_Full_Report.pdf (accessed July 2025).

Monterey, City of. 2016. City of Monterey Climate Action Plan. June. https://www.monterey.org/climate_action_plan_(adopted_june_2016)/index.php. (accessed July 2025).

Monterey, County of. 2022. Monterey County Community Climate Action and Adaptation Plan online engagement platform. [website]. N.d. https://montereyclimateaction.konveio.com/project-overview (accessed July 2025).

National Ocean Economics Program. 2014. State of the U.S. Ocean and Coastal Economies. https://cbe.miis.edu/cgi/viewcontent.cgi?article=1000&context=noep_publications (accessed July 2025).

National Oceanic and Atmosphere Administration. 2025a. Climate Change and Ocean Acidification Monterey Bay. https://sanctuaries.noaa.gov/science/sentinel-site-program/monterey-bay/climate-change-ocean-acidification.html (accessed July 2025).

National Oceanic and Atmosphere Administration. 2025b. Climate Change: Global Temperature. https://www.climate.gov/news-features/understanding-climate/climate-change-global-temperature (accessed September 2025).

Pacific Grove, City of. 2025. Climate Planning. https://www.cityofpacificgrove.gov/our_city/departments/public_works/programs___initiatives/environmental_programs/climate_planning.php (accessed September 2025).

Parmesan, Camille. 2006. Ecological and Evolutionary Responses to Recent Climate Change. https://www.fws.gov/southwest/es/documents/R2ES/LitCited/LPC_2012/Parmesan_2006.pdf (accessed July 2025).

Salinas, City of. 2025. Climate Action Plan. [website]. N.d. https://www.visionsalinas.org/climateactionplan (accessed July 2025).

San Benito, County of. 2025. San Benito County Comprehensive Climate Action Plan. [website]. N.d. https://www.sanbenitocountyca.gov/departments/resource-management-agency/planning-and-land-use-division/san-benito-county-comprehensive-climate-action-plan-ccap (accessed July 2025).

Santa Cruz, City of. 2022. City of Santa Cruz Climate Action Plan. September. https://www.cityofsantacruz.com/home/showpublisheddocument/90696/637983259409670000 (accessed July 2025).

Santa Cruz, County of. 2022. County of Santa Cruz Climate Action and Adaptation Plan. December. https://www.santacruzcountyca.gov/Portals/0/County/OR3/CAAP/2022%20Climate%20Action%20and%20Adaptation%20Plan%20(CAAP).pdf (accessed July 2025).

Seaside, City of. 2025. 2025 Climate Action and Adaptation Plan. June 2025. https://ci.seaside.ca.us/848/Climate-Action-and-Resilience-Hub (accessed September 2025).

State of California. 2018. California's Fourth Climate Change Assessment Statewide Summary Report. August 27, 2018. http://www.climateassessment.ca.gov/state/ (accessed July 2025).

Watsonville, City of. 2015. City of Watsonville Climate Action Plan. April. https://www.cityofwatsonville.org/DocumentCenter/View/194/Climate-Action-Plan-PDF?bidId=. (accessed July 2025).

Watsonville, City of. 2021. Final City of Watsonville Climate Action and Adaption Plan. October 2021. https://www.watsonville.gov/DocumentCenter/View/21317/Final-Watsonville-CAAP-with-Appendices_Climate-Action-and-Adaptation-Plan (accessed July 2025).

United States Environmental Protection Agency (U.S. EPA). 2009. Final Rule: Mandatory Reporting of Greenhouse Gases. October 2009. https://www.govinfo.gov/content/pkg/FR-2009-10-30/pdf/E9-23315.pdf (accessed July 2025).

_____. 2025. EPA Releases Proposal to Rescind Obama-Era Endangerment Finding, Regulation that Paved the Way for Electric Vehicle Mandates. July 29, 2025. https://www.epa.gov/newsreleases/epa-releases-proposal-rescind-obama-era-endangerment-finding-regulations-paved-way

World Meteorological Organization. 2021. Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Masson-Delmotte, V., P. Zhai, A. Pirani, S. L. Connors, C. Péan, S. Berger, N. Caud, Y. Chen, L. Goldfarb, M. I. Gomis, M. Huang, K. Leitzell, E. Lonnoy, J.B.R. Matthews, T. K. Maycock, T. Waterfield, O. Yelekçi, R. Yu and B. Zhou (eds.)] Cambridge University Press. https://www.ipcc.ch/report/ar6/wg1/downloads/report/IPCC_AR6_WGI_Full_Report.pdf (accessed July 2025).

Hazards and Hazardous Materials

ASTM E1527-13, Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process, ASTM International, West Conshohocken, PA, 2013, www.astm.org

California Department of Education (DOE). 2025. School Directory. https://www.cde.ca.gov/SchoolDirectory/Results?Title=California%20School%20Directory&search=1&counties=27&status=1%2C2&types=0&nps=0&multilingual=0&charter=0&magnet=0&yearround=0&qdc=0&qsc=0&sax=True&Tab=1&Order=0&Page=0&Items=0&HideCriteria=False&isStaticReport=False (accessed May 2025).

California Department of Resources Recycling and Recovery (CalRecycle). 2025. SWIS Facility/Site Search. https://www2.calrecycle.ca.gov/SolidWaste/Site/Search (accessed June 2025)

California Department of Toxic Substances Control (DTSC). 2025a. Registered Hazardous Waste Transporters. https://hwts.dtsc.ca.gov/transporters/trans_cnty.cfm. (accessed May 2025).

_____. 2025b. Active Transporter County Search. https://hwts.dtsc.ca.gov/transporters/TRANSRCH04.cfm (accessed June 2025).

_____. 2025c. Envirostor Database. https://www.envirostor.dtsc.ca.gov/public/map/?myaddress=Search# (accessed June 2025).

California Office of Emergency Services (CalOES). 2024. Hazardous Materials Spill Report 2024. https://www.caloes.ca.gov/office-of-the-director/operations/response-operations/fire-rescue/hazardous-materials/spill-release-reporting/ (accessed June 2025).

Capitola, City of. 2014. Capitola General Plan. https://www.cityofcapitola.org/sites/default/files/fileattachments/page//general_plan_-_update_2019.pdf (accessed May 2025).

Education Data Partnership. 2025. School Search by County. https://www.ed-data.org/ (accessed May 2025).

Federal Highway Administration. 2025. Traffic Incident Management in Hazardous Materials Spills in Incident Clearance. https://ops.fhwa.dot.gov/publications/fhwahop08058/20.htm (accessed May 2025)

Federal Motor Carrier Safety Administration. 2024. National Hazardous Materials Route Registry – California. https://www.fmcsa.dot.gov/sites/fmcsa.dot.gov/files/2025-04/California0425.pdf (accessed May 2025).

Hollister, City of. 2005. City of Hollister General Plan. https://files.hollister.ca.gov/DS%20Documents/Planning/General%20Plan/Complete_General_Plan.pdf (accessed May 2025).

Marina, City of. 2000. City of Marina at Monterey Bay General Plan. https://www.cityofmarina.org/DocumentCenter/View/13219/General-Plan-Last-Update-2023- (accessed May 2025).

Monterey Bay Air Resources District (MBARD). 2025. Asbestos Renovation & Demolition. https://www.mbard.org/asbestos-renovation-demolition (accessed May 2025).

Monterey County Municipal Airport Land Use Commission. 1978. Mesa Del Rey Airport Master Plan. https://www.countyofmonterey.gov/home/showpublisheddocument/37931/636371078595770000 (accessed May 2025).

_____. 1982. Salinas Municipal Airport Land Use Plan. https://www.countyofmonterey.gov/home/showpublisheddocument/37951/636371078672370000 (accessed May 2025).

_____. 2019a. Monterey Regional Airport: Airport Land Use Compatibility Plan. February 2019. https://www.co.monterey.ca.us/home/showpublisheddocument/75251/636875603145330000 (accessed September 2021).

_____. 2019b. Marina Municipal Airport: Airport Land Use Compatibility Plan. May 2019. https://www.co.monterey.ca.us/home/showpublisheddocument/78366/636965288859870000 (accessed September 2021).

Monterey, County of. 2010. 2010 Monterey County General Plan. https://www.countyofmonterey.gov/government/departments-a-h/housing-community-development/planning-services/current-planning/general-info/2010-monterey-county-general-plan-adopted-october-26-2010 (accessed May 2025).

_____. 2022. County of Monterey Multi-Jurisdictional Hazard Mitigation Plan. https://www.countyofmonterey.gov/home/showpublisheddocument/114305/637961624630700000 (accessed May 2025).

Pacific Gas & Electric Company (PG&E). 2025. California Pipeline/Storage Facilities. [map]. https://www.pge.com/pipeline/en/about-cgt/system-maps/statemap.html (accessed May 2025).

San Benito, County of. 2012. Hollister Municipal Airport Land Use Compatibility Plan. http://sanbenitocog.org/wp-content/uploads/2018/10/ADOPTED-ALUCP-June-2012.pdf (Accessed May 2025).

_____. 2019. Airport Land Use Compatibility Plan Frazier Lake Airpark. http://sanbenitocog.org/wp-content/uploads/2020/01/FLA-2019-Amended-ALUCP-Complete-Dec19-R.pdf (accessed May 2025).

_____. 2015. San Benito County 2035 General Plan. https://www.sanbenitocountyca.gov/home/showpublisheddocument/5859/637347294134470000 (accessed May 2025).

_____. 2022. County of San Benito, California Multi-Jurisdictional Hazard Mitigation Plan. https://www.sanbenitocountyca.gov/home/showpublisheddocument/10834/638181251398570000 (accessed May 2025).

_____. 2023. San Benito County Operational Area Emergency Operations Plan. https://www.sanbenitocountyca.gov/home/showpublisheddocument/11957/638415122753530000 (accessed May 2025).

Santa Cruz, County of. 2021. County of Santa Cruz Local Hazard Mitigation Plan 2021-2026. https://cdi.santacruzcountyca.gov/Portals/35/CDI/Planning/Policy/LocalHazardMitigationPlan2021-2026.pdf (accessed May 2025).

_____. 2023. Santa Cruz County Operational Area Emergency Operations Plan. https://www.santacruzcountyca.gov/portals/0/County/or3/pdfs/SCC_EOP-Base%20Plan_101123_Public%20Comment%20Version.pdf (accessed May 2025).

_____. 2024. County of Santa Cruz General Plan. https://cdi.santacruzcountyca.gov/Planning/PolicyPlanning/General,TownVillagePlans.aspx (accessed May 2025).

Security and Emergency Response Training Center (SERTC). 2025. Security and Emergency Response Training Center (SERTC). https://sertc.org/ (accessed May 2025).

State Water Resources Board (SWRCB). 2025. GeoTracker database. https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=Search+GeoTracker (accessed June 2025).

Transportation Research Board. 2004. Special Report 281: Transmission Pipelines and Land Use, A Risk Informed Approach. Available online: http://onlinepubs.trb.org/onlinepubs/sr/sr281.pdf. (accessed May 2025).

United States Army Corps of Engineers (USACE). 2022. Formerly Used Defense Sites (FUDS) Viewer – FY22 Data. https://geospatial.sec.usace.army.mil/arcgis/apps/webappviewer/index.html?id=fe3efb63b00e45b5857d3b9e15420f92 (accessed June 2025).

United States Department of Transportation (USDOT). 2025a. U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration Office of Hazardous Material Safety Hazmat Summary by Incident State. https://portalpublic.phmsa.dot.gov/analytics/saw.dll?Dashboard (accessed August 2025).

_____. 2025b. Letter to the Association of American Railroads. https://www.transportation.gov/briefing-room/letter-association-american-railroads (accessed May 2025).

United States Environmental Protection Agency (U.S. EPA). 2025a. Defining Hazardous Waste: Listed, Characteristic and Mixed Radiological Wastes. https://www.epa.gov/hw/defining-hazardous-waste-listed-characteristic-and-mixed-radiological-wastes (accessed May 2025).

_____. 2025b. Envirofacts Database. https://enviro.epa.gov/envirofacts/multisystem/search/results (accessed June 2025).

United States Geological Survey (USGS). 2011. Reported Historic Asbestos Mines, Historic Asbestos Prospects, and Other Natural Occurrences of Asbestos in California. Open File Report 2011-1188. Retrieved on May 8, 2025, from https://pubs.usgs.gov/of/2011/1188/.

Hydrology and Water Quality

California Department of Water Resources. 2025a. SGMA Basin Prioritization Dashboard [map database]. Accessed June 2025.

_____. 2025b. GSP Status Summary. Accessed June 2025.

_____. 2025b. Adjudicated Areas. Accessed July 2025.

Central Coast Regional Water Quality Control Board (CCRWQCB). 2019. Water Quality Control Plan for the Central Coastal Basin. Accessed June 2025.

Greater Monterey County Regional Water Management Group (GMCRWMG). 2018. Integrated Regional Water Management Plan for the Greater Monterey County Region Section B Greater Monterey County Region Description. Accessed June 2025.

Hollister, City of. 2016. Hollister Urban Area Urban Water Management Plan. Accessed June 2025.

Monterey, City of. 2024. Monterey 2031 General Plan Update: Safety Element. Accessed June 2025.

Monterey, County of. 2010. 2010 Monterey County General Plan. https://www.countyofmonterey.gov/government/departments-a-h/housing-community-development/planning-services/current-planning/general-info/2010-monterey-county-general-plan-adopted-october-26-2010 (accessed June 2025).

_____. 2022. Monterey County Multi-Jurisdictional Hazard Mitigation Plan Volume 1. Accessed June 2025.

_____. 2025. County Code. Accessed June 2025.

Monterey One Water. 2021. Pure Water Monterey Groundwater Replenishment Project. https://www.montereyonewater.org/261/Pure-Water-Monterey-Overview (accessed July 2025).

Pajaro River Watershed Regional Water Management Group (PRWRWMG), 2019. Pajaro River Watershed Integrated Regional Water Management Plan. Accessed June 2025.

Salinas, City of. 2024. Stormwater Master Plan Update. Accessed June 2025.

San Benito County. 2015a. 2035 General Plan. Accessed June 2025.

_____. 2015b. Final Environmental Impact Report 2035 San Benito County General Plan Update: Geology, Soils, and Mineral Resources. Accessed June 2025.

Santa Cruz, City of. 2019. 2030 General Plan. Accessed June 2025.

_____. 2021. 2020 Urban Water Management Plan. Accessed June 2025.

Santa Cruz, County of. 2019. Santa Cruz Integrated Regional Water Management Plan Addendum. Accessed June 2025.

_____. 2021. Local Hazard Mitigation Plan 2021-2026. Accessed June 2025.

_____. 2024a. Santa Cruz County General Plan/ Local Coastal Program: Chapter 5 Agriculture, Natural Resources and Conservation Element. Accessed June 2025.

_____. 2024b. Santa Cruz County General Plan/ Local Coastal Program: Chapter 6 Public Safety. Accessed June 2025.

Santa Cruz County and City of Capitola. 2010. Stormwater Management Program. November 2010. Accessed June 2025.

Watsonville, City of. 1994. Watsonville 2005 General Plan. Accessed June 2025.

Land Use and Planning

California Air Resources Board (CARB). 2025. SB 375 Regional Targets. https://ww2.arb.ca.gov/our-work/programs/sustainable-communities-program/sb-375-regional-targets (accessed May 2025).

California Coastal Commission. 2025a. Coastal Zone Boundary Maps: Monterey. https://www.coastal.ca.gov/maps/czb/ (accessed September 2025).

_____. 2025b. Coastal Zone Boundary Maps: Santa Cruz. https://www.coastal.ca.gov/maps/czb/ (accessed September 2025).

_____. 2020. City of Watsonville Local Coastal Program Major Amendment Number 1-99 Public Hearing Staff Report. https://documents.coastal.ca.gov/reports/2000/3/Th9a-3-2000.pdf (accessed July 2025).

_____. No date. Frequently Asked Questions: The Coastal Commission Permit Appeal Process. https://documents.coastal.ca.gov/assets/cdp/appeals-faq.pdf (accessed September 2025).

California State University, Monterey Bay. 2022. Master Plan Guidelines. https://csumb.edu/media/csumb/section-editors/facilities/2022-master-plan/CSUMB-Master-Plan-Guidelines-2022.pdf (accessed May 2025).

Capitola, City of. 2025. Local Coastal Program Updates. https://www.cityofcapitola.org/communitydevelopment/page/local-coastal-program-updates (accessed September 2025).

_____. 2014. General Plan. https://www.cityofcapitola.org/sites/default/files/fileattachments/page//general_plan_-_update_2019.pdf (accessed May 2025).

_____. 1981. Land Use Plan Local Coastal Program. https://www.cityofcapitola.org/sites/default/files/fileattachments/community_development/page/15081/capitola_local_coastal_program.pdf (accessed July 2025).

Carmel-by-the-Sea, City of. 2003. General Plan/ Coastal Land Use Plan. https://ci.carmel.ca.us/sites/main/files/general_plan_complete.pdf (accessed May 2025).

_____. 2025. Local Coastal Program. https://ci.carmel.ca.us/post/local-coastal-program (accessed July 2025).

Chadwell, John. 2023. Supervisors, Planning Commissioners briefed on General Plan land-uses. https://benitolink.com/supervisors-planning-commissioners-briefed-on-general-plan-land-uses/ (accessed May 2025).

Changing America. 2020. "After 250 years, Native American tribe regains ancestral lands in California: 'It is our homeland, the creation story of our lives'". https://thehill.com/changing-america/respect/equality/509544-after-250-years-native-american-tribe-regains-ancestral/ (accessed April 2025).

Council of San Benito County Governments. 2012. Hollister Municipal Airport Land Use Compatibility Plan. http://sanbenitocog.org/wp-content/uploads/2018/10/ADOPTED-ALUCP-June-2012.pdf (accessed May 2025).

_____. 2019. Frazier Lake Airpark Airport Land Use Compatibility Plan. http://sanbenitocog.org/wp-content/uploads/2020/01/FLA-2019-Amended-ALUCP-Complete-Dec19-R.pdf (accessed May 2025).

Del Rey Oaks, City of. 1997. General Plan Update. https://www.delreyoaks.org/media/7436 (accessed May 2025).

Gonzales, City of. 2018. Gonzales 2010 General Plan. https://gonzalesca.gov/sites/default/files/2018-09/Gonzales%20General%20Plan%20June%202018.pdf (accessed May 2025).

Governor's Office of Land Use and Climate Innovation. 2017. General Plan Guidelines. https://lci.ca.gov/docs/OPR_COMPLETE_7.31.17.pdf (accessed April 2025).

Greenfield, City of. 2005. General Plan Introduction. https://ci.greenfield.ca.us/DocumentCenter/View/156/01-Introduction-to-General-Plan-PDF (accessed May 2025).

Hollister, City of. 2005. General Plan. https://files.hollister.ca.gov/DS%20Documents/Planning/General%20Plan/Complete_General_Plan.pdf (accessed May 2025).

_____. 2025. General Plan. https://hollister.ca.gov/government/departments/development_services/planning/general_plan.php (accessed May 2025).

King City, City of. 1998. General Plan. https://www.kingcity.com/DocumentCenter/View/258/King-City-General-Plan-PDF (accessed May 2025).

Marina, City of. 2000. General Plan. https://www.cityofmarina.org/DocumentCenter/View/13219/General-Plan-Last-Update-2023- (accessed May 2025).

_____. 2025. The Local Coastal Program (LCP) Coastal Hazards and Sea Level Rise Update. https://www.cityofmarina.org/1204/The-Local-Coastal-Program-LCP-Coastal-Ha (accessed July 2025).

Monterey County Airport Land Use Commission. 1978. Mesa Del Rey Airport Master Plan. https://www.countyofmonterey.gov/home/showpublisheddocument/37931/636371078595770000 (accessed May 2025).

_____. 1982. Salinas Municipal Airport Land Use Plan. https://www.countyofmonterey.gov/home/showpublisheddocument/37951/636371078672370000 (accessed May 2025).

_____. 2019a. Monterey Regional Airport Land Use Compatibility Plan. https://www.co.monterey.ca.us/home/showpublisheddocument/75251/636875603145330000 (accessed May 2025).

_____. 2019b. Marina Municipal Airport Land Use Compatibility Plan. https://www.countyofmonterey.gov/home/showpublisheddocument/37929/638761769732570000 (accessed May 2025).

Monterey, City of. 2005. General Plan. https://files.monterey.gov/Document%20Center/CommDev/Planning/General-Plan/19_0604-General-Plan.pdf (accessed May 2025).

_____. 2024. 2023-31 Housing Element. https://files.monterey.gov/Document%20Center/CommDev/Planning/Land-Use-Plans/General%20Plan/Certified%20Housing%20Element%20Volume_1.pdf (accessed May 2025).

_____. 2025. Local Coastal Program. https://haveyoursaymonterey.org/local-coastal-program (accessed July 2025).

Monterey, County of. 2010. 2010 Monterey County General Plan. https://www.countyofmonterey.gov/government/departments-a-h/housing-community-development/planning-services/current-planning/general-info/2010-monterey-county-general-plan-adopted-october-26-2010 (accessed April 2025).

_____. 2025. General Plans/ Land Use Plans. https://www.countyofmonterey.gov/government/departments-a-h/housing-community-development/planning-services/library-current-major-projects/general-plan-land-use-plans (accessed July 2025).

Pacific Grove, City of. 1994. General Plan Introduction. https://files.cityofpacificgrove.org/Document_Center/Departments/Community%20Development/Programs%20&%20Projects/General%20Plan/gpchapter01.pdf (accessed May 2025).

_____. 2020. Local Coastal Program. https://www.cityofpacificgrove.gov/our_city/departments/community_development/programs___projects/local_coastal_program.php (accessed July 2025).

Salinas, City of. 2002. General Plan. https://www.cityofsalinas.org/files/sharedassets/city/v/1/residents/documents/general plan.pdf (accessed May 2025).

San Benito County. 2015. 2035 General Plan EIR Land Use Section. https://www.sanbenitocountyca.gov/home/showpublisheddocument/1750/637205737565170000 (accessed July 2025).

San Juan Bautista, City of. 2015. 2035 General Plan. https://cms6.revize.com/revize/sanjuanbautistaca/document_center/San%20Juan%20Bautista%202035%20General%20Plan/San-Juan-Bautista-2035-General-Plan-FINAL-2-3-16.pdf (accessed May 2025).

Sand City, City of. 2002. General Plan. https://www.sandcity.org/home/showpublisheddocument/3942/638415117988430000 (accessed May 2025).

_____. 1982. Sand City Local Coastal Program Land Use Plan. https://www.sandcity.org/home/showpublisheddocument/3805/638180363482430000 (accessed July 2025).

Santa Cruz, City of. 2012. 2030 General Plan. https://www.cityofsantacruz.com/home/showpublisheddocument/71130/638452552594870000 (accessed May 2025).

_____. 2025a. Downtown Plan Expansion. https://www.cityofsantacruz.com/government/city-departments/planning-and-community-development/long-range-policy-planning/ordinance-policy-updates/downtown-plan-expansion (accessed September 2025).

_____. 2025b. Local Coastal Program. https://www.cityofsantacruz.com/government/city-departments/planning-and-community-development/long-range-policy-planning/past-ordinance-policy-updates/local-coastal-program (accessed July 2025).

Santa Cruz, County of. 2022. Sustainability Policy and Regulatory Update Draft Environmental Impact Report, 4.2 Agriculture, Forest, and Mineral Resources. https://cdi.santacruzcountyca.gov/Portals/35/CDI/UnifiedPermitCenter/Get%20Involved/CEQA/Sustainability%20Update%20Draft%20EIR/4.2_Agriculture_Forestry_Mineral_Resources%20DEIR.pdf (accessed April 2025).

Santa Cruz, County of. 2024. General Plan / Local Coastal Program. https://cdi.santacruzcountyca.gov/Planning/PolicyPlanning/General,TownVillagePlans.aspx (accessed May 2025).

Scotts Valley, City of. 2023. General Plan. https://www.scottsvalley.gov/DocumentCenter/View/4668/Scotts-Valley-General-Plan---Adopted-November-2023 (accessed May 2025).

_____. 2025. The Town Center. https://www.scottsvalley.gov/525/The-Town-Center (accessed September 2025).

Seaside, City of. 2024. General Plan. https://www.ci.seaside.ca.us/DocumentCenter/View/15999/Seaside2040-General-PlanPDF?bidId= (accessed May 2025).

_____. 2025. Local Coastal Program. https://www.ci.seaside.ca.us/272/Local-Coastal-Program (accessed July 2025).

Soledad, City of. 2005. General Plan. https://www.cityofsoledad.com/general-plan/# (accessed May 2025).

University of California, Santa Cruz. 2021. Long Range Development Plan. https://lrdp.ucsc.edu/2021/files/flrdp/web/UCSC-2021-LRDP-Entire-Document.pdf (accessed May 2025).

Watsonville, City of. 1994. General Plan. https://www.watsonville.gov/DocumentCenter/View/177/01-Executive-Summary-PDF (accessed May 2025).

_____. 2023a. Downtown Watsonville Specific Plan. https://www.watsonville.gov/DocumentCenter/View/23797/Adopted-DWSP-10-25-23 (accessed September 2025).

_____. 2023b. Watsonville Municipal Airport Master Plan Update. https://www.watsonville.gov/DocumentCenter/View/22266/KWVI-AIRPORT-MASTER-PLAN-update-2023 (accessed May 2025).

_____. 2024. Watsonville Municipal Airport Regulations. https://www.watsonville.gov/DocumentCenter/View/22558/Airport-Regulations-UPDATED-effective-January-1-2024 (accessed May 2025).

_____. 2025. 2005 General Plan. https://www.watsonville.gov/160/2005-General-Plan (accessed September 2025).

Noise

California Department of Transportation (Caltrans). 2002. Transportation Related Earthborne Vibrations. Technical Advisory, Vibration. Available online: https://www.vibrationdata.com/tutorials_alt/caltrans_earth.pdf (accessed July 2025

_____. 2011. California Airport Land Use Planning Handbook. October 2011.

_____. 2013. Technical Noise Supplement to the Traffic Noise Analysis Protocol. (CT-HWANP-RT-13-069.25.2) September. Available at: https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tens-sep2013-a11y.pdf (accessed July 2025)

_____. 2023. Traffic Census Program. Traffic Volumes: Annual Average Daily Traffic (AADT). https://dot.ca.gov/programs/traffic-operations/census. (accessed July 2025)

_____. 2020a. Transportation and Construction Vibration Guidance Manual (CT-HWANP-RT-20-365.01.01). April. https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf. (accessed July 2025)

_____. 2020b. Traffic Noise Analysis Protocol. For New Highway Construction, Reconstruction, and Retrofit Barrier Projects. April. https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/traffic-noise-protocol-april-2020-a11y.pdf. (accessed July 2025)

California Office of Planning and Research. 2017. General Plan Guidelines. https://opr.ca.gov/planning/general-plan/guidelines.html. (accessed July 2025)

Crocker, Malcolm J. Crocker (Editor). 2007. Handbook of Noise and Vibration Control Book, ISBN: 978-0-471-39599-7, Wiley-VCH, October.

Federal Highway Administration (FHWA). 2017. Noise Policy FAQs. https://www.fhwa.dot.gov/Environment/noise/regulations_and_guidance/faq_nois.cfm#A9 (accessed July 2025)

Federal Interagency Committee on Noise (FICON). 1992. Federal Agency Review of Selected Airport Noise Analysis Issues. https://fican1.files.wordpress.com/2015/10/reports_noise_analysis.pdf. (accessed July 2025).

Federal Transit Administration (FTA). 2018. Transit Noise and Vibration Impact Assessment. November. Available at: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf. (accessed July 2025)

Kinlser, Laurence E., Frey Austin, R., Coppens, Alan B., and Sanders, James, V. 1999. Fundamentals of Acoustics. Fourth Edition.

Monterey County. 2019a. Monterey Regional Airport Land Use Compatibility Plan. January 2019. Adopted February 25, 2019. Available online: https://www.co.monterey.ca.us/home/showpublisheddocument/75251/636875603145330000. (accessed July 2025)

_____. 2019b. Marina Municipal Airport Land Use Compatibility Plan. May 2019. Adopted May 30, 2019. Available online: https://www.co.monterey.ca.us/home/showpublisheddocument/78366/636965288859870000. (accessed July 2025)

San Benito County Airport Land Use Commission. 2012. Hollister Municipal Airport Land Use Compatibility Plan. June 21, 2012. Available online: http://www.sanbenitocog.org/pdf/ADOPTED%20%20ALUCP%20-June%202012.pdf. (accessed July 2025)

_____. 2019. Airport Land Use Compatibility Plan for Frazier Land Airpark. December 19, 2019. Available online: http://frazierlake.com/public_docs/FrazierLakeAirpark-AirportLandUseCompatibilityPlan-Amended-070620.pdf (accessed July 2025).

Population and Housing

Association of Monterey Bay Area Governments (AMBAG). 2020. Final 2022 Regional Growth Forecast. https://www.ambag.org/sites/default/files/2020-12/Final%20Draft%202022%20Regional%20Growth%20Forecast_PDF_A.pdf (accessed May 2025).

_____. 2024a. Final DRAFT 2026 Regional Growth Forecast. https://ambag.org/sites/default/files/2024-10/Final%20Draft%202026%20RGF_092024_Combined.pdf (accessed May 2025).

_____. 2024b. Final DRAFT 2026 Regional Growth Forecast Annual Population, Housing, and Employment Data Table. (accessed July 2025).

California Department of Finance (DOF). 2022. E-5 Population and Housing Estimates for Cities, Counties, and the State, January 2020-2025, with 2020 Benchmark. https://dof.ca.gov/forecasting/demographics/estimates/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2020-2025/ (accessed May 2025).

California Employment Development Department. 2022. Monterey County Median House Price. https://labormarketinfo.edd.ca.gov/cgi/databrowsing/localAreaProfileQSMoreResult.asp?menuChoice=localAreaPro&criteria=property+values&categoryType=economicindicators&geogArea=0604000053&area=Monterey+County&timeseries=property+valuesTimeSeries (accessed July 2025).

_____. 2022b. San Benito County Median House Price. https://labormarketinfo.edd.ca.gov/cgi/databrowsing/localAreaProfileQSMoreResult.asp?menuChoice=localAreaPro&criteria=property+values&categoryType=economicindicators&geogArea=0604000069&area=San+Benito+County&timeseries=property+valuesTimeSeries (accessed July 2025).

_____. 2022c. Santa Cruz County Median House Price. https://labormarketinfo.edd.ca.gov/cgi/databrowsing/localAreaProfileQSMoreResult.asp?menuChoice=localAreaPro&criteria=property+values&categoryType=economicindicators&geogArea=0604000087&area=Santa+Cruz+County&timeseries=property+valuesTimeSeries (accessed July 2025).

Capitola, City of. 2024. Housing Element of the General Plan 2023-2031. https://www.cityofcapitola.org/sites/default/files/fileattachments/community_development/page/22766/capitola_housing_element_august_2024.pdf (accessed June 2025).

Carmel-by-the-Sea, City of. 2024. 6th Cycle Housing Element Update (2023-2031). https://ci.carmel.ca.us/sites/main/files/_carmel_6th_cycle_revised_draft_housing_element_040424_track_changes_version.pdf (accessed June 2025).

County of San Benito. 2025. 2023-2031 Housing Element. https://www.sanbenitocountyca.gov/home/showpublisheddocument/14304/638858592378202682 (accessed July 2025).

_____. 2016. San Benito County Housing Element 2014 – 2023. https://www.hcd.ca.gov/housing-elements/docs/san-benito-cou-5th-adopted042116.pdf (accessed September 2025).

Del Rey Oaks, City of. 2025. 6th Cycle Housing Element Update. https://www.delreyoaks.org/media/11676 (accessed September 2025).

Gonzales, City of. 2024. Housing Element Update. https://gonzalesca.gov/services/community-development/city-gonzales-6th-cycle-housing-element-update (accessed June 2025).

_____. 2016. City of Gonzales 2015-2023 Housing Element. https://www.hcd.ca.gov/housing-elements/docs/gonzales-5th-adopted100115.pdf (accessed September 2025).

Greenfield, City of. 2025. 2023-2031 Housing Element Fourth Revised Draft To State Housing And Community Development. https://ci.greenfield.ca.us/DocumentCenter/View/4361/Housing-Element-HCD---4th-Resubmittal---May-5-2025 (accessed June 2025).

California Department of Housing and Community Development (HCD). 2024. City of Watsonville's 6th Cycle (2023-2031) Draft Housing Element. https://www.hcd.ca.gov/sites/default/files/docs/planning-and-community/housing-element/scr-watsonville-draft-out-051024.pdf (accessed June 2025).

Hollister, City of. 2024. 2023-2031 Housing Element. https://cms3.revize.com/revize/hollisterca/DS%20Documents/Housing/New%20housing%20page%2011222024/24%20City%20of%20Hollister%206th%20Cycle%20Housing%20Element%20Update%20Draft_03.12.2024.pdf (accessed June 2025).

_____. 2016. City of Hollister Housing Element of the General Plan. https://files.hollister.ca.gov/Community%20Development%20Department/Housing/New%20housing%20page%2011222024/01%20Final-Housing-Element-April-2016.pdf?t=202507101458480&t=202507101458480 (accessed September 2025).

King, City of. 2024. 2023-2031 Housing Element. https://www.kingcity.com/DocumentCenter/View/1163/The-City-of-King-2023-2031-Housing-Element- (accessed June 2025).

Marina, City of. 2024. 2023–2031 Housing Element Update. https://cityofmarina.org/DocumentCenter/View/14321/City-of-Marina-2031Housing-Element-March-2024 (accessed June 2025).

Monterey, City of. 2024. 2023-31 Housing Element. https://haveyoursaymonterey.org/27018/widgets/93120/documents/63519 (accessed June 2025).

Monterey, County of. 2025. General Plan Elements Update: Housing Element 6th Cycle Update 2023-2031. https://www.countyofmonterey.gov/government/departments-a-h/housing-community-development/planning-services/advance-planning/ordinances-plans-under-development/general-plan-elements-update-housing-element-6th-cycle-update-2023-2031-ref220020-lrpwp-task-no-21-02 (accessed June 2025).

_____. 2016. County of Monterey 2015-2023 Housing Element. https://www.countyofmonterey.gov/home/showpublisheddocument/125604/638888754011670000 (accessed September 2025).

Pacific Grove, City of. 2025. 2023–2031 Housing Element Update. https://files.cityofpacificgrove.org/City%20of%20Pacific%20Grove%202023%E2%80%932031%20Housing%20Element%20Update%20%2005.21.25.pdf (accessed June 2025).

_____. 2016. City of Pacific Grove Housing Element 2015-2023. https://files.cityofpacificgrove.org/Revize_Photo_Gallery/Department/Community%20Development/Housing/Housing%20Element/Revised%20Draft%20Housing%20Element%201.17.24%20-%201.24.24/pacific-grove-5th-adopted032916.pdf (accessed September 2025).

Salinas, City of. 2023. Adopted 2023-2031 Housing Element. https://www.visionsalinas.org/_files/ugd/021e72_d6275d54c7a64c2da868d1d31ea0658a.pdf (accessed June 2025).

San Juan Bautista, City of. 2023. 2023-2031 6th Cycle Housing Element & Fair Housing Analysis. https://cms6.revize.com/revize/sanjuanbautistaca/document_center/Planning/2023-2031%20DRAFT_HE_NON-TRACKED_PAUL@HCD_09252023.pdf (accessed June 2025).

_____. 2019. City of San Juan Bautista 5th Cycle Housing Element 2nd Four-Year Update (2019-2023). https://www.hcd.ca.gov/housing-elements/docs/san-juan-bautista-5th-draft100219.pdf (accessed September 2025).

Sand City, City of. 2024. 6th Cycle Housing Element Update (2023-2031). https://www.sandcity.org/home/showpublisheddocument/4074/638573085815730000 (accessed June 2025).

Santa Cruz County. 2023. 2023 Housing Element. https://cdi.santacruzcountyca.gov/Portals/35/CDI/Planning/Policy/GeneralPlanTownPlans/General%20Plan%20Chapters/2023%20Housing%20Element_Final_10-16-24%20New%20Date.pdf?ver=RmuioueNcjRq2th9g6kStg%3d%3d (accessed June 2025).

Santa Cruz, City of. 2024. 2023-2031 Housing Element. https://www.cityofsantacruz.com/home/showpublisheddocument/98472/638433520614400000 (accessed June 2025).

Scotts Valley, City of. 2023. Scotts Valley 6th Cycle Housing Element. https://www.scottsvalley.gov/DocumentCenter/View/4812/2023-2031-Housing-Element---Adopted-and-Certified (accessed June 2025).

Seaside, City of. 2023. 2023-2031 Housing Element. https://www.ci.seaside.ca.us/DocumentCenter/View/15171/6th-Cycle-Housing-Element (accessed June 2025).

Soledad, City of. 2024. 2023-2031 Housing Element. file:///C:/Users/mbernard/Downloads/City-of-Soledad-2023-2031-Housing-Element-Certification-Draft.pdf (accessed June 2025).

United States Department of Housing and Urban Development (HUD). 2025. Real Estate Acquisition and Relocation Overview in HUD Programs. https://www.hudexchange.info/programs/relocation/overview/#overview-of-the-ura (accessed May 2025).

Watsonville, City of. 2024. City of Watsonville 2023-2031 Housing Element. https://www.watsonville.gov/DocumentCenter/View/25062/Housing-Element-2023-2031 (accessed September 2025).

Zillow. 2025a. Monterey County Home Values. https://www.zillow.com/monterey-county-ca/home-values/ (accessed May 2025).

_____. 2025b. San Benito County Home Values. https://www.zillow.com/san-benito-county-ca/home-values/ (accessed May 2025).

_____. 2025c. Santa Cruz County Home Values. https://www.zillow.com/santa-cruz-county-ca/home-values/ (accessed May 2025).

Public Services and Recreation

Association of Monterey Bay Area Governments (AMBAG). 2022. 2045 Metropolitan Transportation Plan and Sustainable Communities Strategy. https://www.ambag.org/plans/2045-metropolitan-transportation-plan-sustainable-communities-strategy (accessed August 2025).

_____. 2024. 2024. Final DRAFT 2026 Regional Growth Forecast. https://ambag.org/sites/default/files/2024-10/Final%20Draft%202026%20RGF_092024_Combined.pdf (accessed July 2025).

California Department of Education Dataquest. 2023. 2022-23 Teaching Assignment Monitoring Outcomes by Full-Time Equivalent for Monterey, San Benito, and Santa Cruz Counties. https://dq.cde.ca.gov/dataquest/page2.asp?level=County&subject=TCH&submit1=Submit

California Governor's Office of Planning and Research (OPR). 2017. General Plan Guidelines. https://opr.ca.gov/docs/OPR_COMPLETE_7.31.17.pdf. (Accessed May 2025).

California Highway Patrol. 2025. About. https://www.chp.ca.gov/ (accessed August 2025).

California State Library. 2022. California Public Library Branch Directory. Available: https://ca.countingopinions.com/pireports/report.php?c5e42ef64d3cd9b3c91539fa4a814312&live (accessed April 2025).

Capitola, City of. 2014. Capitola General Plan. https://www.cityofcapitola.org/communitydevelopment/page/capitola-general-plan (accessed May 2025).

Carmel-by-the-Sea, City of. 2003. General Plan. https://ci.carmel.ca.us/sites/main/files/general_plan_complete.pdf (accessed May 2025).

Education Data Partnership. 2024. Summaries for Monterey, San Benito, Santa Cruz Counties. https://www.ed-data.org/. (accessed April 2025).

2024 Fire Hazard Severity Zones. file:///L:/EPS/State%20or%20Regional/23-14882%20AMBAG%202050%20MTP_SCS%20EIR/Report/Drafts/2.%20Admin%20Draft%20EIR/admin%20record/Public%20Services,%20Recreation,%20and%20Utilities/CalFIRE_2024_FHSZ_FAQ.pdf (accessed April 2025).

Gonzales, City of. 2010. General Plan. https://gonzalesca.gov/government/information-center/general-plan (accessed May 2025).

Hollister, City of. 2005. City of Hollister General Plan. https://files.hollister.ca.gov/DS%20Documents/Planning/General%20Plan/Complete_General_Plan.pdf (accessed May 2025).

Marina, City of. 2000. General Plan (Amended 2023). https://www.cityofmarina.org/DocumentCenter/View/13219/General-Plan-Last-Update-2023 (accessed May 2025).

Marina Coast Water District (MCWD). 2021. Marina Coast Water District 2020 Urban Water Management Plan. https://www.mcwd.org/docs/2021_uwmp/DRAFT_MCWD_2020_UWMP_v20210520.pdf (accessed April 2025).

Monterey, City of. 2005. General Plan (Amended 2019). https://files.monterey.org/Document%20Center/CommDev/Planning/General-Plan/19_0604-General-Plan.pdf (accessed May 2025).

Monterey, County of. 2010. 2010 Monterey County General Plan. https://www.countyofmonterey.gov/government/departments-a-h/housing-community-development/planning-services/current-planning/general-info/2010-monterey-county-general-plan-adopted-october-26-2010 (accessed May 2025).

Salinas, City of. 2002. General Plan. https://www.cityofsalinas.org/files/sharedassets/city/v/1/residents/documents/general plan.pdf (accessed May 2025).

San Benito County. 2015. General Plan. https://www.sanbenitocountyca.gov/departments/resource-management-agency/building-planning/general-plan (accessed May 2025).

_____. 2023. Emergency Operations Plan. https://www.sanbenitocountyca.gov/home/showpublisheddocument/11957/638415122753530000 (accessed May 2025).

Santa Cruz County. 2023. Draft Emergency Operations Plan. https://www.santacruzcountyca.gov/portals/0/County/or3/pdfs/SCC_EOP-Base%20Plan_101123_Public%20Comment%20Version.pdf (Accessed May 2025).

Watsonville, City of. 1994. General Plan. https://www.watsonville.gov/DocumentCenter/View/177/01-Executive-Summary-PDF (accessed September 2025).

_____. 2023a. Downtown Watsonville Specific Plan. https://www.watsonville.gov/DocumentCenter/View/23797/Adopted-DWSP-10-25-23 (accessed September 2025).

Transportation

California Air Resources Board (CARB). 2022. 2022 Scoping Plan for Achieving Carbon Neutrality. https://ww2.arb.ca.gov/sites/default/files/2022-12/2022-sp_1.pdf (accessed September 2025).

California Department of Transportation (Caltrans). 2025a. Highway Design Manual, 100-3-100-4.https://dot.ca.gov/-/media/dot-media/programs/design/documents/chp1000-a11y.pdf. (Accessed April 2025).

_____. 2025b. Division of Traffic Operations: Road Information. https://roads.dot.ca.gov/ (accessed April 2025).

_____. 2025c. Active Transportation Program (ATP). https://dot.ca.gov/programs/local-assistance/fed-and-state-programs/active-transportation-program (accessed September 2025).

_____. 2025d. CA Manual on Uniform Traffic Control Devices. https://dot.ca.gov/programs/safety-programs/camutcd (accessed September 2025).

California Office of Planning and Research. 2018. Technical Advisory on Evaluating Transportation Impacts in CEQA. https://lci.ca.gov/docs/20190122-743_Technical_Advisory.pdf (accessed May 2025).

California State Transportation Agency (CalSTA).2025. CAPTI 2.0: Climate Action Plan for Transportation Infrastructure. https://calsta.ca.gov/-/media/calsta-media/documents/capti-2025-a11y.pdf. (accessed April 2025)

_____. 2024a. 2024 Regional Transportation Plan Guidelines for Metropolitan Planning Organizations. https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/division-transportation-planning/regional-and-community-planning/sustainable-transportation-planning-grants/adopted-2024-rtp-guidelines-for-mpos-2-a11y.pdf (accessed April 2025).

_____. 2024b. 2024 Regional Transportation Plan Guidelines for Regional Transportation Planning Agencies. https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/division-transportation-planning/regional-and-community-planning/sustainable-transportation-planning-grants/adopted-2024-rtp-guidelines-for-rtpas-2-a11y.pdf (accessed April 2025).

CalVans. 2025. Frequently Asked Questions About CalVans. https://calvans.gov/#1593552705274-8768d4c9-cf35 (accessed September 2025).

Capitola, City Of. 2019. General Plan. https://www.cityofcapitola.org/sites/default/files/fileattachments/page//general_plan_-_update_2019.pdf (accessed April 2025).

Council of San Benito County Governments (SBCOG). 2009. San Benito County Bicycle and Pedestrian Master Plan. December 2009http://sanbenitocog.org/files/Bike_Ped_Master_Plan_2009/2009_Bike_Ped_Master_Plan.pdf. (accessed April 2025)Cruz511. 2025. Park and Ride. https://cruz511.org/drive/park-and-ride/ (accessed April 2025).

Deakin, Elizabeth, et al. 2020. Calculating and Forecasting Induced Vehicle Miles of Travel Resulting from Highway Projects: Findings and Recommendations from an Expert Panel. California Department of Transportation. https://dot.ca.gov/-/media/dot-media/programs/transportation-planning/documents/sb-743/2020-09-21-sb-743-expert-panel-rpt-fnl-a11y.pdf (accessed June 2025).

Handy, Susan and Boarnet, Marlon. 2014. Technical Background Document on the Impact of Highway Capacity and Induced Travel on Passenger Vehicle Use and Greenhouse Gas Emissions. California Air Resources Board. https://ww2.arb.ca.gov/sites/default/files/2020-06/Impact_of_Highway_Capacity_and_Induced_Travel_on_Passenger_Vehicle_Use_and_Greenhouse_Gas_Emissions_Technical_Background_Document.pdf (accessed June 2025).

Hollister, City of. 2005. City of Hollister General Plan. https://files.hollister.ca.gov/DS%20Documents/Planning/General%20Plan/Complete_General_Plan.pdf (accessed April 2025).

Monterey, County of. 2010. General Plan, Transportation Element. file:///L:/EPS/State%20or%20Regional/23-14882%20AMBAG%202050%20MTP_SCS%20EIR/Report/Drafts/2.%20Admin%20Draft%20EIR/admin%20record/Transportation/MontereyCounty_2010_General%20Plan_Circulation%20Element.pdf (accessed April 2025).

Monterey-Salinas Transit (MST). 2024 Annual Report. https://mst.org/2024-annual-report/mst-fast-facts-2024/. (Accessed April 2025).

_____. Park N Ride. https://mst.org/riders-guide/how-to-ride/park-n-ride/ (accessed April 2025).

San Benito, County of. 2015. 2035 General Plan. https://www.sanbenitocountyca.gov/home/showpublisheddocument/5859/637347294134470000 (accessed April 2025).

Santa Cruz, County of. 2022. Active Transportation Plan. https://cdi.santacruzcountyca.gov/Portals/35/CDI/PublicWorks/Transportation/Traffic%20Engineering/SCC_ATP_Final_web.pdf?ver=lB8_5AVR6x97vFp7oSECSg%3D%3D (accessed September 2025).

_____. 2024. General Plan and Local Coastal Program. file:///L:/EPS/State%20or%20Regional/23-14882%20AMBAG%202050%20MTP_SCS%20EIR/Report/Drafts/2.%20Admin%20Draft%20EIR/admin%20record/Transportation/Santa%20Cruz%20County_2024_General%20Plan%20and%20Local%20Coastal%20Program.pdf (accessed April 2025).

Santa Cruz County Rail Transit Commission. 2020. Transit Cooridor Alternatives Analysis Fact Sheet. https://sccrtc.org/wp-content/uploads/2020/02/SCC-RTC-TCAA-Fact-Sheet-FINAL_website.pdf (accessed April 2025).

Santa Cruz County Rail Transit Commission (SCCRTC). 2023. Total Bikeway Miles. file:///L:/EPS/State%20or%20Regional/23-14882%20AMBAG%202050%20MTP_SCS%20EIR/Report/Drafts/2.%20Admin%20Draft%20EIR/admin%20record/Transportation/SCCRTC_2023_TotalBikewayMiles.pdf (accessed April 2025).

_____. 2024. Zero Emission Passenger Rail & Trail Project. https://www.sccrtc.org/projects/rail/zeprt/ (accessed August 2025).

Santa Cruz Metropolitan Transit District (METRO). 2025. Metro System Ridership Reports For The Fourth Quarter Of FY24. https://scmtd.com/images/department/planning/FY24_Q4_Ridership_Report.pdf (accessed August 2025).

Seaside, City of. 2024. General Plan. https://www.ci.seaside.ca.us/DocumentCenter/View/15999/Seaside2040-General-PlanPDF?bidId= (accessed April 2025).

Transportation Agency for Monterey County (TAMC). 2007. Monterey Bay Sanctuary Scenic Trails Master Plan. https://www.tamcmonterey.org/files/b52702558/MBSST_MasterPlan_FINAL.pdf (accessed April 2025).

_____. 2018. Active Transportation Plan for Monterey County. Adopted June 2018. https://www.tamcmonterey.org/files/991071e61/2018-Monterey-County-ActiveTransportation-Plan.pdf. (accessed April 2025)

_____. 2021. Monterey Bay Area Network Integration Study. https://www.tamcmonterey.org/files/259cbdfbd/Final_Network_Integration_Study_210729.pdf (accessed April 2025).

_____. 2023. Monterey County Bike Map. https://www.tamcmonterey.org/monterey-county-bike-map (accessed September 2025).

_____. 2024. Monterey County Rail Extension Phase 2: Pajaro / Watsonville. https://www.tamcmonterey.org/monterey-county-rail-extension-phase-2-pajaro-watsonville (accessed August 2025).

_____. 2025. Go831. https://www.tamcmonterey.org/go831 (accessed September 2025).

Union Pacific Railroad. 2025. System Map. https://www.up.com/aboutup/reference/maps/system_map/index.htm (Accessed June 2025).

United States Department of Transportation Federal Highway Administration Office of Operations. 2025. Travel Demand Management Publications and Reference Materials. https://ops.fhwa.dot.gov/tdm/ref_material.htm (accessed April 2025)

_____. 2024. What is Transportation Systems Management and Operations (TSMO)? https://ops.fhwa.dot.gov/tsmo/ (accessed April 2025).

United States Department of Transportation Federal Transit Administration. 2022. Metropolitan Transportation Plan (MTP). https://www.transit.dot.gov/regulations-and-guidance/transportation-planning/metropolitan-transportation-plan-mtp (accessed September 2025).

Utilities and Service Systems

Association of Monterey Bay Area Governments (AMBAG). 2022. 2045 Metropolitan Transportation Plan and Sustainable Communities Strategy. https://www.ambag.org/plans/2045-metropolitan-transportation-plan-sustainable-communities-strategy (accessed August 2025).

_____. 2024. 2024. Final DRAFT 2026 Regional Growth Forecast. https://ambag.org/sites/default/files/2024-10/Final%20Draft%202026%20RGF_092024_Combined.pdf (accessed June 2025).

California Department of Resources Recycling and Recovery (CalRecycle). 2025. The Solid Waste Information System (SWIS) Database. https://www2.calrecycle.ca.gov/SolidWaste/Site/Search (accessed April 2025).

California Governor's Office of Planning and Research (OPR). 2017. General Plan Guidelines. https://opr.ca.gov/docs/OPR_COMPLETE_7.31.17.pdf. (Accessed May 2025).

California Water Watch. 2025. Current Conditions. https://cww.water.ca.gov/. (Accessed June 2025).

Central Coast Community Energy (3CE). 2025. About. https://3cenergy.org/about-us/ (accessed April 2025).

Central Coast California Regional Water Quality Control Boards (RWQCB). 2018. Phase II Regulated Small MS4s. https://www.waterboards.ca.gov/rwqcb3/water_issues/programs/stormwater/muni_phase2.html (accessed April 2025).

Hollister, City of. 2005. City of Hollister General Plan. https://files.hollister.ca.gov/DS%20Documents/Planning/General%20Plan/Complete_General_Plan.pdf (accessed May 2025).

_____. 2025. Utilities. https://www.hollister.ca.gov/government/departments/community_services/utilities.php (accessed May 2025).

Marina Coast Water District (MCWD). 2021. Marina Coast Water District 2020 Urban Water Management Plan. https://www.mcwd.org/docs/2021_uwmp/DRAFT_MCWD_2020_UWMP_v20210520.pdf (accessed April 2025).

Monterey, City of. 2005. General Plan (Amended 2019). https://files.monterey.org/Document%20Center/CommDev/Planning/General-Plan/19_0604-General-Plan.pdf (accessed May 2025).

Monterey Peninsula Water Management District (MPWD). 2020. Final Environmental Impact Report. October 2020. Available online: https://www.mpwmd.net/wpcontent/uploads/MPWMD-FEIR-October-2020.pdf (accessed April 2025).

_____. 2025a. Mission, Vision, Values &Goals. https://www.mpwmd.net/who-we-are/mission-vision-goals/ (accessed April 2025).

_____. 2025b. About MPWD. https://www.mpwmd.net/who-we-are/about-mpwmd/ (accessed April 2025).

Pajaro/Sunny Mesa Community Services District. 2025. About Pajaro/Sunny Mesa Community Services District. https://www.pajarosunnymesa.com/about (accessed April 2025).

Pajaro Valley Water Management Agency (PV Water). 2025. Purpose. https://www.pvwater.org/purpose (accessed April 2025).

Salinas Valley Basin Groundwater Sustainability Agency. 2020. Groundwater Sustainability Plan. https://sgma.water.ca.gov/portal/gsp/preview/29. (Accessed May 2025).

Salinas Valley Basin Groundwater Sustainability Agency. 2025. 180/400 Foot Aquifer Subbasin. https://svbgsa.org/180-400-ft-aquifer/. (Accessed May 2025).

San Benito County Water District. 2021. 2020 Hollister Urban Area Urban Water Management Plan.https://www.sbcwd.com/wp-content/uploads/2021/06/HUA-UWMP-2020-FINAL-vol-1-of-2-062521.pdf (accessed April 2025).

San Benito County Water District. 2023. Who We Are. https://sbcwd.com/who-we-are/ (accessed April 2025).

San Lorenzo Valley Water District. 2025. About Us. https://www.slvwd.com/about-us (accessed April 2025).

Santa Cruz Mid-County Groundwater Agency. 2019. Groundwater Sustainability Plan. https://www.midcountygroundwater.org/sustainability-program/groundwater-sustainability-plan (Accessed June 2025).

_____. 2025. GSP Periodic Evaluation. https://www.midcountygroundwater.org/sustainability-program/gsp-periodic-evaluation. (Accessed June 2025).

Scotts Valley Water District. 2025. About. https://www.svwd.org/About (accessed April 2025).

Scotts Valley Water District & San Lorenzo Valley Water District. 2021. 2020 Urban Water Management Plan. https://www.svwd.org/media/Reports/Water%20and%20Planning/UWMP2020.pdf (accessed April 2025).

Soquel Creek Water District. 2025. History. https://www.soquelcreekwater.org/204/History (accessed April 2025).

Soquel Creek Water District. 2021. 2020 Urban Water Management Plan. https://www.soquelcreekwater.org/DocumentCenter/View/1665/2020-Urban-Water-Management-Report-PDF?bidId= (accessed April 2025).

State Water Resources Control Board. 2025. California Drinking Water Watch: Water System Facilities. https://sdwis.waterboards.ca.gov/PDWW/JSP/WaterSystemDetail.jsp?tinwsys_is_number=3738&tinwsys_st_code=CA&wsnumber=CA3510002. (Accessed May 2025).

Sunnyslope County Water District. 2025. Services. https://www.sunnyslopewater.org/services (accessed August 2025).

Wildfire

California Department of Forestry and Fire Protection (CAL FIRE). 2020a. River Fire Incident Webpage. https://www.fire.ca.gov/incidents/2020/8/16/river-fire/. (accessedJune 2025).

_____. 2020b. CZU Lightning Complex (Including Warnella Fire) Incident Webpage. https://www.fire.ca.gov/incidents/2020/8/16/czu-lightning-complex-including-warnella-fire/. (accessed June 2025).

_____. 2020c. *2020 Fire Siege*. https://www.fire.ca.gov/media/hsviuuv3/cal-fire-2020-fire-siege.pdf. (accessed June 2025).

_____. 2021. Top 20 Deadliest California Wildfires. [fact sheet] Sacramento, CA. April 28, 2021. (Accessed June 2025).

_____. 2023. California Strategic Plan. https://bof.fire.ca.gov/media/drtb2b4p/full-15-calfire_strategicplan24_adamfk.pdf. (accessed June 2025).

_____. 2024. Fire Hazard Severity Zones in State Responsibility Area. https://calfire-forestry.maps.arcgis.com/apps/webappviewer/index.html?id=988d431a42b242b29d89597ab693d008 (accessed July 2025).

Carmel-by-the-Sea, City of. 2003. General Plan. https://ci.carmel.ca.us/post/general-plan (accessed August 2025).

Del Rey Oaks, City of. 1997. 1997 General Plan. https://ci.carmel.ca.us/post/general-plan (accessed August 2025).

Federal Emergency Management Agency (FEMA). 2025. State Mitigation Planning Policy Guide. https://www.fema.gov/sites/default/files/documents/fema_hmd_state-mitigation-planning-policy-guide_05292025.pdf (accessed August 2025).

Governor's Office of Emergency Services (Cal OES). 2023a. State of California Emergency Plan 2023. https://www.caloes.ca.gov/wp-content/uploads/Preparedness/Documents/2023-SEP-Draft-Public-Review.pdf. (accessed June 2025).

_____. 2023b. 2023 California State Hazard Mitigation Plan. https://www.caloes.ca.gov/office-of-the-director/operations/recovery-directorate/hazard-mitigation/state-mitigation-planning/. (accessed June 2025).

Governor's Office of Land Use and Climate Innovation (LCI). 2018. California's Fourth Climate Change Assessment. https://www.climateassessment.ca.gov/. (accessed May 2025).

Gonzales, City of. 2018. Gonzales 2010 General Plan. https://gonzalesca.gov/sites/default/files/2018-09/Gonzales%20General%20Plan%20June%202018.pdf (accessed August 2025).

Greenfield, City of. 2005. 2005 General Plan. https://ci.greenfield.ca.us/601/2005-General-Plan-Elements (accessed August 2025).

Hollister, City of. 2005. City of Hollister General Plan. https://files.hollister.ca.gov/DS%20Documents/Planning/General%20Plan/Complete_General_Plan.pdf (accessed June 2025).

King City. 2025. 2025 General Plan Safety Element. https://www.kingcity.com/534/City-of-King-General-Plan (accessed August 2025).

Marina, City of. 2025. 2000 General Plan – 2025 Updates. https://www.cityofmarina.org/DocumentCenter/View/16081/General-Plan-Last-Update-May-2025?bidId= (accessed August 2025).

Monterey, City of. 2024. General Plan – Safety Element. https://files.monterey.gov/Document%20Center/CommDev/Planning/Land-Use-Plans/General%20Plan/Safety%20Element%20-%20Monterey%202031.pdf. (accessed June 2025).

Monterey, County of. 2010. 2010 Monterey County General Plan. https://www.countyofmonterey.gov/government/departments-a-h/housing-community-development/planning-services/current-planning/general-info/2010-monterey-county-general-plan-adopted-october-26-2010 (accessed May 2025).

_____. 2022. Monterey County Local Hazard Mitigation Plan. https://www.countyofmonterey.gov/home/showdocument?id=114305&t=637961624630700000. (accessed June 2025).

Pacific Grove, City of. 1994. Health and Safety Element. https://files.cityofpacificgrove.org/Document_Center/Departments/Community%20Development/Programs%20&%20Projects/General%20Plan/gpchapter10.pdf (accessed August 2025).

Salinas, City of. 2002. General Plan. https://www.salinas.gov/Residents/Community/Vision-Salinas/General-Plan-Info (accessed August 2025).

_____. 2025. State Fire Marshal's Office Identifies Salinas' Fire Hazard Zones. https://www.salinas.gov/Your-Government/Departments/Fire-Department/PUBLIC-EVENTSNEWSROOM/Fire-Hazard-Severity-Zones-in-Salinas (accessed August 2025).

Santa Cruz, City of. 2019. General Plan. https://www.cityofsantacruz.com/government/city-departments/planning-and-community-development/long-range-policy-planning/general-plan. (accessed July 2025).

Santa Cruz, County of. 2021. Santa Cruz County Local Hazard Mitigation Plan https://cdi.santacruzcountyca.gov/Portals/35/CDI/Planning/Policy/LocalHazardMitigationPlan2021-2026.pdf. (accessed June 2025).

_____. 2024. County of Santa Cruz General Plan. https://cdi.santacruzcountyca.gov/Planning/PolicyPlanning/General,TownVillagePlans.aspx (accessed May 2025).

San Benito, County of. 2022. San Benito County Local Hazard Mitigation Plan. https://cms6.revize.com/revize/sanjuanbautistaca/document_center/Departments/Law%20Enforcement/LHMP%202022.pdf. (accessed June 2025).

_____. 2015. San Benito County 2035 General Plan. https://www.sanbenitocountyca.gov/home/showpublisheddocument/5859/637347294134470000 (accessed May 2025).

Sand City. 2002. Sand City General Plan. https://www.sandcity.org/home/showpublisheddocument/3942/638415117988430000 (accessed August 2025).

San Juan Bautista, City of. 2016. 2035 General Plan. https://cms6.revize.com/revize/sanjuanbautistaca/document_center/San%20Juan%20Bautista%202035%20General%20Plan/San-Juan-Bautista-2035-General-Plan-FINAL-2-3-16.pdf (accessed August 2025).

Scotts Valley, City of. 2023. General Plan. https://www.scottsvalley.gov/DocumentCenter/View/4668/Scotts-Valley-General-Plan---Adopted-November-2023 (accessed August 2025).

Seaside, City of. 2024. City of Seaside General Plan. https://www.ci.seaside.ca.us/DocumentCenter/View/15999/Seaside2040-General-PlanPDF?bidId= (accessed August 2025).

Soledad, City of. 2005. 2005 Soledad General Plan. https://www.cityofsoledad.com/general-plan/ (accessed August 2025).

Watsonville, City of. 2020. Local Hazard Mitigation Plan. https://www.watsonville.gov/DocumentCenter/View/15463/City-of-Watsonville-Local-Hazard-Mitigation-Plan (accessed August 2025).

Metropolitan Transportation Plan Consistency with Other Plans

Monterey, County of. 2010. 2010 Monterey County General Plan. https://www.countyofmonterey.gov/government/departments-a-h/housing-community-development/planning-services/current-planning/general-info/2010-monterey-county-general-plan-adopted-october-26-2010 (accessed May 2025).

Monterey Salinas Transit (MST). 2022. Comprehensive Operational Analysis. https://mst.org/wp-content/media/MST-Final-Network-Plan-Feb-2022.pdf (accessed August 2025).

Santa Cruz, County of. 1994. County of Santa Cruz General Plan / Local Coastal Program. Updated 2024. https://cdi.santacruzcountyca.gov/Planning/PolicyPlanning/General,TownVillagePlans.aspx (accessed September 2025).

Santa Cruz Metropolitan Transit District. 2016. Comprehensive Operational Analysis. https://scmtd.com/images/department/planning/2016_COA_Documents/Service_Evaluation.pdf (accessed August 2025).

San Benito, County of. 2015. San Benito County 2035 General Plan. https://www.sanbenitocountyca.gov/home/showpublisheddocument/5859/637347294134470000 (accessed May 2025).

San Benito County Local Transportation Authority. 2016. Mapping Intelligent Transportation Systems for the 21st Century, Needs Assessment Report and Implementation Plan. http://sanbenitocog.org/wp-content/uploads/2018/05/Mapping-Intelligent-Transportation-systems-for-th-21st-Century-Plan.pdf (accessed August 2025).

Other CEQA Related Discussions

Association of Monterey Bay Area Governments (AMBAG). 2021. Metropolitan Transportation Improvement Program. February 2021. https://www.ambag.org/sites/default/files/2021-02/2021%20MTIP-Final-ADA-PDF-A_0.pdf (Accessed August 2025)

California Department of Transportation (Caltrans). 2023. Long-Term Socio-Economic Forecasts by County. https://dot.ca.gov/programs/transportation-planning/division-of-transportation-planning/state-planning/transportation-economics/long-term-socio-economic-forecasts-by-county (accessed August 2025)

_____. 2024. Final DRAFT 2026 Regional Growth Forecast Annual Population, Housing, and Employment Data Table. (accessed July 2025).

Merced, County of. 2013. 2030 General Plan. December 10, 2013. https://www.countyofmerced.com/DocumentCenter/View/6766/2030-Merced-County-General-Plan?bidId= (accessed August 2025)

Fresno, County of. 2000. General Plan. October 3, 2000. https://www.fresnocountyca.gov/files/sharedassets/county/v/1/vision-files/files/18117-2000-general-plan-policy-document.pdf (accessed August 2025)

Kings, County of. 2010. 2035 General Plan. January 26, 2010. https://www.countyofkingsca.gov/home/showpublisheddocument/3106/635274892972100000 (accessed August 2025)

Kern, County of. 2004. General Plan. January 2004. https://kernplanning.com/planning/planning-documents/general-plans-elements/ (accessed August 2025)

San Luis Obispo, County of. 2015. General Plan. April 2015. https://www.slocounty.ca.gov/departments/planning-building/forms-documents/plans-and-elements/elements (accessed August 2025)

San Mateo, County of. 1986. General Plan. November 1986. https://www.smcgov.org/media/101521/download?inline= (accessed August 2025)

Santa Clara, County of. 1994. General Plan. December 20, 1994. https://plandev.santaclaracounty.gov/codes-and-policies/general-plan (accessed August 2025)

Santa Cruz, City of. 2021. 2020 Urban Water Management Plan, including Water Shortage Contingency Plan. https://www.cityofsantacruz.com/government/city-departments/water/urban-water-management-plan-2020 (accessed August 2025)

UC Santa Cruz. 2021. 2021 Long Range Development Plan. https://lrdp.ucsc.edu/2021/lrdp.html (accessed August 2025)

Alternatives

Association of Monterey Bay Area Governments (AMBAG). 2024. Final Draft 2026 Regional Growth Forecast. https://ambag.org/sites/default/files/2024-05/All%20Draft_RGF%20%26%20SGF%20Profiles_042624.pdf (accessed April 2025).

California Department of Transportation. 2018. Pricing and Parking Management to Reduce Vehicle Miles Travelled (VMT). https://dot.ca.gov/-/media/dot-media/programs/research-innovation-system-information/documents/preliminary-investigations/final-pricing-parking-management-to-reduce-vehicles-miles-traveled-pi-a11y.pdf (accessed August 2025).

California State Transportation Agency (CalSTA). 2025. Climate Action Plan for Transportation Infrastructure: CAPTI 2.0. January 2025. https://calsta.ca.gov/-/media/calsta-media/documents/capti-2025-a11y.pdf (accessed August 2025).

8.2 List of Preparers

This EIR was prepared by the Association of Monterey Bay Area Governments (AMBAG), with the assistance of Rincon Consultants, Inc. AMBAG and consultant staff involved in the preparation of the EIR are listed below.

AMBAG

Maura F. Twomey, Executive Director
Heather Adamson, Director of Planning
Bhupendra Patel, Director of Modeling
Regina Valentine, Senior Planner
Gina Schmidt, GIS Coordinator
Will Condon, Associate Planner

RINCON CONSULTANTS, INC.

Megan Jones, MPP, Principal
Taylor Freeman, Project Manager
Katherine Green, Project Manager
Kayleigh Limbach, Assistant Project Manager
Nicole West, Senior Environmental Planner
Brooke Baranek, Environmental Planner
Gianna Meschi, Environmental Planner
Hannah Bireschi, Environmental Planner
Lucas Carneiro, Environmental Planner
Michael Huang, Environmental Planner
Monet Bernard, Environmental Planner
Nichole Yee, Environmental Planner
Ryan Perry, Environmental Planner
Zoe Zepp, Environmental Planner
Samantha Kehr, Senior Biologist
Jessie Jaeger, Air Quality Specialist
Luis Apolinar, Publishing Specialist
Vivian Phan, GIS Analyst

This page intentionally left blank.