

CITY OF ROSEVILLE

2035 GENERAL PLAN UPDATE ENVIRONMENTAL IMPACT REPORT

MAY 2020



DRAFT
CITY OF ROSEVILLE
2035 GENERAL PLAN UPDATE
ENVIRONMENTAL IMPACT REPORT



Development Services Department – Planning Division

311 Vernon Street
Roseville, California 95678

Contact:

Gina McColl, General Plan Update Project Manager
gmccoll@roseville.ca.us
916/774-5276



2020 L Street, Suite 400
Sacramento, CA 95811

Contact:

Matthew Gerken, AICP
Project Manager
916/414-5800

May 2020

TABLE OF CONTENTS

| Section | Page |
|--|------------|
| 1 INTRODUCTION..... | 1-1 |
| 1.1 Type of EIR..... | 1-1 |
| 1.2 Purpose of the EIR | 1-1 |
| 1.3 Use of the General Plan EIR for Tiering and Streamlining..... | 1-2 |
| 1.3.1 Detailed and Rigorous Analysis and Comprehensive Mitigation Strategies..... | 1-3 |
| 1.3.2 Intent to Use CEQA Guidelines Section 15183 Exemptions | 1-3 |
| 1.4 Scope of the EIR..... | 1-4 |
| 1.4.1 Geographic Scope | 1-4 |
| 1.4.2 Topical Scope..... | 1-4 |
| 1.5 Environmental Review Process..... | 1-5 |
| 1.6 Notice of Preparation..... | 1-6 |
| 1.7 Native American Consultation | 1-7 |
| 1.8 Organization of the EIR | 1-7 |
| 1.9 Subsequent Actions Required | 1-8 |
| 1.10 Mitigation Measures..... | 1-8 |
| 1.11 Availability of the EIR | 1-9 |
| 2 PROJECT DESCRIPTION | 2-1 |
| 2.1 Introduction | 2-1 |
| 2.2 Regional Location and Setting | 2-1 |
| 2.2.1 The City’s Planning Area and the EIR Project Site | 2-1 |
| 2.2.2 Sphere of Influence | 2-1 |
| 2.2.3 Existing Land Use | 2-5 |
| 2.3 Project Background | 2-5 |
| 2.4 Project Objectives..... | 2-5 |
| 2.5 Project Description | 2-6 |
| 2.5.1 Numbering and Organization of Goals and Policies | 2-6 |
| 2.5.2 Proposed General Plan Update Goals, Policies, and Implementation Measures..... | 2-7 |
| 2.5.3 Updates to the Format to be More User Friendly..... | 2-28 |
| 2.5.4 Revise Outdated Information | 2-29 |
| 2.5.5 Elements of the General Plan | 2-29 |
| 2.5.6 Planned Land Uses | 2-30 |
| 2.5.7 Development Assumptions..... | 2-33 |
| 2.5.8 Public Infrastructure and Facilities..... | 2-33 |
| 2.6 Intended Uses of the EIR..... | 2-38 |
| 2.7 Relationship to Other Agencies, Plans, and Regulations | 2-43 |
| 2.7.1 Federal Government..... | 2-44 |
| 2.7.2 State Government..... | 2-44 |
| 2.7.3 Regional Government..... | 2-45 |
| 3 EXECUTIVE SUMMARY | 3-1 |
| 3.1 Purpose | 3-1 |

| | | |
|----------|--|--------------|
| 3.2 | Project Summary | 3-1 |
| 3.2.1 | Project Setting | 3-1 |
| 3.2.2 | Project Description | 3-1 |
| 3.2.3 | Project Objectives | 3-2 |
| 3.3 | Summary of Environmental Impacts and Mitigation Measures | 3-2 |
| 3.4 | Summary of Project Alternatives | 3-2 |
| 3.4.1 | Infill Housing Alternative | 3-3 |
| 3.4.2 | Reduced Growth Alternative | 3-3 |
| 3.4.3 | No Project Alternative | 3-3 |
| 3.4.4 | Environmentally Superior Alternative | 3-4 |
| 3.5 | Areas of Controversy | 3-4 |
| 3.6 | Public Review of the Draft EIR | 3-4 |
| 3.7 | Significant Unavoidable Adverse Impacts | 3-34 |
| 4 | ENVIRONMENTAL IMPACT ANALYSIS | 4.0-1 |
| 4.0 | Approach to the Environmental Analysis | 4.0-1 |
| 4.0.1 | Introduction | 4.0-1 |
| 4.0.2 | Contents of EIR Sections and Definition of Terms | 4.0-1 |
| 4.1 | Land Use Planning and Agricultural Resources | 4.1-1 |
| 4.1.1 | Introduction | 4.1-1 |
| 4.1.2 | Environmental Setting | 4.1-1 |
| 4.1.3 | Regulatory Framework | 4.1-5 |
| 4.1.4 | Environmental Impacts and Mitigation Measures | 4.1-15 |
| 4.2 | Population and Housing | 4.2-1 |
| 4.2.1 | Introduction | 4.2-1 |
| 4.2.2 | Environmental Setting | 4.2-1 |
| 4.2.3 | Regulatory Framework | 4.2-4 |
| 4.2.4 | Environmental Impacts and Mitigation Measures | 4.2-9 |
| 4.3 | Transportation | 4.3-1 |
| 4.3.1 | Introduction | 4.3-1 |
| 4.3.2 | Environmental Setting | 4.3-1 |
| 4.3.3 | Regulatory Framework | 4.3-15 |
| 4.3.4 | Environmental Impacts and Mitigation Measures | 4.3-21 |
| 4.4 | Air Quality | 4.4-1 |
| 4.4.1 | Introduction | 4.4-1 |
| 4.4.2 | Environmental Setting | 4.4-1 |
| 4.4.3 | Regulatory Framework | 4.4-11 |
| 4.4.4 | Environmental Impacts and Mitigation Measures | 4.4-23 |
| 4.5 | Greenhouse Gas Emissions | 4.5-1 |
| 4.5.1 | Introduction | 4.5-1 |
| 4.5.2 | Environmental Setting | 4.5-1 |
| 4.5.3 | Regulatory Framework | 4.5-6 |
| 4.5.4 | Environmental Impacts and Mitigation Measures | 4.5-14 |
| 4.6 | Noise and Vibration | 4.6-1 |
| 4.6.1 | Introduction | 4.6-1 |

| | | |
|--------|---|---------|
| 4.6.2 | Environmental Setting..... | 4.6-1 |
| 4.6.3 | Regulatory Framework..... | 4.6-27 |
| 4.6.4 | Environmental Impacts and Mitigation Measures..... | 4.6-41 |
| 4.7 | Geology, Soils, and Paleontological Resources | 4.7-1 |
| 4.7.1 | Introduction | 4.7-1 |
| 4.7.2 | Environmental Setting..... | 4.7-1 |
| 4.7.3 | Regulatory Framework..... | 4.7-14 |
| 4.7.4 | Environmental Impacts and Mitigation Measures..... | 4.7-25 |
| 4.8 | Biological Resources..... | 4.8-1 |
| 4.8.1 | Introduction | 4.8-1 |
| 4.8.2 | Environmental Setting..... | 4.8-1 |
| 4.8.3 | Regulatory Framework..... | 4.8-44 |
| 4.8.4 | Environmental Impacts and Mitigation Measures..... | 4.8-54 |
| 4.9 | Cultural and Tribal Cultural resources | 4.9-1 |
| 4.9.1 | Introduction | 4.9-1 |
| 4.9.2 | Environmental Setting..... | 4.9-1 |
| 4.9.3 | Regulatory Framework..... | 4.9-5 |
| 4.9.4 | Research Methodology | 4.9-17 |
| 4.9.5 | Environmental Impacts and Mitigation Measures..... | 4.9-27 |
| 4.10 | Hazards, Hazardous Materials, and Wildfire..... | 4.10-1 |
| 4.10.1 | Introduction | 4.10-1 |
| 4.10.2 | Environmental Setting..... | 4.10-1 |
| 4.10.3 | Regulatory Framework..... | 4.10-8 |
| 4.10.4 | Environmental Impacts and Mitigation Measures..... | 4.10-17 |
| 4.11 | Public Services and Recreation | 4.11-1 |
| 4.11.1 | Introduction | 4.11-1 |
| 4.11.2 | Environmental Setting..... | 4.11-1 |
| 4.11.3 | Regulatory Framework..... | 4.11-14 |
| 4.11.4 | Environmental Impacts and Mitigation Measures..... | 4.11-21 |
| 4.12 | Utilities and Service Systems | 4.12-1 |
| 4.12.1 | Introduction | 4.12-1 |
| 4.12.2 | Environmental Setting..... | 4.12-1 |
| 4.12.3 | Regulatory Framework..... | 4.12-11 |
| 4.12.4 | Environmental Impacts and Mitigation Measures..... | 4.12-20 |
| 4.13 | Hydrology and Water Quality | 4.13-1 |
| 4.13.1 | Introduction | 4.13-1 |
| 4.13.2 | Environmental Setting..... | 4.13-1 |
| 4.13.3 | Regulatory Framework..... | 4.13-12 |
| 4.13.4 | Environmental Impacts and Mitigation Measures..... | 4.13-26 |
| 4.14 | Aesthetics | 4.14-1 |
| 4.14.1 | Introduction | 4.14-1 |
| 4.14.2 | Environmental Setting..... | 4.14-1 |
| 4.14.3 | Regulatory Framework..... | 4.14-5 |
| 4.14.4 | Environmental Impacts and Mitigation Measures..... | 4.14-16 |

| | | |
|------------|---|------------|
| 4.15 | Energy | 4.15-1 |
| 4.15.1 | Introduction | 4.15-1 |
| 4.15.2 | Environmental Setting..... | 4.15-1 |
| 4.15.3 | Regulatory Framework..... | 4.15-3 |
| 4.15.4 | Environmental Impacts and Mitigation Measures..... | 4.15-9 |
| 5 | OTHER CEQA CONSIDERATIONS | 5-1 |
| 5.1 | Introduction | 5-1 |
| 5.2 | Cumulative Impacts..... | 5-1 |
| 5.2.1 | Projects Contributing to Potential Cumulative Effects | 5-2 |
| 5.2.2 | Cumulative Context..... | 5-2 |
| 5.2.3 | Cumulative Impact Analysis | 5-3 |
| 5.3 | Growth-Inducing Impacts..... | 5-28 |
| 5.3.1 | Growth-Inducing Impacts of the Proposed General Plan Update | 5-28 |
| 5.4 | Significant Irreversible Environmental Changes..... | 5-30 |
| 5.5 | Significant and Unavoidable Environmental Impacts | 5-30 |
| 6 | ALTERNATIVES..... | 6-1 |
| 6.1 | Introduction | 6-1 |
| 6.2 | Project Objectives..... | 6-2 |
| 6.3 | Alternatives Considered but Rejected FOR Detailed Analysis in this EIR..... | 6-3 |
| 6.3.1 | General Plan Scenario: No Greenfield Development..... | 6-3 |
| 6.4 | Alternatives Analyzed in the EIR..... | 6-3 |
| 6.4.1 | Infill Housing Alternative | 6-3 |
| 6.4.2 | Reduced Growth Alternative..... | 6-4 |
| 6.4.3 | No Project Alternative..... | 6-4 |
| 6.5 | Alternatives Analysis | 6-9 |
| 6.5.1 | Land Use and Agriculture | 6-12 |
| 6.5.2 | Population and Housing | 6-15 |
| 6.5.3 | Transportation | 6-18 |
| 6.5.4 | Air Quality..... | 6-26 |
| 6.5.5 | Greenhouse Gas Emissions | 6-38 |
| 6.5.6 | Noise and Vibration..... | 6-41 |
| 6.5.7 | Geology, Soils, and Paleontological Resources | 6-46 |
| 6.5.8 | Biological Resources..... | 6-50 |
| 6.5.9 | Cultural and Tribal Cultural Resources..... | 6-64 |
| 6.5.10 | Hazards and Hazardous Materials | 6-71 |
| 6.5.11 | Public Services and Recreation | 6-78 |
| 6.5.12 | Public Utilities..... | 6-83 |
| 6.5.13 | Hydrology and Water Quality | 6-87 |
| 6.5.14 | Aesthetics | 6-95 |
| 6.5.15 | Energy | 6-100 |
| 6.6 | Environmentally Superior Alternative | 6-104 |
| 7.0 | REFERENCES | |
| 8.0 | LIST OF PREPARERS | |

Appendices

- A Notice of Preparation and Responses
- B Air Quality and Greenhouse Gas Emissions
- C Noise
- D Traffic Impact Report

| Tables | Page |
|---------------|---|
| Table 1-1 | Analyses Required by the CEQA Guidelines..... 1-6 |
| Table 2-1 | Policy Changes included in the Proposed General Plan Update 2-7 |
| Table 2-2 | Acreage by General Plan Land Use Designation 2-30 |
| Table 3-1 | Summary of Project Impacts and Mitigation Measures 3-5 |
| Table 3-2 | Summary of Significant and Unavoidable Impacts..... 3-34 |
| Table 4.1-1 | Acreage by General Plan Land Use Designation 4.1-2 |
| Table 4.2-1 | City of Roseville Regional Housing Needs Allocation for 2021–2029 4.2-8 |
| Table 4.2-2 | Existing and Anticipated Growth through the General Plan Horizon 4.2-11 |
| Table 4.3-1 | Level of Service Definitions – Signalized Intersections 4.3-6 |
| Table 4.3-2 | Signalized Intersection Operations Summary – Existing Conditions 4.3-6 |
| Table 4.3-3 | Vehicle Miles Traveled: Baseline Conditions 4.3-12 |
| Table 4.3-4 | Land Use Change Under Buildout of the General Plan..... 4.3-27 |
| Table 4.3-5 | Total Vehicle Miles Traveled by City of Roseville Land Uses: Service Population Analysis 4.3-31 |
| Table 4.3-6 | Home-Based Production Vehicle Miles Traveled: Per Capita Analysis 4.3-32 |
| Table 4.3-7 | Vehicle Miles Traveled: Proposed General Plan Constrained Scenario: Per Capita Analysis 4.3-32 |
| Table 4.3-8 | Signalized Intersections Operating at LOS C or Better (Excluding Pedestrian Overlay Districts) 4.3-37 |
| Table 4.4-1 | National and California Ambient Air Quality Standards 4.4-7 |
| Table 4.4-2 | Attainment Designations for the Placer County Portion of the Sacramento Valley Air Basin . 4.4-8 |
| Table 4.4-3 | PCAPCD Mass Emission Thresholds 4.4-25 |
| Table 4.4-4 | Summary of Maximum Daily Construction-Related Emissions of Criteria Air Pollutants: Maximum Single-Year Construction Scenario (2021)..... 4.4-27 |
| Table 4.4-5 | Summary of Maximum Daily Operational Emissions of Criteria Air Pollutants and Precursors: Full Buildout of the proposed General Plan Update (2035)..... 4.4-29 |
| Table 4.4-6 | Odor Screening Distances for Consideration in Land Use Planning..... 4.4-50 |
| Table 4.5-1 | Statewide Emissions Inventory and Reduction Targets 4.5-16 |
| Table 4.5-2 | Adjusted Statewide Emissions Inventory – Land Use-Related Sectors 4.5-17 |
| Table 4.5-3 | City of Roseville Efficiency Thresholds 4.5-18 |
| Table 4.5-4 | Summary of Maximum Construction-Related Greenhouse Gas Emissions for the Maximum Single-Year Construction Scenario (year 2021) and with Full Buildout 4.5-19 |
| Table 4.5-5 | Modeled GHG Emissions Generated within the Planning Area (emissions are presented in MT CO _{2e} unless otherwise stated) 4.5-20 |
| Table 4.6-1 | Existing Traffic Noise Levels and Contour Distances 4.6-9 |
| Table 4.6-2 | Existing Ambient Noise Levels..... 4.6-23 |
| Table 4.6-3 | FTA Construction Vibration Damage Criteria 4.6-31 |
| Table 4.6-4 | FTA Construction Vibration Annoyance Criteria 4.6-31 |
| Table 4.6-5 | Structural Responses to Vibration Levels 4.6-33 |
| Table 4.6-6 | Maximum Allowable Noise Exposure Transportation Noise Sources 4.6-35 |
| Table 4.6-7 | Performance Standards for Non-Transportation Noise Sources or Projects Affected by Non-Transportation Noise Sources (As Measured at the Property Line of Noise-Sensitive Uses) 4.6-36 |
| Table 4.6-8 | Requirements for an Acoustical Analysis 4.6-36 |
| Table 4.6-9 | Typical Construction Equipment Noise Levels..... 4.6-44 |
| Table 4.6-10 | Proposed General Plan Update 60 dBA, 65 dBA, and 70 dBA Ldn Traffic Noise Contours . 4.6-48 |

| | | |
|--------------|--|---------|
| Table 4.6-11 | Typical Vibration Levels for Construction Equipment | 4.6-61 |
| Table 4.7-1 | Paleontological Sensitivity Assessment | 4.7-6 |
| Table 4.7-2 | Modified Mercalli Index | 4.7-8 |
| Table 4.8-1 | Habitat Types in the Planning Area..... | 4.8-5 |
| Table 4.8-2 | Special-Status Plant Species with Potential to Occur Within the Planning Area..... | 4.8-15 |
| Table 4.8-3 | Special-Status Wildlife Species with Potential to Occur Within the Planning Area..... | 4.8-25 |
| Table 4.8-4 | Habitat Types that Would Be Disturbed by Buildout of the General Plan..... | 4.8-58 |
| Table 4.9-1 | Properties Previously Designated by the City of Roseville as Historic..... | 4.9-19 |
| Table 4.9-2 | Privately-Owned Significant Buildings..... | 4.9-20 |
| Table 4.9-3 | City-Owned Significant Buildings | 4.9-20 |
| Table 4.9-4 | Historical Resources in Downtown Specific Plan Area | 4.9-21 |
| Table 4.9-5 | Sites of Historical and Cultural Importance (2010 General Plan, Adopted 1992) | 4.9-21 |
| Table 4.9-6 | Sites of Historical and Cultural Importance (Existing General Plan, Adopted 2016)..... | 4.9-22 |
| Table 4.9-7 | CHR Status Codes of Previously Identified Historical Resources | 4.9-22 |
| Table 4.9-8 | Master List of City of Roseville’s Historical Resources | 4.9-23 |
| Table 4.11-1 | Schools Serving the City of Roseville..... | 4.11-6 |
| Table 4.12-1 | City of Roseville Current Surface Water Entitlements | 4.12-2 |
| Table 4.12-2 | City of Roseville Contracted Surface Water Supplies and Water Supply Reliability | 4.12-3 |
| Table 4.12-3 | Actual and Projected Recycled Water Demand, 2015–2035 | 4.12-5 |
| Table 4.12-4 | City of Roseville Water Conservation (up to 20 Percent of Normal Year Demand) | 4.12-5 |
| Table 4.12-5 | Actual and Projected Potable Water Demand, 2015–2035 | 4.12-6 |
| Table 4.12-6 | City of Roseville Comparison of Water Supply and Demand, 2015–2035..... | 4.12-26 |
| Table 4.12-7 | General Plan Update Average Dry Weather Flow | 4.12-29 |
| Table 4.15-1 | Modeled Construction Fuel Consumption, Total and Amortized over 30 Years | 4.15-10 |
| Table 4.15-2 | Estimated Annual Operational Energy Demand | 4.15-12 |
| Table 5-1 | Existing and Future Developed Acres, Dwelling Units, and Employment—2016-2040..... | 5-2 |
| Table 5-2 | Summary of Significant and Unavoidable Impacts | 5-31 |
| Table 6-1 | Comparison of Impacts of the Alternatives to the Proposed Project..... | 6-9 |
| Table 6.5-1 | Vehicle Miles Traveled by City of Roseville Land Uses: Total and Per Service Population Analysis..... | 6-18 |
| Table 6.5-2 | Home-Based Production Vehicle Miles Traveled: Per Capita Analysis | 6-19 |
| Table 6.5-3 | Vehicle Miles Traveled: General Plan Constrained Scenario: Per Capita Analysis | 6-19 |

| Exhibits | Page |
|-----------------|--|
| Exhibit 2-1 | Regional Location 2-2 |
| Exhibit 2-2 | Planning Area, Specific Plan Areas, and Sphere of Influence 2-3 |
| Exhibit 2-3 | Land Use Map 2-31 |
| Exhibit 2-4 | Existing and Planned Bikeways 2-39 |
| Exhibit 2-5 | Roadway Functional Classification 2-41 |
| Exhibit 4.1-1 | Specific Plan Areas 4.1-3 |
| Exhibit 4.3-1 | Existing (2020) Number of Travel Lanes..... 4.3-3 |
| Exhibit 4.3-2 | Existing (2020) Average Daily Traffic Volumes 4.3-7 |
| Exhibit 4.3-3 | Existing Signalized Intersections 4.3-9 |
| Exhibit 4.3-4 | General Plan Number of Travel Lanes 4.3-23 |
| Exhibit 4.3-5 | General Plan Lane Increases 4.3-25 |
| Exhibit 4.5-1 | 2017 California GHG Emissions Inventory by Sector 4.5-4 |
| Exhibit 4.5-2 | Trends in California GHG Emissions (Years 2000 to 2017)..... 4.5-5 |
| Exhibit 4.6-1 | Vicinity Map 4.6-3 |
| Exhibit 4.6-2 | Decibel Scale and Common Noise Sources 4.6-4 |
| Exhibit 4.6-3 | Noise Sensitive Uses 4.6-7 |
| Exhibit 4.6-4a | Existing Traffic Noise Contours, Local Roadways 4.6-13 |
| Exhibit 4.6-5b | Existing Highway Traffic Noise Contours 4.6-15 |
| Exhibit 4.6-6 | Existing Railroad Noise Contours 4.6-21 |
| Exhibit 4.6-7 | Noise Measurement Sites 4.6-25 |
| Exhibit 4.6-8 | FTA Impact Criteria for Noise 4.6-30 |
| Exhibit 4.6-9 | General Plan Buildout Traffic Noise Contours, Constrained Network 4.6-55 |
| Exhibit 4.6-10 | General Plan Buildout Traffic Noise Contours, Unconstrained Network 4.6-57 |
| Exhibit 4.7-1 | Paleontological Sensitivity Map..... 4.7-3 |
| Exhibit 4.7-2 | Regional Faults..... 4.7-11 |
| Exhibit 4.7-3 | Soil Types..... 4.7-15 |
| Exhibit 4.7-4 | Stormwater Runoff Potential 4.7-17 |
| Exhibit 4.7-5 | Shrink Swell Potential 4.7-19 |
| Exhibit 4.8-1 | Habitat Types and Preserve Areas Habitat Types 4.8-3 |
| Exhibit 4.8-2 | USFWS Vernal Pool Recovery Plan - Western Placer County Core Area 4.8-11 |
| Exhibit 4.8-3 | Steelhead Critical Habitat..... 4.8-21 |
| Exhibit 4.8-4 | Habitat Conversion Map 4.8-55 |
| Exhibit 4.9-1 | City of Roseville Historical Resources..... 4.9-25 |
| Exhibit 4.10-1 | Known Hazardous Materials Sites 4.10-5 |
| Exhibit 4.11-1 | Existing and Planned Fire Stations..... 4.11-3 |
| Exhibit 4.11-2 | Existing & Planned Schools& District Boundaries 4.11-7 |
| Exhibit 4.11-3 | Open Space and Parks and Recreation Areas..... 4.11-11 |
| Exhibit 4.12-1 | Regional Wastewater Service Area 4.12-7 |
| Exhibit 4.11-3 | Open Space and Parks and Recreation Areas..... 4.11-11 |
| Exhibit 4.12-1 | Regional Wastewater Service Area 4.12-7 |
| Exhibit 4.13-1 | Subwatersheds and Surface Waters..... 4.13-3 |
| Exhibit 4.13-2 | Flood Zones 4.13-9 |
| Exhibit 4.13-3 | Regulatory Floodplain and Proposed Land Uses 4.13-37 |

| | | |
|----------------|---|---------|
| Exhibit 4.14-1 | Typical 50-Foot Transition Zone..... | 4.14-15 |
| Exhibit 6-1 | Infill Housing Alternative | 6-5 |
| Exhibit 6-2 | Planning Area with SACOG Community Types..... | 6-7 |

ACRONYMS AND ABBREVIATIONS

| | |
|--------------------------|---|
| µg/m ³ | micrograms per cubic meter |
| 2014 Scoping Plan Update | First Update to the Climate Change Scoping Plan: Building on the Framework |
| 2017 Scoping Plan Update | California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target |
| 2020 MTP/SCS | 2020 Metropolitan Transportation Plan/Sustainable Communities Strategy |
| AADT | Annual Average Daily Traffic |
| AB | Assembly Bill |
| ACM | asbestos-containing materials |
| ADA | Americans with Disabilities Act |
| ADT | average daily traffic |
| AEP | annual exceedance probability |
| af | acre feet |
| afy | acre feet per year |
| Alquist-Priolo Act | Alquist-Priolo Earthquake Fault Zoning Act |
| AMI | Area Median Income |
| amsl | above mean sea level |
| ANSI S1 | American National Standards Institute for Class 1 sound level meters |
| APE | Area of Potential Effects |
| APS | alternative planning strategy |
| AQAP | Air Quality Attainment Plan |
| AQMD | Air Quality Management District |
| ARB | California Air Resources Board |
| ARB Handbook | Air Quality and Land Use Handbook: A Community Health Perspective |
| ASR | Aquifer Storage and Recovery |
| AST | above-ground storage tanks |
| ATCM | Asbestos Airborne Toxic Control Measure |
| AVs | automated vehicles |
| B.P. | Before Present |
| Basin Plan | Water Quality Control Plan for the Sacramento–San Joaquin River Basins |
| bgs | below the ground surface |
| BIOS | Biogeographic Information and Observation System |
| BMPs | best management practices |
| BTU | British thermal unit |
| Bureau | U.S. Bureau of Reclamation |
| Business Plans | Hazardous Materials Management |
| CAA | Clean Air Act |
| CAAQS | California ambient air quality standards |
| CAFE | Corporate Average Fuel Economy |
| CAL 200 | Model 820, 824 and 831 LDL Model |
| CAL FIRE | California Department of Forestry and Fire Protection |
| CalARP | California Accidental Release Prevention program |

| | |
|----------------------|---|
| CalEEMod | California Emissions Estimator Model |
| CalEPA | California Environmental Protection Agency |
| CALGreen Code | California Green Building Standards Code |
| Cal-OSHA | California Occupational Safety and Health Administration |
| CalRecycle | California Department of Resources Recycling and Recovery |
| Caltrans | California Department of Transportation |
| CARP | County Aquatic Resources Program |
| CASGEM | California Statewide Groundwater Elevation Monitoring |
| CAW | California American Water Company |
| CBC | California Building Standards Code |
| CC&Rs | Covenants, Conditions & Restrictions |
| CCAA | California Clean Air Act |
| CCR | California Code of Regulations |
| CDE | California Department of Education |
| CDFW | California Department of Fish and Wildlife |
| Central Valley RWQCB | Central Valley Regional Water Quality Control Board |
| CEQA | California Environmental Quality Act |
| CERCLA | Comprehensive Environmental Response, Compensation, and Liability Act |
| CESA | California Endangered Species Act |
| CFC | California Fire Code |
| CFCs | chlorofluorocarbons |
| CFR | Code of Federal Regulations |
| CGS | California Geological Survey |
| CHP | California Highway Patrol |
| CHR | California Historical Resources |
| CIP | Capital Improvement Program |
| City | City of Roseville |
| CIWMA | California Integrated Waste Management Act |
| CLOMR | Conditional Letters of Map Revision |
| CNDDB | California Natural Diversity Database |
| CNEL | Community Noise Equivalent Level |
| CNPS | California Native Plant Society |
| CO | carbon monoxide |
| CO ₂ e | carbon dioxide equivalent |
| County | Placer County |
| CPUC | California Public Utilities Commission |
| CRHR | California Register of Historical Resources |
| CRPR | California Rare Plant Rank |
| CSP | Creekview Specific Plan |
| CUPA | Certified Unified Program Agency |
| CVFMP | Central Valley Flood Management Planning |
| CVFPB | Central Valley Flood Protection Board |
| CVFPP | Central Valley Flood Protection Plan |

| | |
|-----------------------|---|
| CVP | Central Valley Project |
| CVRWQCB | Central Valley Regional Water Quality Control Board |
| CWA | Clean Water Act of 1972 |
| dB | decibels |
| DBH | diameter at breast height |
| DOF | California Department of Finance |
| DPM | diesel particulate matter |
| DPM | diesel PM |
| DPR | California Department of Parks and Recreation |
| DPR | California Department of Pesticide Regulation |
| DPS | distinct population segment |
| DTSC | California Department of Toxic Substances Control |
| DWR | California Department of Water Resources |
| ECLs | Emission Control Labels |
| EDD | California Employment Development Department |
| EIR | Environmental Impact Report |
| EISA | Energy Independence and Security Act of 2007 |
| EMO | Emergency Management Organization |
| EO | Executive Order |
| EOP | Emergency Operations Plan |
| EPA | U.S. Environmental Protection Agency |
| EPCRA | Emergency Planning Community Right-to-Know Act |
| ESA | Endangered Species Act |
| ESA | federal Endangered Species Act |
| ESU | evolutionarily significant unit |
| existing General Plan | City of Roseville existing 2035 General Plan, which was adopted in 2016 |
| dBA | A-weighted sound levels |
| FAA | Federal Aviation Administration |
| FEMA | Federal Emergency Management Agency |
| FESA | federal Endangered Species Act |
| FGC | California Fish and Game Code |
| FHWA | Federal Highway Administration |
| FHWA-RD-77-108 | FHWA Highway Traffic Noise Prediction Model |
| FIRMs | Flood Insurance Rate Maps |
| FMMP | Farmland Mapping and Monitoring Program |
| FRA | Federal Railroad Administration |
| FTA | Federal Transit Administration |
| GDP | gross domestic product |
| GET | groundwater extraction and treatment |
| GHG | greenhouse gas |
| GSAs | groundwater sustainability agencies |
| GSP | groundwater sustainability plans |
| GVWR | gross vehicle weight rating |

| | |
|-------------|---|
| GWh | gigawatt-hours |
| GWP | global warming potential |
| HABS | Historic American Building Survey |
| HAER | Historic American Engineering Record |
| HALS | Historic American Landscapes Survey |
| Handbook | Air Quality and Land Use Handbook: A Community Health Perspective |
| HCD | State of California Department of Housing and Community Development |
| HCFCs | Hydrochlorofluorocarbons |
| HCM | Highway Capacity Manual |
| HCP | Habitat Conservation Plan |
| HDR | High Density Residential |
| HFCs | Hydrofluorocarbons |
| High GWP | High Global Warming Potential |
| HMBP | Hazardous Material Business Plan |
| HMTA | Hazardous Materials Transportation Act |
| HOV | High Occupancy Vehicle |
| HRAs | health risk assessments |
| HSWA | Hazardous and Solid Waste Act |
| HTSs | household travel surveys |
| HUD | U.S. Department of Housing and Urban Development |
| HVAC | Heating, ventilation, and air conditioning |
| Hz | Hertz |
| I-80 | interstate freeway 80 |
| IGP | Industrial General Permit |
| IPaC | Information, Planning, and Conservation System |
| IPCC | Intergovernmental Panel on Climate Change |
| ISO | Insurance Service Office |
| ITS | intelligent transportation system |
| IWRP | Integrated Water Resources Plan |
| kV | kiloVolt |
| LAFCO | Local Agency Formation Commission |
| lb/day | pounds per day |
| LDL | Larson Davis Laboratories |
| L_{dn} | Day-Night Average Level |
| LEAs | local enforcement agencies |
| L_{eq} | Equivalent Sound Level |
| $L_{eq[h]}$ | A-weighted equivalent sound level |
| LID | low impact development |
| Lincoln | City of Lincoln |
| L_{max} | Maximum Sound Level |
| L_n | Percentile-Exceeded Sound Level |
| LOMR | Letters of Map Revision |
| LOS | level of service |

| | |
|---------------------|--|
| LUST | leaking underground storage |
| MBTA | Migratory Bird Treaty Act |
| MEI | Maximally Exposed Individual |
| MERV | Minimum Efficiency Reporting Value |
| mg/m ₃ | milligrams per cubic meter |
| MGD | million gallons per day |
| mgd | million gallons per day |
| MLD | Most Likely Descendant |
| MMBTU | one million British thermal unit |
| MMI | Modified Mercalli Intensity |
| MMT | million metric tons |
| MOU | Memorandum of Understanding |
| MOU Transition Area | Memorandum of Understanding established a transition area |
| MPO | metropolitan planning organization |
| MRF | Materials Recovery Facility |
| MT CO _{2e} | metric tons of carbon dioxide equivalent equivalents |
| MTP | Metropolitan Transportation Plan |
| MUN | Municipal and Domestic Supply |
| MWh | mega-watt hours |
| NAAQS | national ambient air quality standards |
| NAC | noise abatement criteria |
| NAHC | Native American Heritage Commission |
| NCCP | Natural Community Conservation Plan |
| NCCP Act | California Natural Community and Conservation Planning Act |
| NCP | National Contingency Plan |
| NEMDC | Natomas East Main Drainage Canal |
| NESHAP | National Emission Standard for Hazardous Air Pollutants |
| NFIP | National Flood Insurance Program |
| NHPA | National Historic Preservation Act |
| NHTSA | National Highway Traffic Safety Administration |
| NIMS | National Incident Management System |
| NO ₂ | nitrogen dioxide |
| NOA | naturally occurring asbestos |
| NOP | Notice of Preparation |
| NOV | notice of violation |
| CalRecycle | California Integrated Waste Management Board |
| NO _x | nitrogen oxides |
| NPDES | National Pollutant Discharge Elimination System |
| NPL | National Priorities List |
| NPPA | Native Plant Protection Act |
| NRCS | U.S. National Resources Conservation Service |
| NRHP | National Register of Historic Places |
| NWI | National Wetlands Inventory |

| | |
|------------------------------|---|
| O ₃ | ozone |
| OCPs | organochlorine pesticides |
| OEHHA | California Office of Environmental Health Hazard Assessment |
| OEHHA Guidance Manual | Air Toxics Hot Spots Program Guidance Manual for the Preparation of Health Risk Assessments |
| OES | California Office of Emergency Services |
| OPR | California Governor's Office of Planning and Research |
| OSHA | federal Occupational Safety and Health Administration |
| OSPOMP | Open Space Preserve Overarching Management Plan |
| PCAPCD | Placer County Air Pollution Control District |
| PCCP | Placer County Conservation Program |
| PCFCWCD | Placer County Flood Control and Water Conservation District |
| PCTPA | Placer County Transportation Planning Agency |
| PCWA | Placer County Water Agency |
| PFCs | Perfluorinated Chemicals |
| PG&E | Pacific Gas & Electric Company |
| PGWWTP | Pleasant Grove Wastewater Treatment Plant |
| PHMSA | Pipeline and Hazardous Materials Safety Administration |
| PM | particulate matter |
| PM ₁₀ | PM with aerodynamic diameter less than 10 microns |
| PM _{2.5} | PM with aerodynamic diameter less than 2.5 microns |
| Porter-Cologne Act | Porter-Cologne Water Quality Control Act |
| ppb | parts per billion |
| ppd | pounds per day |
| ppm | parts per million |
| PPV | peak particle velocity |
| Preserve Management Plan | Preserve Overarching Management Plan |
| proposed General Plan Update | City of Roseville 2035 General Plan Update |
| PSAP | public safety answering point |
| PV | photovoltaic |
| RCRA | Resource Conservation and Recovery Act of 1976 |
| RCRMRP | Roseville Creek and Riparian Management and Restoration Plan |
| RD | Reclamation District |
| Reason Farms | Amoruso Ranch Specific Plan Area and the Al Johnson Wildlife Area |
| REP | Roseville Energy Park |
| Reporting Rule | Greenhouse Gas Reporting Rule |
| RHNA | Regional Housing Needs Allocation |
| RMPP | California Risk Management and Prevention Program |
| ROG | reactive organic gasses |
| Roseville Electric Utility | City of Roseville Electric Department |
| ROW | right-of way |
| RPS | renewable portfolio standard |
| RTP | Regional Transportation Plan |

| | |
|--|---|
| RTPAQ | Relationship to Transit, Pedestrian, Air Quality |
| RWD | Reports of Waste Discharge |
| RWQCBs | Regional Water Quality Control Boards |
| SACOG | Sacramento Area Council of Governments |
| SAFE | Safer Affordable Fuel-Efficient |
| SARA | Superfund Amendments and Reauthorization Act |
| SB | Senate Bill |
| Scoping Plan | Climate Change Scoping Plan |
| SCS | sustainable communities strategy |
| SEMS | California's Standardized Emergency Management System |
| SF ⁶ | Sulfur hexafluoride |
| SFPD | School Facilities Planning Division |
| SGMA | Sustainable Groundwater Management Act |
| SHMP | State Hazard Mitigation Plan |
| SHS | State Highway System |
| SIP | State Implementation Plan |
| Small MS4s | Small Municipal Separate Storm Sewer Systems |
| SMAQMD | Sacramento Metropolitan Air Quality Management District |
| SMARA | Surface Mining and Reclamation Act |
| SMUD | Sacramento Municipal Utilities District |
| SO ₂ | sulfur dioxide |
| SOI | Sphere of Influence |
| SO _x | oxides of sulfur |
| SPMUD | South Placer Municipal Utility District |
| SPRTA | South Placer Regional Transportation Agency |
| SPWA | South Placer Wastewater Authority |
| SR 65 | State Route 65 |
| SRAs | State Responsibility Areas |
| S RTP | Short-Range Transit Plan |
| STAA | Surface Transportation Assistance Act |
| State | State of California |
| State Reclamation Board, previously known | Central Valley Flood Protection Board |
| Stormwater Ordinance | Stormwater Quality Management and Discharge Control Ordinance |
| SVAB | Sacramento Valley Air Basin |
| SVP | Society of Vertebrate Paleontology |
| SWCV | Solid Waste Collection Vehicles |
| SWPPP | storm water pollution prevention plan |
| SWRCB | State Water Resources Control Board |
| TAC | toxic air contaminant |
| TCRs | tribal cultural resources |
| TDR | Transfer of Development Rights |
| the local CUPA | Placer County Division of Environmental Health |

| | |
|----------------------------------|--|
| THRIS | Tribal Historical Resources Information System |
| TMDL | Total Maximum Daily Loads |
| TNCs | Transportation networking companies |
| TPAs | transit priority areas |
| tpd | tons of solid waste per day |
| TRUs | transport refrigeration units |
| U.S.C. | United States Code |
| UAIC | United Auburn Indian Community |
| UCMP | University of California, Berkeley Museum of Paleontology |
| ULDC | Urban Levee Design Criteria |
| ULOP | Urban Level of Flood Protection |
| UPAAG | Unified Program Administration and Advisory Group |
| UPRR | Union Pacific Railroad Company |
| USACE | U.S. Army Corps of Engineers |
| USDOT | U.S. Department of Transportation |
| USFWS | United States Fish and Wildlife Service |
| USGS | U.S. Geological Survey |
| USTs | Underground storage tanks |
| UWMP | Urban Water Management Plan |
| VELB | valley elderberry longhorn beetle |
| VMT | vehicle miles traveled |
| VOC | volatile organic carbon |
| WAPA | Western Area Power Administration |
| Wastewater Systems Evaluation | South Placer Regional Wastewater and Recycled Water Systems Evaluation |
| WDRs | waste discharge requirements |
| WPCGMP | West Placer County Groundwater Management Plan |
| WPGMP | Western Placer County Groundwater Management Plan |
| WPWMA | Western Placer Waste Management Authority |
| WRSL | Western Regional Sanitary Landfill |
| WRSP | West Roseville Specific Plan |
| WWTP | Wastewater Treatment Plan |

This page intentionally left blank

1 INTRODUCTION

This Environmental Impact Report (EIR) evaluates the impacts of the *City of Roseville 2035 General Plan Update* (proposed General Plan Update), also referred to as “the proposed project.” This EIR was prepared in compliance with the California Environmental Quality Act (CEQA) of 1970 (Public Resources Code Section 21000 *et seq.*) and the CEQA Guidelines (California Code of Regulations, Title 14, Section 15000 *et seq.*).

1.1 TYPE OF EIR

This proposed General Plan Update EIR is a program EIR, as described under the CEQA (Public Resources Code Section 21000 *et seq.*) and the CEQA Guidelines (California Code of Regulations, Title 14, Sections 15000 *et seq.*). According to the CEQA Guidelines (Section 15168[a]), a state or local agency may prepare a program EIR, rather than a project EIR, when a series of actions may be characterized as one large project and are related either:

- ▶ geographically;
- ▶ as logical parts of a chain of contemplated actions;
- ▶ in connection with the issuance of rules, regulations, plans, or other general criteria that govern the conduct of a continuing program; or
- ▶ as individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects that can be mitigated in similar ways.

In this case, this program EIR addresses the proposed General Plan Update, which is the proposed “project,” as defined by CEQA. This program EIR considers a series of actions related to implementation of the General Plan.

Although the required contents of a program EIR are the same as those of a project EIR, there are differences in level of detail. General Plans by their nature are broad, long-range, and conceptual. Program EIRs contain a more general discussion of impacts, alternatives, and mitigation measures than do project-level EIRs. This is appropriate since the proposed General Plan Update is a long-term guide for development and conservation throughout the City of Roseville’s (City’s) Planning Area.

1.2 PURPOSE OF THE EIR

The CEQA Guidelines charge public agencies with the responsibility of avoiding or minimizing environmental damage that could result from implementation of a project, where feasible. As part of this responsibility, public agencies are required to balance various public objectives, including economic, environmental, and social issues.

The purpose of an EIR is not to recommend approval or denial of a project. An EIR is an informational document used in the planning and decision-making process by the lead agency and responsible and trustee agencies. An EIR describes the significant environmental impacts of a project, identifies potentially feasible measures to mitigate significant impacts, and describes potentially feasible alternatives to the project that can reduce or avoid significant environmental effects. CEQA requires decision-makers to balance the benefits of a project against its unavoidable environmental effects in deciding whether to carry out a project.

The lead agency is the public agency with primary responsibility over the proposed project. In accordance with CEQA Guidelines Section 15051(b)(1), “[t]he lead agency will normally be the agency with general governmental powers, such as a city or county, rather than an agency with a single or limited purpose...” The City, as the lead agency, has prepared this EIR to evaluate the environmental impacts of implementation of the proposed General Plan Update. The EIR was prepared under the direction of the City and is provided for review by both the public and public agencies, as required by CEQA. The City Council must certify that the Final EIR has been completed in compliance with CEQA before adopting the proposed General Plan Update.

If significant environmental effects of the proposed project are identified, the lead agency must adopt “findings” indicating whether feasible mitigation measures or alternatives exist that can avoid or reduce those effects. If the environmental impacts are identified as significant and unavoidable, the lead agency may still approve the project if it determines that social, economic, legal, technological, or other benefits of the project outweigh the significant unavoidable impacts. The lead agency would then be required to prepare a “Statement of Overriding Considerations” that discusses the specific reasons for approving the project, based on information in the EIR and other information in the record.

In making its decision about the proposed project, the City considers the information in this EIR, comments received on the EIR, and responses to those comments, along with other available information and technical analyses.

1.3 USE OF THE GENERAL PLAN EIR FOR TIERING AND STREAMLINING

The analysis in this program EIR is considered the first tier of environmental review and creates the foundation upon which future, project-specific CEQA documents can build. Tiering refers to the concept of a multi-level approach to preparing environmental documents set forth in Public Resources Code Section 21083.3 and Section 15152 of the CEQA Guidelines. Project-level environmental analysis can be streamlined to limit the scope of site-specific approvals following the preparation of an EIR for a general plan.¹ This streamlining provision applies to site-specific approvals for projects that are consistent with the general plan.

Section 15152 of the CEQA Guidelines provides that where a first-tier EIR has “adequately addressed” the subject of cumulative impacts, such impacts need not be revisited in second- and/or third-tier documents. According to Section 15152(f)(3), significant effects identified in a first-tier EIR have been adequately addressed, for purposes of later approvals, if the lead agency determines that such effects have been either:

- A) “mitigated or avoided as a result of the prior [EIR] and findings adopted in connection with that prior [EIR]”; or
- B) “examined at a sufficient level of detail in the prior [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.”

This program EIR will help determine the need for subsequent environmental documentation, as well as dictate the scope of project level CEQA review. According to Section 15168(d) of the CEQA Guidelines, a program EIR

¹ This section of the Public Resources Code also refers to consistency with community plans and zoning, but the above discussion is tailored to this General Plan EIR.

can be used to simplify the task of preparing future environmental documents on later activities in the program. A program EIR can:

- 1) “Provide the basis in an Initial Study for determining whether the later activity may have any significant effects.
- 2) Be incorporated by reference to deal with regional influences, secondary effects, cumulative impacts, broad alternatives, and other factors that apply to the program as a whole.
- 3) Focus an EIR on a later activity to permit discussion solely of new effects which had not been considered before.”

As discussed further below, the City will also use the proposed General Plan Update EIR to streamline future environmental review and approval of private and public projects, as well as implementation actions, such as updates to zoning, the City’s CEQA Implementing Procedures, the Capital Improvement Program, and other implementing documents and plans that are consistent with the proposed General Plan Update. The City will make use of existing streamlining provided by CEQA, and will make use of emerging streamlining techniques, as appropriate.

1.3.1 DETAILED AND RIGOROUS ANALYSIS AND COMPREHENSIVE MITIGATION STRATEGIES

While many general plan program EIRs include only generalized analysis of conceptual land use change estimates, the City elected to include an enhanced level of analysis for this General Plan Update and EIR. The proposed General Plan Update EIR uses detailed land use programming and identification of the location and types of future public facilities and infrastructure as its basis of analysis, in order to maximize the value of the General Plan EIR to future projects that promote the proposed General Plan Update’s objectives. Part of this focus is on vacant and underutilized properties that represent infill opportunity areas – for housing, services, and other land uses allowed under the General Plan – that are appropriate for development between the present and 2035. This EIR includes quantified estimates in certain impact areas, such as transportation, air quality, greenhouse gas emissions, noise, and other topics, based on reasonable assumptions as to the amount, type, and character of land use changes under the proposed General Plan Update. This enhanced level of analysis will serve to streamline and expedite later projects that are consistent with, and implement the policies and measures of, the proposed General Plan Update. Note that throughout this EIR, the phrase “land use changes” refers to the physical changes to land that will occur as the City continues to develop. It does not refer to changes in the City’s land use plan or land use designations, because none are proposed as a part of this proposed General Plan Update.

1.3.2 INTENT TO USE CEQA GUIDELINES SECTION 15183 EXEMPTIONS

The City intends to make full use of the streamlining allowed under Public Resources Code 21083.3 and CEQA Guidelines 15183. Under this provision, CEQA only applies to issues “peculiar to the site.” Lead agencies can use programmatic EIRs for a general plan to analyze the impacts of projects that are consistent with the plan, and greatly limit later project-level analysis to project-specific or site-specific issues. CEQA Guidelines Section 15183(f) provides that impacts are not peculiar to the project if uniformly applied development policies or standards substantially mitigate that environmental effect.

Public agencies can use uniformly applied policies or standards to mitigate effects of future projects, precluding the need to analyze these effects, unless new information arises that changes the impact analysis (Public Resources Code Section 21083.3[d]). The General Plan Update process was used to identify policies and implementation measures that can constitute uniformly applied standards and substantially limit the scope of analysis for proposed projects that are consistent with the General Plan as updated by the proposed General Plan Update project. This EIR includes references to General Plan policies and implementation measures, where appropriate, to address environmental impacts. As discussed throughout this EIR, the uniformly applied development policies (in the form of General Plan policies and implementation measures), would substantially mitigate each environmental effect, when applied to future projects.

Future CEQA documents may reference the same General Plan policies and implementation measures, where appropriate, to demonstrate less-than-significant impacts and that later project-level issues are not “peculiar to the parcel” if they have been substantially mitigated by General Plan policies and implementation measures (uniformly applied development policies). Please refer to Public Resources Code Section 21083.3 and CEQA Guidelines Section 15183 for a more detailed description of impacts that are peculiar to the parcel and the use of uniformly applied development standards and policies.

1.4 SCOPE OF THE EIR

1.4.1 GEOGRAPHIC SCOPE

The geographic scope that could be affected by a project varies depending on the issue topic. The geographic area associated with different environmental effects was used to define the area considered for impact analysis. For example, the geographic scope for air pollutant impact analysis, such as those related to emissions of ozone precursors, is very broad, encompassing large areas within the same air basin. In contrast, the geographic scope for stationary source noise impacts is relatively narrow, because noise attenuates substantially with distance, making impacts more localized. The environmental impact analyses throughout this EIR describe the environmental impacts of implementing the proposed General Plan Update throughout the City’s Planning Area.

This EIR analyzes impacts of buildout of the General Plan compared to existing conditions. The proposed General Plan Update is not a comprehensive rewrite of every element. This General Plan Update does not include any changes to land use designations, expansion to the City’s Planning Area, or other major physical changes to areas planned for development compared to the existing General Plan. Nonetheless, consistent with Section 15125(a)(1) of the CEQA Guidelines and the intent of the City to provide an enhanced level of analysis, the EIR analysis compares buildout of the General Plan with existing physical environment conditions within the Planning Area at the time the NOP was published.

1.4.2 TOPICAL SCOPE

Environmental review in compliance with CEQA is required as part of the City’s consideration of the proposed General Plan Update. The EIR has been prepared in compliance with CEQA, including the CEQA statutes, CEQA Guidelines, and judicial decisions interpreting CEQA and the CEQA Guidelines. This EIR includes an evaluation of all required environmental topic areas, as well as other CEQA-mandated sections, as presented below:

- ▶ Chapter 1.0. Introduction
- ▶ Chapter 2.0. Project Description

- ▶ Chapter 3.0. Executive Summary
- ▶ Chapter 4.0. Introduction to the Environmental Analysis
 - Section 4.1. Land Use and Agriculture
 - Section 4.2. Population, Employment, and Housing
 - Section 4.3. Transportation
 - Section 4.4. Air Quality
 - Section 4.5. Greenhouse Gas Emissions
 - Section 4.6. Noise and Vibration
 - Section 4.7. Geology, Soils, and Paleontological Resources
 - Section 4.8. Biological Resources
 - Section 4.9. Cultural and Tribal Cultural Resources
 - Section 4.10. Hazards, Hazardous Materials, and Wildfire
 - Section 4.11. Public Services and Recreation
 - Section 4.12. Utilities and Service Systems
 - Section 4.13. Hydrology and Water Quality
 - Section 4.14. Aesthetics
 - Section 4.15. Energy
- ▶ Chapter 5.0. Other CEQA Considerations
- ▶ Chapter 6.0. Alternatives
- ▶ Chapter 7.0. References Cited
- ▶ Chapter 8.0. List of Preparers

Other CEQA-mandated issues discussed within the context of this EIR are cumulative impacts, growth-inducing impacts, irreversible environmental effects, and significant and unavoidable adverse impacts (Chapter 5 of this EIR, “Other CEQA Considerations”). Chapter 6 of this EIR, “Alternatives,” includes an analysis of a range of reasonable alternatives to the proposed General Plan Update, as required by Section 15126.6 of the CEQA Guidelines. As described in more detail below, Chapter 6 analyzes the environmental impacts of the alternatives presented and compares them to the environmental impacts of the proposed General Plan Update. Chapter 7 of this EIR, “References Cited,” identifies the references and citations used in drafting the EIR, and Chapter 8 of this EIR, “List of Preparers,” lists the preparers of the EIR.

1.5 ENVIRONMENTAL REVIEW PROCESS

The CEQA Guidelines have specific requirements for EIRs related to the description of the project, environmental setting, and impact analysis. Table 1-1 identifies the required elements of an EIR (with CEQA Guidelines sections referenced) and the corresponding chapters or sections in which each item is discussed in this document.

| Table 1-1. Analyses Required by the CEQA Guidelines | |
|--|------------------------|
| Required Description and Analysis | EIR Chapter or Section |
| Summary (Section 15123) | 3 |
| Project Description (Section 15124) | 2 |
| Description of the Existing Setting (Section 15125) | 4 |
| Environmental Impacts (Sections 15126 and 15143) | 4 |
| Alternatives (Section 15126.6) | 6 |
| Cumulative Impacts (Section 15355) | 5 |
| Growth-Inducing Impacts (Section 15126.2[e]) | 5 |
| Irreversible Environmental Effects (Section 15126.2[d]) | 5 |
| Significant Environmental Effects Which Cannot be Avoided (Section 15126.2[c]) | 5 |

1.6 NOTICE OF PREPARATION

To assist the City in determining the focus and scope of analysis for this EIR, pursuant to Section 15082 of the CEQA Guidelines, on August 26, 2019 the City filed a Notice of Preparation (NOP) and sent the NOP to each responsible and trustee agency, special service districts, organizations, and individuals with an interest in or jurisdiction over the project. The NOP is sent by the lead agency to inform the public, interested parties, responsible agencies, trustee agencies, and potentially affected federal, state, and local agencies that the lead agency plans to prepare an EIR. The NOP also seeks comments regarding the scope and content of the EIR. The City held a public scoping meeting for the project on September 17, 2019. Please see Appendix A for the NOP and responses.

The City received NOP comment letters from:

- ▶ California Department of Transportation
- ▶ California Department of Fish and Wildlife
- ▶ Central Valley Regional Water Quality Control Board
- ▶ City of Citrus Heights
- ▶ Governor's Office of Planning and Research, State Clearinghouse
- ▶ Native American Heritage Commission
- ▶ Placer County
- ▶ Placer County Air Pollution Control District
- ▶ Reclamation District 1000

The NOP comment letters and comments at the scoping meeting suggest that the following topics related to adverse physical environmental impacts should be particular areas of focus for the City's environmental analysis:

- ▶ Travel demand (vehicle miles traveled, or VMT)
- ▶ Direct, indirect, and cumulative biological resources effects
- ▶ Surface and groundwater quality
- ▶ Cultural resources and tribal cultural resources

- ▶ Greenhouse gas emissions
- ▶ Criteria air pollutant emissions
- ▶ Carbon monoxide concentrations
- ▶ Flooding and hydraulic impacts

1.7 NATIVE AMERICAN CONSULTATION

The City contacted the Native American Heritage Commission to obtain a list of Native American Tribal representatives that may have an interest in the proposed General Plan Update and sent a letter inviting input to each of these representatives and all Native American Tribal representatives that have requested consultation by the City. The United Auburn Indian Community responded to this invitation to provide input and provided recommendations, which have been incorporated into the proposed General Plan Update and General Plan Update EIR.

1.8 ORGANIZATION OF THE EIR

This EIR is organized as follows:

Chapter 1, “Introduction,” describes the type of EIR prepared for the proposed General Plan Update; the purpose, intended uses, and geographic and environmental scope of the EIR; the environmental review process; subsequent actions required; the EIR comment process; and other agencies expected to use this EIR.

Chapter 2, “Project Description,” describes the project location; project objectives; project purpose; the General Plan Update process; General Plan development estimates; and the relationship between the proposed General Plan Update and other agencies and plans.

Chapter 3, “Executive Summary,” provides an overview of the findings and conclusions of this EIR.

Chapter 4, “Environmental Impact Analysis,” evaluates the environmental effects of the proposed General Plan Update and identifies mitigation for potentially significant and significant effects.

Chapter 5, “Other CEQA Considerations,” describes the impacts of implementing the proposed General Plan Update in combination with the impacts of related past, present, and reasonably foreseeable future projects (the cumulative condition). Various policies in the proposed General Plan Update control the timing, location, and sequence under which the Planning Area could build out through the planning horizon year (2035). Chapter 6 also discusses the growth inducement potential of the proposed General Plan Update, significant irreversible environmental changes associated with the plan, and significant and unavoidable effects of the plan.

Chapter 6, “Alternatives,” provides a comparative analysis between the environmental impacts of the project alternatives and the proposed General Plan Update. The Alternatives chapter provides a summary of the relative environmental impacts of the project alternatives, including the No Project Alternative. This chapter also describes alternatives that were considered but eliminated from detailed consideration in the EIR and identifies the “environmentally superior” alternative.

Chapter 7, “References Cited,” lists the sources of information cited throughout the EIR.

Chapter 8, “List of Preparers,” lists the individuals who contributed to preparation of the EIR.

Appendices provide background and technical information.

1.9 SUBSEQUENT ACTIONS REQUIRED

Further actions or procedures required to allow implementation of the proposed General Plan Update may include revisions to zoning, subdivision maps, site plans, building permits, grading permits, and other actions. Future development project proposals, public investments, and other actions would also be subject to CEQA requirements, as appropriate.

In California, general plans are cities' and counties' guiding land use policy documents. Local agencies implement general plans in part through the adoption and enforcement of zoning codes, subdivision ordinances, and other regulations. General plan land use designations and planning policy provide a framework for zoning designations and development standards. Cities and counties' design regulations and guidelines are also governed by general plans. General plans contain policy that may be implemented by municipal code sections and ordinances that regulate grading, building permits, open space dedications, landscaping requirements, parkland dedication, off-street parking requirements, transportation infrastructure, signage, improvement standards, impact fees, and other planning-related codes and ordinances.

1.10 MITIGATION MEASURES

CEQA Guidelines Section 15370 defines mitigation to include:

- (a) "Avoiding the impact altogether by not taking a certain action or parts of an action.
- (b) Minimizing impacts by limiting the degree or magnitude of the action and its implementation.
- (c) Rectifying the impact by repairing, rehabilitating, or restoring the [affected] environment.
- (d) Reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action.
- (e) Compensating for the impact by replacing or providing substitute resources or environments, including through permanent protection of such resources in the form of conservation easements."

During development of the proposed General Plan Update, the City took into account the potential impacts discussed in this EIR and included policies and implementation measures in the proposed General Plan Update that would reduce potential impacts. In some instances, additional feasible mitigation measures are proposed in the EIR to clarify proposed General Plan Update policies as they relate to environmental effects and to further reduce potentially significant impacts.

CEQA requires the adoption of a program for mitigation monitoring or reporting for all adopted mitigation measures. The mitigation monitoring plan must be designed to ensure compliance during project implementation (Public Resources Code Section 21081.6, CEQA Guidelines Section 15097). When the project is a general plan or other plan-level document, the monitoring plan may be the annual plan implementation report required by statute, such as a report on general plan status (CEQA Guidelines Section 15097[b]).

1.11 AVAILABILITY OF THE EIR

Copies of the proposed General Plan Update and this EIR are available through the City of Roseville Development Services Department. The City has circulated the document to public agencies, other public and private organizations, property owners, developers, and other interested individuals. Detailed information related to the proposed General Plan Update and this EIR are available at the City of Roseville City Hall and online at the General Plan Update Website: www.roseville.ca.us/GeneralPlan

Comments on the EIR are invited in writing or via email to:

Gina McColl, General Plan Update Project Manager
City of Roseville Planning Division
311 Vernon Street
Roseville, CA 95678
gmccoll@roseville.ca.us

Comments should be focused on the adequacy and completeness of the EIR, or should address questions about the environmental consequences of project implementation. “Adequacy” is defined as the thoroughness of the EIR in addressing significant adverse physical environmental effects, identifying mitigation measures for those impacts, and supplying enough information for public officials to make decisions about the merits of the project (CEQA Guidelines Section 15151).

After the close of the public review period, a Final EIR will be prepared containing all the comments received during the public review period, responses to those comments, and other information the City deems relevant. This document will be made available for review before the City certifies it as complete. The Draft EIR, any changes to the Draft EIR, and the responses to comments on the Draft EIR, together will comprise the Final EIR.

This page intentionally left blank

2 PROJECT DESCRIPTION

2.1 INTRODUCTION

The following sections describe the proposed project that is the subject of analysis in this EIR, which is the City of Roseville 2035 General Plan Update (“proposed General Plan Update”). Along with a description of the proposed General Plan Update, this chapter provides a description of the location and objectives of the proposed project, the relationship with other plans and regulations, and the intended use of this EIR.

As described below in more detail, the proposed General Plan Update consists of revisions to goals, policies, and implementation measures in the City’s existing 2035 General Plan, which was adopted in 2016 (“existing General Plan”). The purpose of this update is to comply with new State laws, revise outdated information, improve and clarify policy language, and make the General Plan more readable and user-friendly. The proposed General Plan Update does not include changes to the land use plan or Sphere of Influence. The Housing Element is being updated to the new more readable format, but the content is not proposed for any amendment.

2.2 REGIONAL LOCATION AND SETTING

Roseville is the largest city in Placer County and is located 15 miles northeast of downtown Sacramento. Roseville is surrounded by agricultural uses to the west, the cities of Rocklin to the north and Citrus Heights to the south, and the unincorporated communities of Antelope to the southwest and Granite Bay to the east. Exhibit 2-1 shows Roseville in its regional context.

2.2.1 THE CITY’S PLANNING AREA AND THE EIR PROJECT SITE

According to State law, each city must include in its General Plan all territory within the boundaries of the incorporated area, as well as “any land outside its boundaries [that] in the planning agency’s judgment bears relation to its planning” (California Government Code Section 65300). The Planning Area for this General Plan Update includes all areas within the City limits and those areas outside City limits that are within the City’s Sphere of Influence. The Planning Area is approximately 29,000 acres or 45 square miles in total land area. The City’s Sphere of Influence and Planning Area are shown in Exhibit 2-2.

Just as the Planning Area is important for a General Plan, for an EIR, the *project site* is an important geographic area. The “project site” for the analysis in this EIR is the same as the General Plan Planning Area.

2.2.2 SPHERE OF INFLUENCE

Contained within the Planning Area and the EIR project site is the City’s Sphere of Influence (SOI). The SOI is a boundary that encompasses lands that are expected to ultimately be annexed by the City. While it does not have any land use entitlement authority, Placer Local Agency Formation Commission (LAFCO) is the entity empowered to review and approve proposed boundary changes and annexations by incorporated municipalities, including changes to spheres of influence.

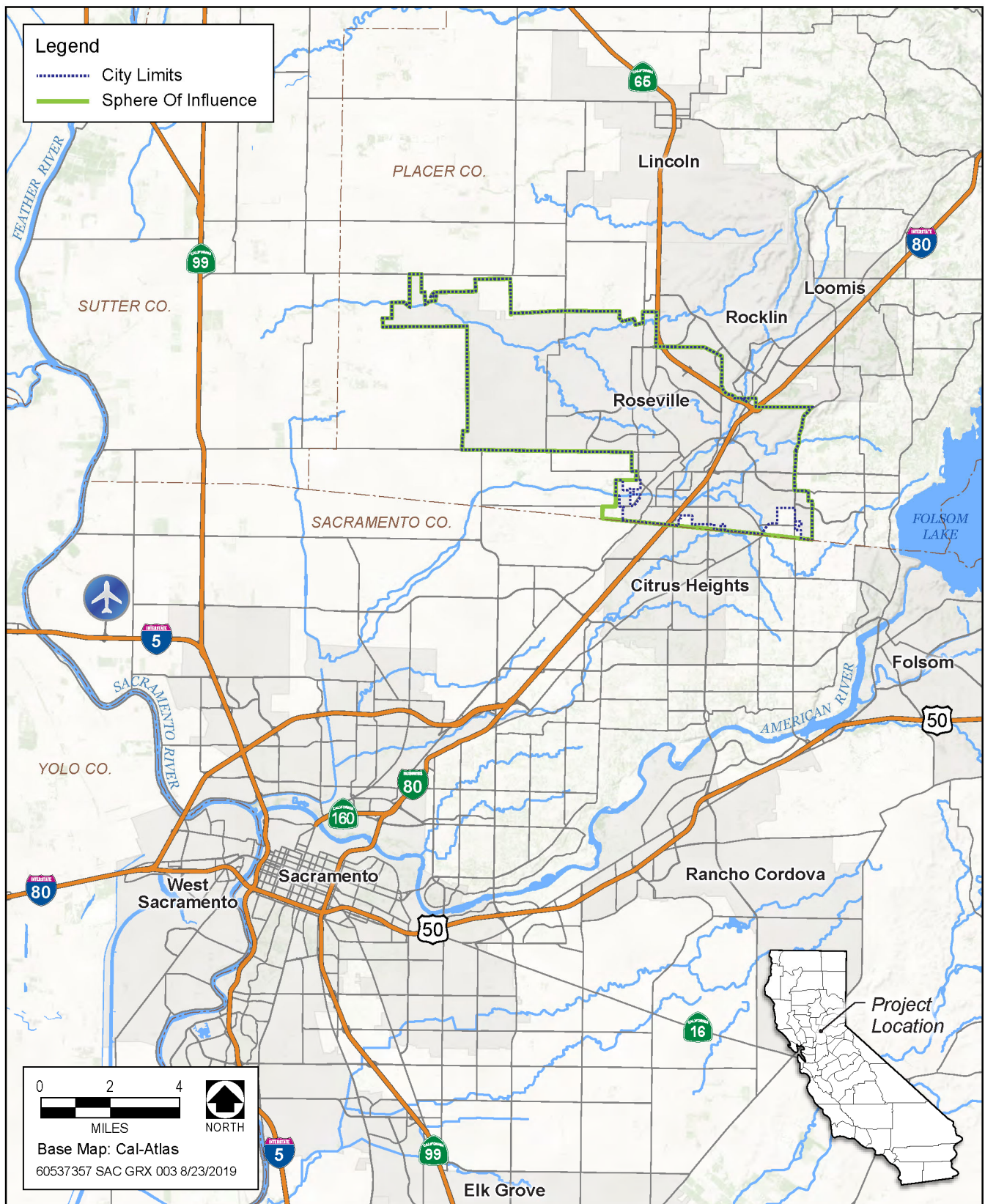


Exhibit 2-1.

Regional Location

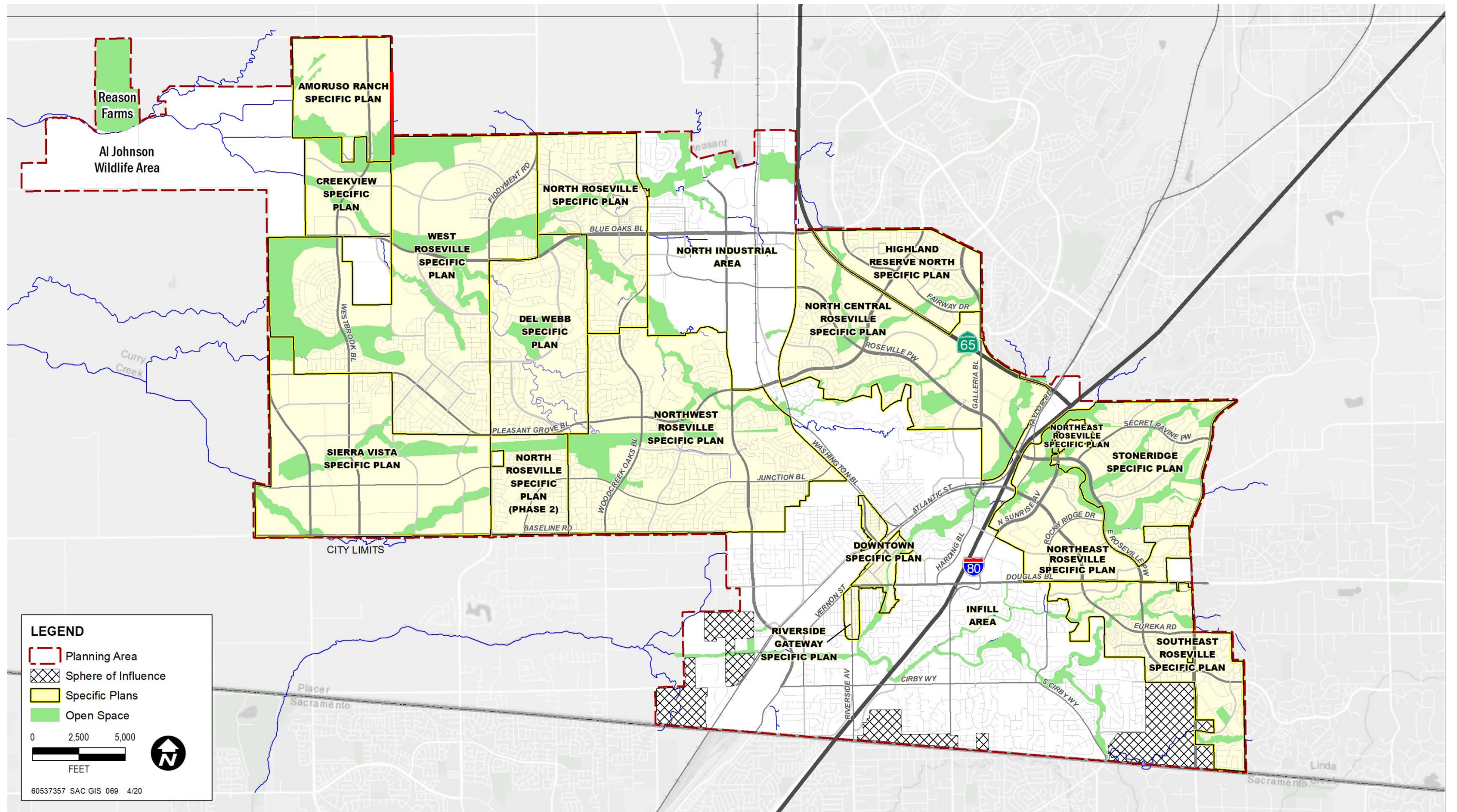


Exhibit 2-2.

Planning Area, Specific Plan Areas, and Sphere of Influence

This page intentionally left blank

2.2.3 EXISTING LAND USE

Within the context of this EIR, “land use” is used to refer to the existing physical use of the land. Within the City’s Planning Area, residential development occupies approximately 30 percent of the total land area and vacant land accounts for another 20 percent. Public uses, open space, and recreational uses occupy approximately 20 percent of the Planning Area. Approximately 15 percent of the Planning Area is dedicated to road rights-of-way. Commercial and industrial land occupies approximately 10 percent of the Planning Area. The balance of the Planning Area is currently in agricultural production.

2.3 PROJECT BACKGROUND

The General Plan provides the basis for the City’s regulation of the overall amount, character, and location of urban development, as well as preservation and natural resource conservation, economic development, transportation, safety, public facilities and services, and housing. As the City’s “constitution,” or “charter” for future development, the General Plan fulfills State legal requirements for long-range comprehensive planning and provides a framework for the City to exercise its land use entitlement authority, as provided under State law. The General Plan identifies locations within the Planning Area where there is capacity for future growth and identifies how the City will protect, enhance, and maintain a high quality of life as the City grows, and the Planning Area is developed.

Because the General Plan includes projections of future development capacity, it serves as a tool for the City and other service providers to plan for services, facilities, infrastructure, and environmental mitigation. The General Plan is a decision-making guide – the City relies on the General Plan when reviewing private development applications, public investments, and other important actions to ensure that they are consistent with the General Plan. The General Plan also provides direction for agencies or organizations that do business or provide services in the City’s Planning Area.

2.4 PROJECT OBJECTIVES

The proposed General Plan Update does not include any changes to land use designations, expansion of the City’s Planning Area, or other physical changes to areas planned for development compared to the existing General Plan. Rather, this Update revises goals, policies, and implementation measures to comply with recently adopted State law, improves and clarifies policy language, replaces outdated information, and improves the organization and user friendliness of the document. The project objectives for the proposed General Plan Update are as follows:

- ▶ Revise goals and policies, as appropriate, to address recent changes in State law;
- ▶ Prepare a detailed estimate of existing and future greenhouse gas (GHG) emissions associated with implementing the General Plan and feasible mitigating policies that would reduce emissions;
- ▶ Take advantage of GHG reduction strategies that offer co-benefits, such as more practical bicycle, pedestrian, and transit mobility options; reductions in household and business transportation and utility costs; and improvements to air quality and public health;

- ▶ Identify ongoing programs that reduce GHG emissions and incorporate such efforts as policy or implementation measures;
- ▶ Prepare estimates of existing and future vehicular travel demand and identify feasible mitigating policies and implementation measures that would reduce vehicular travel demand;
- ▶ Revise policies and implementation measures, as appropriate, to ensure an appropriate balance between managing traffic congestion and facilitating infill development, promoting public health through active transportation, and reducing GHG emissions;
- ▶ Incorporate changes to the Noise Element that are more appropriate for current and future conditions in Roseville; and
- ▶ Integrate the environmental analysis and policy planning process to promote the City’s planning, environmental, economic, and fiscal goals.

2.5 PROJECT DESCRIPTION

The City’s last comprehensive General Plan update was in 1992. The General Plan has been amended with the adoption of specific plans since then, the most recent update in 2016 with the adoption of the Amoruso Ranch Specific Plan.¹ The Housing Element was certified by the State Department of Community Development in 2013, addressing the Regional Housing Needs Allocation (RHNA) requirements for the planning period of 2013 to 2021. No changes to the Housing Element are proposed as part of this update. Updates to Housing Elements are cyclical, with the required timing based on State law. The City’s next Housing Element update will be due in June 2021. The purpose of this update is to comply with new State planning laws, the 2017 General Plan Guidelines, and updates to the California Environmental Quality Act (CEQA) Guidelines and case law; revise outdated information; improve and clarify policy language; and make the General Plan more readable and user-friendly. The City is not proposing changes to the Land Use Map or Sphere of Influence as a part of this Update.

The following global revisions are proposed as a part of this proposed General Plan Update.

2.5.1 NUMBERING AND ORGANIZATION OF GOALS AND POLICIES

In order to ensure each goal and policy in the General Plan has a unique, citable identifier, the existing format has been changed to include the Element abbreviation, a section number, and a policy number. For example, in the second policy section of the Circulation Element (Level of Service), the existing identifier in the General Plan is “Goal 1, Policy 1,” and the identifier in the proposed General Plan would be “Goal CIRC2, Policy CIRC2.1.”

¹ As noted, this proposed General Plan Update does not include changes to land use designations or any expansion to the Planning Area or Sphere of Influence. Throughout this EIR, “proposed General Plan Update,” “General Plan Update,” and “General Plan” are used to refer to *this* proposed update. Whenever referring to the version of the General Plan adopted in 2016, this EIR uses the terminology “existing General Plan” to avoid confusion.

2.5.2 PROPOSED GENERAL PLAN UPDATE GOALS, POLICIES, AND IMPLEMENTATION MEASURES

This proposed General Plan Update has been updated for consistency and clarity, and to be consistent with current best practices, State laws, and the General Plan Guidelines. The following revisions are proposed as a part of this General Plan Update:

- ▶ Circulation Element: updates to reflect Assembly Bill (AB) 1358 (Complete Streets), and SB 743, and CEQA Guidelines Section 15064.3 as they relate to active transportation and travel demand management (vehicle miles traveled, or “VMT”).
- ▶ Air Quality & Climate Change Element: updates to include feasible mitigation to reduce GHG emissions.
- ▶ Open Space & Conservation Element: updates to reflect State law related to Native American consultation.
- ▶ Noise Element: updates for clarity and revisions to the City’s goals for land use and noise compatibility which reflect current best practices, including changes to the City’s exterior noise compatibility standards.

The following Table 2-1 is a summary table of changes to the goals and policies within each Element of the General Plan, with [brackets] to show the existing policy number, deletions in ~~striketrough~~, additions in **bold, underlined text**, and [*brackets with italics*] to indicate text that has been moved to or from elsewhere.

For a complete description of proposed changes to the General Plan, please refer to the draft proposed General Plan Update, under separate cover.

| Table 2-1. Policy Changes included in the Proposed General Plan Update |
|--|
| Land Use |
| Community Form: General |
| Goal LU1 [Goal 1]: a. Distinction from other communities through <u>the</u> quality of development and the high level of services provided its <u>to</u> citizens. b. A commitment to preserving its small-town attributes and cultural heritage, and a dedication to promoting a strong sense of community, while preserving individual neighborhoods and promoting a prosperous business community. c. Continuing to be a family-oriented community <u>that,</u> which offers opportunities to pursue various lifestyles. |
| Policy LU1.1 [Policy 1]: Ensure high-quality development in new and existing development areas, as defined through specific plans, the development review process, and <u>the</u> Community Design Guidelines. |
| Policy LU1.3 [Policy 3]: Continue to provide a full range of public services and maintain high levels of service <u>for public facilities, services, transportation, open space, and parks and recreation,</u> as specified in other elements of this Plan, including the Public Facilities, Open Space and Conservation, Safety, Circulation and Parks and Recreation Elements. |
| Policy LU1.6 [Policy 6]: Through development approvals and City programs (e.g., revitalization, Capital Improvement Program, parks and recreation programs, etc.), assure <u>ensure</u> that all portions of the community are linked and integrated. |
| Policy LU1.7 [Community Form – Downtown, Neighborhoods, Policy 2]: Promote land use patterns that result in the dispersion of secondary or satellite services including libraries, schools, parks, public meeting places, and commercial uses throughout the community through the establishment of neighborhood centers. [<i>Moved from referenced existing policy location</i>] |

| Table 2-1. Policy Changes included in the Proposed General Plan Update |
|---|
| Community Form: Development Patterns, Transportation, and Air Quality/Greenhouse Gas Emissions |
| Goal LU2 [Goal 2]: While recognizing that the automobile is the primary form of transportation, the City of Roseville should make a commitment to shift from the automobile to other modes of transportation. <u>Achieve a community form that supports convenient and safe pedestrian, bicycle, and transit access.</u> |
| Policy LU2.1 [Policy 1]: Promote land use <u>development</u> patterns that support a variety of transportation modes and accommodate pedestrian mobility. |
| Policy LU2.2 [Policy 2]: Allow for land use patterns and mixed- use development that integrates residential and non-residential land uses, such that residents may easily walk or bike to shopping, services, employment, and leisure activities. |
| Policy LU2.3 [Policy 3]: Concentrate higher-intensity uses and appropriate support uses in <u>Pedestrian Districts and</u> within close proximity of transit and bikeway corridors, as identified in the <u>Transit Master Plans and</u> Bicycle Master Plan. In addition, some component of public <u>Public</u> uses, such as parks, plazas, public buildings, community centers, <u>schools</u> , and/or libraries, should be located within Pedestrian Districts and transit and bikeway corridors <u>easily accessible to the public.</u> |
| Policy LU2.4 [Policy 4]: Promote and encourage the location of employee services, such as child care, restaurants, banking facilities, convenience markets, etc <u>and other daily needs</u> , within major employment centers for the purpose of reducing mid-day service-related vehicle trips. |
| Policy LU2.5 [Policy 5]: Where feasible, improve existing developed ment areas to create better pedestrian, <u>bicycle</u> , and transit accessibility. |
| Policy LU2.6 [Policy 6]: Through City land use planning and development approvals, Require <u>proposed</u> that neighborhood-serving uses (e.g. neighborhood commercial uses, day care, parks, schools, and other community facilities <u>and services</u>) <u>to</u> be physically linked with adjacent residential neighborhoods <u>through multi-modal transportation connections.</u> |
| Community Form: Downtown and Neighborhoods <u>Revitalization</u> |
| Goal LU3.1 [Goal 3]: In partnership with private interests, the City of Roseville will <u>continue to</u> promote the creation of a <u>vibrant</u> town center offering government services, social and cultural activities, and commercial opportunities in <u>Central Downtown</u> Roseville. Roseville will also encourage the creation of additional social, cultural and commercial satellite opportunities throughout the community. |
| Goal LU3.2 [Goal 4]: Through the designation of special study areas and revitalization efforts, the City of Roseville will promote the <u>preservation, revitalization, revitalize, and enhancement</u> of its business districts, and existing neighborhoods, <u>and mixed-use corridors.</u> |
| Policy LU3.1 [Policy 1]: Create and maintain a strong and identifiable downtown <u>Downtown</u> that offers the surrounding community a cluster of municipal offices and services, commercial, <u>retail, and</u> services, office <u>uses, higher education opportunities</u> , and higher-density residential uses, <u>consistent with the Downtown Specific Plan.</u> |
| [Policy 2]: Promote land use patterns that result in the dispersion of secondary or satellite services including libraries, schools, parks, public meeting places and commercial uses, throughout the community through the establishment of clustered community centers. [Moved to be Policy LU1.7] |
| Policy LU3.2 [Policy 3]: Consider accommodating a portion of the overall projected <u>Facilitate</u> population and economic growth in areas having the potential for revitalization |
| Policy LU3.3 [Policy 4]: The City should <u>Direct resources to facilitate revitalization of Downtown, neighborhoods in the Infill Area, and mixed-use corridors.</u> Support the revitalization of areas that are in decline or economically underutilized |
| Policy LU3.4 [Policy 5]: Encourage infill development and rehabilitation <u>reinvestment</u> that: |
| <ul style="list-style-type: none"> • <u>Upgrades the quality and enhances the character of existing areas;</u> • <u>Enhances the mix of land uses in proximity to one another so that more households can access services, recreation, and jobs without the use of a car;</u> |

| |
|---|
| Table 2-1. Policy Changes included in the Proposed General Plan Update |
| <ul style="list-style-type: none"> • enhances Facilitates pedestrian activity and public transit use, and pedestrian access; |
| <ul style="list-style-type: none"> • Efficiently utilizes and does not overburden existing services and infrastructure; and |
| <ul style="list-style-type: none"> • Results in land use patterns and densities that provide the opportunity for the construction of a variety of household-housing types that are affordable to all income groups. |
| Policy LU3.7 [Policy 8]: Identify locations where special study is necessary to develop strategies for preserving, enhancing, and revitalizing these existing developed areas. |
| Community Form: Relationship of New Development (RND) |
| Policy LU4.1 [Policy 1]: Require that new development areas and associated community-wide facilities (open space resources, parks, libraries, etc.) to be linked and oriented to existing developed areas of the community through road networks, public transit systems, open space systems, bikeway and pedestrian systems, and other physical connections. |
| Policy LU4.2 [Growth Management – General, Policy 3]: The City shall Encourage a development pattern that is contiguous with existing developed areas of the City. |
| Community Form: Jobs/Housing and Economic Development |
| Goal LU5.1 [Goal 6]: Roseville will strive to be a balanced complete community with a reasonable mix of land uses, housing types, and job opportunities that meet the diverse needs of its existing and future residents and businesses. |
| Goal LU5.2 [Goal 7]: Roseville will promote and encourage the availability of a variety of goods and services and will take measures to retain a positive business climate in the City. |
| Policy LU5.1 [Policy 1]: Implement Strive for a land use mix and pattern of development that provides linkages between residents' jobs and local employment-generating uses, facilitates a match between the number and type of local jobs and the local labor force, will provide an reasonable jobs to /housing balance, and will maintains the fiscal viability of the City. |
| Policy LU5.2 [Policy 2]: Support Apply density bonuses in for the construction of affordable housing, in accordance with the Density Bonus Ordinance and the Housing Element, to promote affordable housing options in areas particularly in areas where with few such housing opportunities exist and where and significant employment centers exist or are planned. |
| Policy LU5.3 [Policy 3]: Consider the fiscal impacts to the City from projects proposing a General Plan land use change Establish a standard process to analyze the fiscal impacts of proposed development and require a fiscal impact analysis of all projects proposing a significant General Plan land use change as defined through the Economic Development Study/Plan. |
| Policy LU5.4 [Policy 5]: The City may approve a project that is identified as having a negative fiscal impact on the City if overriding findings are made that the project benefits outweigh its impacts. Such benefits may relate to the provision of affordable housing, significant open space or recreation facilities, job creation, infill development near transit service, or other public benefits. <i>[Moved from referenced existing policy]</i> |
| Policy LU5.5 [Policy 4]: Uphold the City's Affordable Housing Goal by requiring an affordable housing target for projects seeking a General Plan Amendment, Specific Plan Amendment, and/or rezoning to a residential designation proposing 25 or more new dwelling units. For these projects, the target is a minimum of 10% of all new development to be affordable to housing units to cost no more than 30% of the total monthly income of very low-, low-income, and moderate-income households (the City also uses the term "middle" in certain Specific Plans to refer to moderate-income households earning no more than 100% of the Area Median Income-AMI). The breakdown of the affordable units will be, at a minimum, 40% for rental to very low- and 40% for rental to low-income households. The remaining 20% may be reserved for middle-income moderate-income purchase (which will be priced to be affordable to households earning 95% of the Area Median Income) or may be distributed equally among the rental obligations, as approved by the City. Variations in affordable housing ratios may be approved through a Development Agreement where the following criteria are met: |
| <ul style="list-style-type: none"> • A need has been identified for a specific affordable housing type (very low-, low- or moderate-income) and the project meets this need; |
| <ul style="list-style-type: none"> • The project does not rely on or obtain City subsidies; and |

| |
|---|
| Table 2-1. Policy Changes included in the Proposed General Plan Update |
| <ul style="list-style-type: none"> Units proposed within this these criteria would allow for individuals to stay within their units as their future income grows. |
| [Policy 5]: The City may approve a project that is identified as having a negative fiscal impact on the City if overriding findings are made that the project benefits outweigh its impacts. Such benefits may relate to the provision of affordable housing, significant open space or recreation facilities, job creation, infill development near transit service, or other public benefits. [Moved to be Policy LU5.4] |
| Policy LU5.6 [Policy 6]: Maintain land use patterns, intensities, and densities that promote ensure an adequate supply of land for office, a positive business climate (e.g. supply of business professional, commercial, and industrial lands), industrial, and other employment-generating development. |
| Policy LU5.7 [Policy 7]: Support activities that attract employment uses to the City, as identified in the Economic Development Study/ Plan Strategy. |
| Community Form: Community Involvement and Inter-Jurisdictional Cooperation |
| <u>Goal LU6.2: Provide inclusive community engagement opportunities for individuals and community groups to produce timely and meaningful input leading to proactive, consensus-driven actions by the City and its partners.</u> |
| [Goal 8]: Maintain a strong commitment to an open governmental process which stresses accessibility of City officials (e.g. staff, committees, commissions, elected officials) and opportunities for citizen participation. |
| Policy LU6.3 [Policy 3]: Coordinate and take a lead role, where feasible, with local, state, federal, and other jurisdictional agencies on regional issues of importance, including but not limited to air quality, climate change mitigation and resiliency , transportation, water supply, sewage treatment, solid waste disposal and recycling, flood control, hazardous waste management, resource protection, and transit. |
| Policy LU6.4 [Policy 4]: To the extent feasible, coordinate land use policies planning and public improvements with neighboring jurisdictions. |
| Policy LU6.5 [Policy 5]: Encourage early consultation with adjacent jurisdictions , and refer development proposals that may have an impact to, adjacent these jurisdictions to the respective agencies for their review and comment. Respond and comment on development proposals that are received in from other jurisdictions that may have an impact on Roseville, to minimize such impacts and ensure consistency and compatibility with existing and planned development in the City. |
| Community Design |
| Policy LU7.2 [Policy 2]: Continue to develop and apply design standards that result in efficient site and building designs, pedestrian-friendly projects that stimulate the use of alternative modes of transportation, and the establishment of functional relationships between adjacent developments. |
| Policy LU7.7 [Policy 8]: Encourage and promote the preservation of historic and/or unique, culturally and architecturally significant buildings, features, and important visual environments resources. |
| <u>Policy LU7.9: Control artificial lighting to avoid spill-over lighting onto adjacent properties. Use anti-reflective architectural materials and coatings to prevent glare.</u> |
| Growth Management: General |
| Goal LU8.1 [Goal 1]: The City shall Proactively manage and plan for growth. |
| Goal LU8.2 [Goal 2]: The City shall Encourage a pattern of development that promotes the efficient and timely provision of urban infrastructure and services, and that preserves valuable natural and environmental resources. |
| Goal LU8.4 [Goal 4]: The City shall Continue a comprehensive, logical planning process, rather than an incremental, piecemeal approach. |
| Goal LU8.5 [Goal 5]: The City shall Encourage public participation in the development and monitoring of growth management policies and programs. |
| Goal LU8.6 [Goal 6]: The City shall Manage and evaluate growth in a regional context, not in isolation. |

| Table 2-1. Policy Changes included in the Proposed General Plan Update |
|--|
| Goal LU8.8 [Goal 8]: Growth and development must occur at a rate corresponding to the availability of desired facilities' capacity and the attainment of defined General Plan levels of service for public activities. |
| Goal LU8.12 [Goal 12]: The City shall Use growth management as a tool to maintain the City's identity, community form, reputation in the region, to maintain high levels of service for residents, and to influence projects outside the City's boundaries that have the potential to affect the quality of life and/or services that are provided to residents. |
| Policy LU8.1 [Policy 1]: Growth must provide a strong diversified economic base and a reasonable balance between employment and affordable housing. |
| [Policy 3]: The City shall encourage a development pattern that is contiguous with existing developed areas of the City. [moved to Community Form LU4.2] |
| Policy LU8.3 [Policy 4]: Growth shall be managed to ensure that adequate public facilities and services, as defined in the Public Facilities Element, are planned and provided, and the public health, safety, and welfare is protected. |
| Policy LU8.7 [Policy 8]: <u>The City will</u> M manage growth in such a way to ensure that significant open space areas will be preserved. |
| Policy LU8.9 [Policy 10]: Work aggressively to address traffic generated outside of Roseville by working in collaboration with neighboring jurisdictions, regional, state, and federal entities to ensure <u>that</u> traffic through Roseville is mitigated by regional solutions. Ensure that transportation solutions are supported by land use and design policies <u>The City will encourage changes in land use mix and community design</u> that promote walking, biking, and transit, consistent with the Growth Management Visioning Committee's Vision Statement. |
| Policy LU8.10 [Growth Management – Public Amenities, Policy 2]: In addition to being consistent with the other goals and policies of the General Plan, S specific P plans shall comply with the following: <i>[Moved from referenced existing policy]</i> |
| a. Provide a public focal point, community, and/or theme feature. These features shall be specific to each area and be designed to promote and enhance community character. A special feature may include, but is not limited to, a community plaza, central park, or some other type of gathering area; outdoor amphitheater; community garden; regional park with special facilities; sports complex; or cultural facilities. |
| b. Provide entryways at entrances to the City in accordance with the Community Design Guidelines. Where possible, the entryways shall take advantage of and incorporate existing natural resources into the entry treatment. The S specific P plans shall identify the location and treatment of the entryways, and shall consider the use of open space, oak regeneration areas, signage, and/or special landscaping to create a visual edge or buffer that provides a strong definition to entryways into the City. |
| c. The S specific P plan areas shall be planned and oriented to be an integral part of the City consistent with the policies of the Community Form component of this Element. |
| d. Develop design guidelines, specifying screening and a transition between public utilities (e.g. substations, pump stations) and other uses, in conjunction with the public utility departments and agencies. In addition, development along power line and pipeline easements shall incorporate design treatment to ensure compatibility and safety. Design guidelines and treatment may include minimum setbacks, building and landscape design standards, and possible limitations on certain types of uses and activities. |
| e. Preserve natural resource areas where they exist, and where feasible, along new roadways. Such roadways may create a public boundary between the resource area and other uses. The S specific P plans shall identify locations and standards for the preservation of natural resources along roadways, and shall identify sources of financing for such road segments. |
| Growth Management – Land Use Allocation |
| [Policy 1]: 1. The city shall, through its land use planning process, Capital Improvement Plans, and facility and service programs, provide a land use dwelling unit allocation at buildout as shown in Table II-4 and non-residential entitlements as designated on the General Plan Land Use Map. |
| [Policy 2]: The City shall maintain a pool of 1,000 residential units to be allocated for City sponsored and state mandated programs (e.g. second units, density bonuses for affordable housing, infill revitalization, annexations of island areas to |

| |
|---|
| Table 2-1. Policy Changes included in the Proposed General Plan Update |
| complete corporate boundaries as reflected on Figure II-1) to be utilized in areas where existing development entitlements exist or to further city affordable housing goals. |
| [Policy 3]: The City shall review, and if necessary, modify, the 1,000-unit pool in conjunction with regular updates of the housing element, and concurrent with any significant modification to the General Plan resulting in the allocation of additional residential units. |
| Growth Management – New Growth Areas |
| Goal LU9.13 [Goal 13]: New development shall be consistent with the City’s desire to establish an edge along the western boundary of the City that fosters: a physical separation from County lands through a system of connected open space; a well-defined sense of entry to City from <u>the</u> west; opportunities for habitat preservation and recreation; and view preservation corridors that provide an aesthetic and recreational resource for residents. |
| Policy LU9.1 [Policy 1]: The City may consider modification to the General Plan land use allocation for new growth where adequate public services and facilities and preservation and conservation of natural resources can be provided in conjunction with the following: |
| a. <u>Additional</u> land to accommodate demand for housing or employment uses |
| b. Projects that will provide public community benefits to the City , including, but not limited to the provision of public transit services |
| c. Ensure that growth provides benefits to the community as a whole and weigh community benefits against public costs |
| Policy LU9.2 [Policy 2]: Prior to the consideration of any General Plan amendment to modify the land use allocation land use designations or expand the City’s boundaries or Sphere of Influence , the City shall complete or cause to be completed the following City-wide studies/plans: |
| a. Long-range transit plan |
| b. Economic Development Fiscal studies |
| c. Public facilities and services capacity study |
| d. Transportation system capacity study |
| e. <u>Utility capacity and supply (i.e., water, sewer, drainage, and electric)</u> |
| Policy LU9.4 [Policy 4]: Specific plans will be evaluated based on the following minimum criteria: |
| a. Government Code requirements for specific plans |
| b. Demonstrated consistency with General Plan goals and policies |
| c. Demonstrated consistency with the identified City-wide studies and holding capacity analyses |
| d. Justification for proposed specific plan boundaries |
| e. Community benefit (e.g., affordable housing, significant open space or recreation facilities, job creation, infill development near transit service). |
| f. Ability to substantially mitigate impacts |
| g. Impact on the City’s growth pattern |
| Each specific plan proposal shall include, with its initial submittal, a full analysis of how the plan complies with, and relates to the above factors. The specific plans’ consistency with the General Plan, and its relation to other identified criteria, will be a primary factor in determining whether the proposal will or will not be considered by the City. |
| Policy LU9.5 [Policy 5]: Apply the City’s adopted Guiding Principles for Growth to any new development proposed in and out of City’s corporate boundaries, which that is not already part of an adopted Specific Plan or within the Infill Area: |
| 1. Any new development proposal shall, on a stand-alone basis, have an overall net neutral or positive fiscal impact on the City’s General Fund Services. |

| Table 2-1. Policy Changes included in the Proposed General Plan Update | |
|--|---|
| 2. | Any <u>new</u> development proposal shall include logical growth/plan boundaries. and an east to west growth pattern. |
| 3. | Any <u>new</u> development proposal shall not conflict <u>create a direct or indirect conflict</u> with the <u>ongoing operations of the Pleasant Grove and or Dry Creek Wastewater Treatment Plant operations or any future Power Generation Facility City-owned power generation facilities.</u> |
| 4. | Any <u>new</u> development proposal shall maintain the integrity of existing neighborhoods and create a sense of place in new neighborhoods. |
| 5. | Any <u>new</u> development proposal shall include a plan to ensure fully funding and maintenance of improvements and services at no cost to existing residents (including increased utility rates). A proposal shall not burden, increase the cost <u>of</u> , or diminish the supply and or reliability of <u>public</u> services. |
| 6. | Any <u>new</u> development proposal shall aid in regional traffic <u>transportation</u> solutions and in right-of-way preservation. |
| 7. | Any <u>new</u> development proposal that does not have a sufficient supply of surface water shall secure additional supplies above what the City currently has available. New development proposals shall also provide the funding necessary to incorporate the new source of supply into the City's water supply portfolio (surface water, groundwater and recycled water); and new development proposals shall include measures to reduce water demand by implementing the use of conservation best management practices, recycled water, and other off-sets. |
| 8. | Any <u>new</u> development proposal shall consider development potential within the entire City/County Memorandum of Understanding Transition Area in the design and sizing of infrastructure improvements. |
| 9. | Any <u>new</u> development proposal shall aid in resolution of regional storm water retention. |
| 10. | Any <u>new</u> development proposal shall incorporate mechanisms to ensure new schools, <u>and, if necessary, new schools</u> are available to serve the residents <u>anticipated for new development and that new development does not adversely affect</u> and shall not impact existing schools. |
| 11. | Any <u>new</u> development proposal shall include a significant interconnected public open space component/conservation plan <u>consistent</u> in coordination with the City of Roseville/U.S. Fish and Wildlife Service Memorandum of Understanding. |
| 12. | Any <u>new</u> development proposal shall include a public participation component to keep the public informed and solicit feedback throughout the specific plan process. |
| 13. | Any <u>new</u> development proposal shall provide a " <u>public-community</u> benefit" to the City and residents. |
| Policy LU9.6 [Policy 6]: As new development is proposed in or outside the City's Sphere of Influence, project proponents shall provide a transitional area between City and County lands, through a system of <u>managed</u> interconnecting Open Space land areas <u>open space</u> or other buffers, such as separation by arterial roadways. | |
| Policy LU9.8 [Policy 8]: New development proposals to the <u>north and</u> west of <u>the City limits</u> Fiddymont Road within the County/City Memorandum of Understanding Transition Area shall meet the objectives and terms of the Memorandum of Understanding between the City of Roseville and the County of Placer. | |
| Policy LU9.9 [Policy 9]: Development proposed on the western edge of the City shall provide a distinctive open space transition to create a physical and visual buffer between the City and County to that assure <u>ensures</u> that the identity and uniqueness of the City and County will be maintained. | |
| Policy LU9.10 [Policy 10]: Consistent with the County/City Memorandum of Understanding Transition Area , the City shall continue to support and endorse the maintenance of the one-mile buffer zone around landfill operations, as set forth in Policy No. 4.G.11 of the Placer County General Plan, adopted in August 1994. <u>The buffer zone should, consistent with relevant establish performance criteria, be sufficient to maintain the long-term viability of the landfill, while at the same time protecting City residences from nuisances.</u> | |

| Table 2-1. Policy Changes included in the Proposed General Plan Update |
|---|
| Growth Management—Public Amenities |
| [Policy 1]: The City may determine, in accordance with the goals and policies of this element, that it is appropriate to amend its General Plan land use allocation and expand. Under such circumstances, a specific plan will be required to comprehensively plan each of the areas. |
| [Policy 2] In addition to being consistent with the other goals and policies of the General Plan, specific plans shall comply with the following: <i>[Moved to be Policy LU8.10]</i> |
| a. Provide a public focal point, community, and/or theme feature. These features shall be specific to each area and be designed to promote and enhance community character. A special feature may include, but is not limited to, a community plaza, central park, or some other type of gathering area; outdoor amphitheater; community garden; regional park with special facilities; sports complex; or cultural facilities. |
| b. Provide entryways at entrances to the City in accordance with the Community Design Guidelines. Where possible, the entryways shall take advantage of and incorporate existing natural resources into the entry treatment. The specific plans shall identify the location and treatment of the entryways, and shall consider the use of open space, oak regeneration areas, signage, and/or special landscaping to create a visual edge or buffer that provides a strong definition to entryways into the City. |
| c. The specific plan areas shall be planned and oriented to be an integral part of the City consistent with the policies of the Community Form component of this Element. |
| d. Develop design guidelines, specifying screening and a transition between public utilities (e.g. substations, pump stations) and other uses, in conjunction with the public utility departments and agencies. In addition, development along power line and pipeline easements shall incorporate design treatment to ensure compatibility and safety. Design guidelines and treatment may include minimum setbacks, building and landscape design standards, and possible limitations on certain types of uses and activities. |
| e. Preserve natural resource areas where they exist, and where feasible, along new roadways. Such roadways may create a public boundary between the resource area and other uses. The specific plans shall identify locations and standards for the preservation of natural resources along roadways, and shall identify sources of financing for such road segments. |
| f. The specific plans shall include a resource mitigation / banking plan to be developed in accordance with the provisions of the Open Space and Conservation Element. |
| Growth Management – Annexations and Sphere of Influence |
| <u>Goal LU10: Evaluate Sphere of Influence amendments and annexations that promote efficient use of land and public service provision and advance General Plan goals.</u> |
| Policy LU10.1 [Policy 1]: The City may initiate studies to investigate the potential of (1) annexing areas within its Sphere Of of Influence; and (2) expanding its Sphere of Influence sphere of influence boundaries. The studies should be focused on those areas that, both long and short term , may affect General Plan goals and policies and would be logically served and planned by the City. The studies shall include the identification, availability, and funding of public services, as well as the costs and impacts to the City and other service providers. Issues to be analyzed include, but are not limited to, present and planned land uses, water, sewer, electric, library, parks, schools, circulation, and affordable housing. Based on these studies, and resident and property owner input, the City may take steps to annex or expand its Sphere of Influences sphere of influence . |
| Policy LU10.2 [Policy 2]: The City may consider annexations that: |
| <ul style="list-style-type: none"> Are consistent with State state law and Placer County Local Agency Formation Commission (LAFCO) standards and criteria; |
| Policy LU10.3 [Policy 3]: The City may consider expanding its Sphere of Influence sphere of influence to incorporate areas that, in the future, should be logically planned and serviced by Roseville. The City shall consider the following factors, as identified by LAFCO, when making determinations involving Sphere of Influence sphere of influence boundaries: |

| Table 2-1. Policy Changes included in the Proposed General Plan Update |
|---|
| Circulation |
| Functional Classification Section |
| Policy CIRC1.1 [Policy 1]: Establish a The functional classification system to shall guide the planning and design of the City's roadway system. |
| Policy CIRC1.3 [Policy 3]: Establish Maintain a comprehensive set of design standards for the City's roadway system by functional class. |
| Policy CIRC1.5: <u>Design intersections and public rights-of-ways in accordance with state and federal accessibility requirements.</u> |
| Levels of Service |
| Goal CIRC2: Maintain an adequate appropriate level of transportation service for all of Roseville's residents, and employees, and consumers through a balanced transportation system which that considers automobiles, and transit users, bicyclists, and pedestrians. |
| Policy CIRC2.1 [Policy 1]: Maintain a level of service (LOS) "C" standard at a minimum of 70 percent of all signalized intersections and roadway segments in the City during the a.m. and p.m. peak hours. Exceptions to the LOS "C" standard may be considered for intersections where the City finds that the required improvements are unacceptable based on established criteria identified in the implementation measures <u>required to achieve the standard would adversely affect pedestrian, bicycle, or transit access, or where feasible LOS improvements and travel-demand-reducing strategies have been exhausted.</u> [In addition, Pedestrian Districts may be exempted from the LOS standard. <i>Moved to CIRC2.5</i>] |
| Policy CIRC2.2 [Policy 2]: Strive to meet the level of service standards through a balanced transportation system that reduces the auto emissions that contribute to climate change by providing alternatives to the automobile and avoiding excessive vehicle congestion through roadway improvements, Intelligent Transportation Systems, <u>pedestrian and bicycle improvements</u> , and transit improvements. |
| Policy CIRC2.5 [Policy 5]: Enable the City to designate a Pedestrian District over a geographic area for the purpose of implementing measures that promote pedestrian walkability and reduce total vehicle miles traveled and resultant air pollution emissions that contribute to climate change. In these districts, the City recognizes that pedestrian and bicycle travel takes and transit access have a higher priority than automobile travel, which could reduce the vehicular level of service. <u>in the City's Pedestrian Districts, and development projects in these areas are exempt from the City's LOS standard.</u> |
| <u>Policy CIRC2.6: Prioritize investments in pedestrian, bicycle, and transit access in Pedestrian Districts.</u> |
| Transit |
| Goal CIRC3 [Goal 1]: Promote Provide a safe, convenient, and efficient transit system, utilizing both bus and rail modes, to to enhance mobility ; reduce congestion; reduce auto emissions, including emissions that contribute to climate change; improve the environment; and provide viable non-automotive means of transportation in and through Roseville. |
| Policy CIRC3.1 [Policy 1]: Pursue and support transit services within the community and region and pursue land use, design, and other mechanisms that promote the use of such services. <u>Promote transit service that is convenient, cost-effective, and responsive to the challenges and opportunities of serving Roseville and surrounding communities, and explore opportunities for transit innovation and service improvements.</u> |
| Policy CIRC3.3 [Policy 3]: Continue to study options for introducing Bus Rapid Transit <u>high quality transit and/or extending other regional transit linkages to Roseville and developing convenient connections to Sacramento Regional Transit</u> light rail service to Roseville. |
| Policy CIRC3.5 [Policy 5]: Consider the transit <u>access to health care, community services and employment, and the needs of seniors, minorities, low income persons, persons with disabilities, and other persons who may be transit-dependent when making decisions regarding transit service.</u> |
| <u>Policy CIRC3.6: Identify opportunities to increase the number and/or capacity of park-and-ride lots as needed, to increase transit and carpool/vanpool use.</u> |
| <u>Policy CIRC3.7: Pursue transit routes that optimize ridership</u> |

| |
|---|
| Table 2-1. Policy Changes included in the Proposed General Plan Update |
| <u>Policy CIRC3.8: Include transit improvements with new roadway or roadway expansion projects.</u> |
| Travel Demand Management (renamed from “Transportation Systems Management” |
| Goal CIRC4 [Goal 1]: Reduce travel demand vehicle miles traveled on the City's and regional roadway systems, while expanding mobility options for residents, employees, and visitors. |
| Goal 2: Reduce total vehicle emissions in the City of Roseville and the South Placer County region. |
| Policy CIRC4.1 [Policy 1]: Continue to enforce the City's TSM ordinance and monitor its effectiveness. <u>The City will review and condition projects, as appropriate, to reduce travel demand per capita and per employee by promoting increased density near transit, improving the quality of non-vehicular transportation options, providing incentives for non-vehicular travel, encouraging the mixing of complementary land uses in proximity to one another, and using other feasible methods.</u> |
| Policy CIRC4.2 [Policy 2]: Work with appropriate agencies to develop implementation measures to reduce vehicular travel demand and total vehicle miles traveled and meet air quality goals. |
| <u>Policy CIRC4.3: Specific Plan Amendments and land use development projects not included in a Specific Plan shall be evaluated for consistency with the City’s VMT Impact Standards.</u> |
| <u>Policy CIRC4.4: If the evaluation required by CIRC4.3 finds a Specific Plan Amendment or land use development project not included in an adopted Specific Plan is inconsistent with thresholds established within the City’s VMT Impact Standards, on-site land use, transportation, and urban design-related VMT-reducing features should be prioritized to demonstrate consistency. If feasible on-site features cannot achieve the VMT threshold, Specific Plan Amendments and land use development projects outside Specific Plan Areas may demonstrate equivalent consistency through off-site actions or fair-share fee contributions, or if consistency cannot be achieved, shall implement all feasible measures.</u> |
| <u>Policy CIRC4.5: Policy CIRC4.3 does not apply to projects that propose residential or office uses in Transit Priority Areas or low-VMT areas. Low-VMT areas are those shown by the General Plan travel demand model or the SCS travel demand model to have per-capita, per-employee, or per-service-population VMT rates that are at least 15 percent less than the baseline citywide or regional rate.</u> |
| <u>Policy CIRC4.6: Promote and incentivize Infill development, particularly affordable housing development, through assistance in obtaining outside grant funding and reductions or deferrals in impact fees.</u> |
| <u>Policy CIRC4.7: Continue to educate the public and business community about alternative modes of travel through Safe Routes to School, Transportation Systems Management, and other local and regional programs and events.</u> |
| Bikeways/Trails |
| [Goal 3] Establish education, encouragement and enforcement programs that increase bicyclist and motorist awareness of the rights and responsibilities of bicyclists in order to foster a climate of acceptance for bike riding. [Moved to be Policy CIRC5.6] |
| Goal CIRC5.4 [Goal 4]: Obtain Maintain the Bicycle Friendly Community Designation from the League of American Bicyclists. |
| Policy CIRC5.1 [Policy 1]: Develop a comprehensive and safe system of recreational and commuter bicycle routes and trails that provides connections between the City's major employment destinations (including employment) and housing areas and between its existing and planned bikeways. |
| Policy CIRC5.3 [Policy 4]: Enhance bicycle education, encouragement, and enforcement programs targeted at adult and child bicyclists and motorists. |
| <u>Policy CIRC5.5: Specific Plans shall incorporate an off-street, Class I bicycle system as part of the comprehensive on-street and off-street bikeway plan.</u> |
| Policy CIRC5.6 [Goal 3]: Establish Educate Education, encourage encouragement, and enforcement programs that increase bicyclist and motorist awareness of the rights and responsibilities of bicyclists in order to foster a climate of acceptance for bike riding. <i>[Moved from the referenced existing policy]</i> |

| |
|---|
| Table 2-1. Policy Changes included in the Proposed General Plan Update |
| <u>Policy CIRC5.7: Include on-street and off-street bicycle improvements with new roadway and roadway expansion projects.</u> |
| Pedestrian Access [new Circulation Element component] |
| <u>Goal CIRC6.1: Increase the percentage of pedestrian trips in Roseville.</u> |
| <u>Policy CIRC6.1: Establish and maintain a safe and continuous pedestrian network that provides connections between residential areas and commercial retail and services, employment, public services, parks, and public transit.</u> |
| <u>Policy CIRC6.2: Promote development patterns that encourage people to walk to destinations.</u> |
| <u>Policy CIRC6.3: Enhance pedestrian-friendly street environments and design public spaces and destinations in a way that encourages walking.</u> |
| <u>Policy CIRC6.4: Sidewalks shall be required in all new Specific Plan Areas with new roadway construction and with roadway expansion.</u> |
| <u>Policy CIRC6.5: In reviewing proposed development projects and implementing public projects, the City will incorporate standards designed to protect the security of pedestrians and minimize the potential for collisions involving pedestrians.</u> |
| <u>Policy CIRC6.6: In the Infill Area, the City will actively seek funding sources to complete and maintain sidewalk networks.</u> |
| <u>Air Quality and Climate Change</u> |
| Goal AQ1.1 [Goal 1]: Improve Roseville's air quality by: a) Achieving and <u>Reduce local air pollutant emissions to assist with meeting and</u> maintaining ambient air quality standards established by the U.S. Environmental Protection Agency and the California Air Resources Board; and, b) and <u>and</u> minimizing public exposure to toxic or hazardous air pollutants and air pollutants that create a public nuisance through irritation to the senses (such as unpleasant odors). |
| Goal AQ1.3 [Goal 3]: Encourage the coordination <u>Coordinate</u> and integration of all forms of public transport to, while reducing motor vehicle emissions, through a decrease in the average daily vehicular trips and vehicle miles traveled, while encouraging an increase in, and by increasing the commute vehicle occupancy rate by 50% to 1.5 or more persons per vehicle. |
| Goal AQ1.4 [Goal 4]: Increase the capacity of the <u>pedestrian, bicycle, and transit</u> transportation systems and <u>and</u> Promote and the share of City-owned vehicular transportation that uses less-polluting fuels, such as electricity, including the roadway system and alternate modes of transportation. |
| Goal AQ1.5 [Goal 5]: Provide adequate pedestrian and bikeway <u>bicycle</u> facilities for present and future transportation needs. |
| Goal AQ1.6 [Policy 6]: Promote a well-designed and efficient light rail and transit system. |
| Goal AQ1.7 [Policy 7]: While recognizing that the automobile is the primary form of transportation, the City of Roseville should make a commitment to shift from the automobile to other modes of transportation. <u>Improve transit, biking, bicycle, and pedestrian access to lessen dependence on automobile travel and reduce household transportation costs.</u> |
| <u>Goal AQ1.8: Reduce City greenhouse gas emissions, consistent with local, regional, and state goals.</u> |
| <u>Goal AQ1.9: Enhance Roseville's resilience to local impacts of climate change.</u> |
| Policy AQ1.1 [Policy 1]: Cooperate with other agencies to develop a consistent and an effective approach to <u>reducing</u> air pollution planning . |
| Policy AQ1.2 [Policy 2]: Work with the Placer County Air Pollution Control District to monitor air pollutants of concern on a continuous basis, <u>and support Air District efforts to minimize emissions from stationary sources.</u> |
| Policy AQ1.3 [Policy 3]: <u>Projects that could generate substantial air pollutant emissions or expose sensitive uses to substantial air pollutant concentrations should incorporate strategies to reduce</u> operational emissions, applicable emissions control <u>exposure to such emissions using measures recommended by the Placer County Air Pollution</u> |

| |
|---|
| Table 2-1. Policy Changes included in the Proposed General Plan Update |
| <u>Control District, and other relevant applicable, feasible strategies, as needed, to avoid significant air quality impacts</u> Develop consistent and accurate procedures for evaluating the air quality impacts of new projects. |
| <u>Policy AQ1.5: Coordinate with local and regional non-profits and other agencies to substantially increase Roseville's tree canopy, which serves as a natural air pollutant filtration system that can counter the urban heat island effect. Focus on neighborhoods without a tree canopy and areas prioritized for natural habitat restoration.</u> |
| <u>Policy AQ1.6: Require new development and City projects to reduce greenhouse gas emissions sources in the Planning Area to the greatest degree feasible.</u> |
| <u>Policy AQ1.7: The City will participate in and support regional greenhouse gas reduction and adaptation programs that are consistent with the General Plan and have available funding.</u> |
| <u>Policy AQ1.8: Use the Multi-Hazard Mitigation Plan and regional collaborations to guide implementation of adaptation and resilience strategies associated with the anticipated local impacts of climate change.</u> |
| <u>Policy AQ1.9: Preserve and enhance carbon sequestration resources in the City to improve air quality and reduce net greenhouse gas emissions.</u> |
| <u>Policy AQ1.10: Improve overall health and sustainability of the community by reducing emissions of greenhouse gases that contribute to climate change.</u> |
| <u>Policy AQ1.11: Promote local purchase and use of electric vehicles through incentives and strategic expansion of charging infrastructure.</u> |
| Policy AQ1.12 [Policy 5] Policy 5: Develop transportation systems that minimize vehicle delay and <u>reduce vehicle emissions by improving the desirability of walking, bicycling, and public transportation relative to vehicular travel air pollution.</u> |
| Policy AQ1.13 [Policy 6] Policy 6: Develop consistent and accurate procedures for mitigating transportation emissions from new and existing projects <u>Identify feasible strategies to reduce and transportation associated with existing development within the Planning Area.</u> |
| Policy AQ1.14 [Policy 7] Policy 7: Encourage alternative modes of transportation, including pedestrian, bicycle, and transit usage use. |
| <u>Policy AQ1.15: Promote and incentivize low-emissions vehicles and associated charging infrastructure. Pursue funding from state programs and other sources to facilitate local purchase and use of electric vehicles.</u> |
| Policy AQ1.16 [Policy 9]: Encourage <u>Implement</u> land use policies that maintain and improve air quality <u>and expand opportunities for transit-oriented development, which allows residents to significantly reduce vehicular transportation and associated air pollutant emissions.</u> |
| Policy AQ1.17 [Policy 10]: Conserve energy and reduce air <u>pollutant</u> emissions by encouraging energy efficient building designs and transportation systems <u>and promoting energy efficiency retrofits of existing structures.</u> |
| <u>Policy AQ1.18: Promote building and transportation energy efficiency in new residential and commercial development through encouraging and incentivizing implementation measures early in the design and development process.</u> |
| <u>Policy AQ1.19: Encourage energy efficiency by identifying potential cost savings, resource, and health benefits.</u> |
| Policy AQ1.20 [Policy 8]: <i>Separate air pollution-sensitive land uses from sources of harmful air pollution.</i> |
| Policy AQ1.21 [Policy 11]: Protect City residents from the risks involved in the transport, distribution, storage, use, and disposal of hazardous materials, <u>and coordinate with other agencies and organizations to reduce existing sources of health risk.</u> |
| <u>Policy AQ1.22: Support improvements to diesel engines, limits on idling, and incorporation of technology and management practices that reduce harmful emissions at the Rail Yard.</u> |

| Table 2-1. Policy Changes included in the Proposed General Plan Update |
|---|
| Open Space and Conservation |
| Open Space System |
| Goal OS1.1 [Goal 1]: Establish a comprehensive system of public and private open space, including interconnected open space corridors that should include <u>include</u> oak woodlands, riparian areas, grasslands, wetlands, and other open space resources. |
| Goal OS1.2 [Goal 2]: Utilize the open space system to connect neighborhoods and separate development areas within the City. |
| Goal OS1.3 [Goal 3]: Provide access to public open space areas through the establishment of a series <u>network</u> of public linkages <u>pedestrian and bicycle trails</u> that will be adequately managed and protected. |
| [Goal 5]: Consider alternatives to City ownership and management of open space preserve areas. <i>[moved to be Policy OS1.7]</i> |
| Policy OS1.3 [Policy 3]: Work with adjacent jurisdictions to connect the City with regional open space and trail systems, providing a network of open space and habitat resources, pathways, and, where reasonable <u>feasible</u> , equestrian trails through the City to link nearby communities. |
| Policy OS1.4 [Policy 4]: Require all new development to provide <u>pedestrian and bicycle</u> linkages to existing and planned open space systems. Where such access cannot be provided through the creation of open space connections, identify alternative linkages. |
| Policy OS1.6 [Policy 6]: Take into account consideration of natural habitat areas in developing <u>when designating</u> linkages <u>access to</u> , and in preserving open space areas. Identify alternate sites <u>locations and design</u> for linkages <u>access</u> where sensitive habitat areas have the potential to be adversely impacted. |
| Policy OS1.7 [Goal 5]: Consider alternatives to City ownership and management of open space preserve areas. <i>[Moved from referenced existing policy]</i> |
| <u>Policy OS1.12: In new development, properties adjoining open space should be oriented toward this open space in order to reduce maintenance, security, and aesthetic concerns. Not more than 50 percent of residential and non-residential properties, as measured by the length of adjoining parcel boundaries, should back up to adjacent open space.</u> |
| Vegetation and Wildlife |
| Goal OS2.2 [Goal 2]: Maintain healthy, and well-managed, <u>and connected</u> habitat areas in conjunction with one another, <u>that</u> maximizing the potential for compatible open space <u>habitat preservation and compatible</u> recreation, and visual experiences. |
| Policy OS2.1 [Policy 1]: Incorporate existing trees into development projects, <u>with an Particular emphasis</u> shall be placed on avoiding the removal of groupings or groves of trees. and w Where preservation is not feasible, continue to require mitigation for the loss of removed trees. Particular emphasis shall be placed on avoiding the removal of groupings or groves of trees. |
| Policy OS2.2 [Policy 2]: Preserve and rehabilitate <u>restore</u> continuous riparian corridors and adjacent habitat along the City's creeks and waterways. |
| Policy OS2.6 [Policy 6]: Provide for <u>the</u> protection and enhancement of native fishery resources, including as informed by <u>as informed by</u> continued coordination with the California Department of Fish and Wildlife to release water into Linda Creek. |
| Policy OS2.7 [Policy 7]: Require <u>consistency with the City of Roseville Open Space Preserve Overarching Management Plan for dedication and management of on-site wetland</u> cumulative mitigation plans for wetlands, where feasible, in association with <u>as part of Specific Plans new development.</u> |
| Policy OS2.8 [Policy 8]: Consider substitute <u>off</u> -site mitigation for federally non-regulated wetlands, provided that such mitigation will provide comparable habitat values. |
| Policy OS2.9 [Policy 9]: Limit the access of pedestrians and cyclists to vernal pool and wetland areas so that access is compatible with long-term protection of these natural resource areas, <u>consistent with the City's Open Space Preserve Overarching Management Plan.</u> |

| |
|--|
| Table 2-1. Policy Changes included in the Proposed General Plan Update |
| Policy OS2.10 [Policy 10]: Manage public <u>open space preserves</u> lands with <u>that can provide habitat for</u> special-status species to encourage propagation of the species and discourage <u>spread of</u> non-indigenous, invasive species, <u>consistent with the City's Open Space Preserve Overarching Management Plan</u> . |
| Policy OS2.12 [Policy 12]: Consider the use of City property for habitat preservation and mitigation requirements resulting from <u>new</u> development proposals when such efforts do not conflict with existing resources, recreational opportunities, or other City goals, policies, or programs. |
| <u>Water Quality and Groundwater Recharge</u> |
| Policy OS3.1 [Policy 1]: Utilize cost-effective urban run-off controls, including Best Management Practices, <u>such as low impact development and naturalized stormwater management features</u> , to <u>reduce the rate of stormwater runoff</u> and limit urban pollutants from entering the watercourses. |
| <u>Historical, and Cultural, Tribal Cultural, and Paleontological Resources</u> |
| Goal OS4.1 [Goal 1]: Strengthen Roseville's unique identity through the protection of its archaeological, historic, <u>paleontological</u> , and <u>tribal</u> cultural resources. |
| <u>Policy OS4.1: Consult with local Native American Tribes that are traditionally and culturally affiliated with resources that could be affected by City plans or projects, identify areas that may be of cultural or tribal cultural significance, and determine appropriate treatment for the areas.</u> |
| Policy OS4.3 [Policy 2]: When feasible, incorporate significant archaeological and <u>tribal cultural resource</u> sites into open space areas. |
| Policy OS4.4 [Policy 3]: Subject to approval by <u>The City shall coordinate with</u> the appropriate federal, state, local agencies, and Native American Most Likely Descendant (MLD) Tribes upon discovery of artifacts. <u>The City shall offer the Maidu Museum & Historic Site as a temporary housing location for artifacts</u> that are discovered and subsequently determined to be "removable," should be offered for dedication to the Maidu Interpretive CenterMuseum & Historic Site. |
| Policy OS4.6 [Policy 5]: <u>Buildings and other resources that have historical or architectural value should be preserved, wherever feasible, and the City will encourage private property owners to preserve and maintain or renovate significant historic resources, consistent with applicable Department of the Interior historic preservation standards.</u> Establish standards for the designation, improvement and protection of buildings, landmarks, and sites of cultural and historic character. |
| Policy OS4.7 [Policy 6]: <u>Participate in countywide inventories of historical sites</u> Participate in the completion of a countywide inventory of historical sites. |
| Policy OS4.9 [Policy 8]: Explore <u>Pursue</u> funding for cultural, archaeological, and historic programs and activities. |
| Policy OS4.10 [Policy 9]: Provide opportunities to <u>for</u> public awareness and education through coordination with the <u>Roseville</u> Historical Society and local schools. |
| <u>Policy OS4.11: Provide guidance to construction personnel for recognizing paleontological resources and when items of paleontological significance are discovered within the City, a qualified paleontologist shall be called to evaluate the find and to recommend proper action.</u> |
| <u>Parks and Recreation</u> |
| Goal PR1.1 [Goal 1]: Provide adequate park land, recreational facilities, and <u>a wide variety of programs, activities, and educational opportunities</u> programs within the City of Roseville through <u>using</u> public and private resources. |
| Goal PR1.2 [Goal 2]: <u>Maximize the use of dedicated park lands and open space areas to provide</u> residents with both active/ <u>formal/programmable</u> and <u>passive/informal/non-programmed</u> recreation opportunities by maximizing the use of dedicated park lands and open space areas. |
| Policy PR1.1 [Policy 1]: The City shall ensure the provision of nine acres of parkland per 1,000 residents, <u>but may waive parkland acreage and fee requirements in targeted reinvestment areas, such as along mixed-use corridors in the Infill Area and the Downtown and Riverside Gateway Specific Plan Areas</u> except in certain instances in the Riverside and Downtown Specific Plan areas. |

| |
|--|
| Table 2-1. Policy Changes included in the Proposed General Plan Update |
| Policy PR1.2 [Policy 2]: Retain flexibility in applying park lands standards, in terms of size, facilities, and service areas, so that existing and future needs can be met. |
| Policy PR1.3 [Policy 3]: The City may consider allocating park credits for lands <u>open space lands</u> that provides active and/or passive recreational value <u>to residents as counting toward the parkland standards.</u> |
| <u>Policy PR1.4: The City will consider payment of in-lieu fees for both development and parkland as an alternative to dedication of land in order to achieve the parkland standard.</u> |
| <u>Policy PR1.5: The City shall prioritize discretionary and grant funding for areas of the community that are underserved in terms of access to passive and active recreation opportunities.</u> |
| <u>Policy PR1.6: Identify opportunities to develop additional parks or other public recreation facilities in underserved areas of the community where access to such facilities exceeds a one-half mile walking distance for residents.</u> |
| <u>Policy PR1.7: Continue to collaborate with the local school district on planning, financing, and development of joint-use park and recreational facilities.</u> |
| Policy PR1.10 [Policy 6]: Take into consideration energy efficiency and water conservation, including the use of treated wastewater, in park <u>design and development of parks, streetscapes, and paseos and design.</u> |
| Policy PR1.12 [Policy 8]: Require that p <u>Parks and recreational facilities in new development areas be phased or fully completed so as to should be available as by the time adjacent residential uses are developed occupied.</u> |
| [Policy 9]: Continue to maintain and upgrade as necessary City parks and open space areas through the Parks, Recreation & Libraries Department, to assure safe, clean and orderly facilities. [Moved to Implementation Measures] |
| [Policy 10]: Continue to provide a wide variety of programs, activities, and educational opportunities for the community. [Moved to be Goal PR1.1] |
| Policy PR1.13 [Policy 11]: Through parks and recreation facilities and programs, A commodate those with special needs <u>through parks and recreation facilities and programs,</u> including <u>for</u> teenagers, seniors, and the disabled <u>people with disabilities,</u> and meet the requirements of the Americans <u>with</u> Disabilities Act. |
| Policy PR1.14 [Policy 12]: Ensure that <u>adequate funding is provided for initial development and ongoing maintenance and operation of</u> new public parks, and recreation facilities, open space, paseos, landscape areas and greenways. provide adequate funding for initial development, as well as ongoing maintenance and operation. |
| Public Facilities |
| Civic Center, Community Facilities, and Maintenance Facilities |
| Goal PF1.1 [Goal 1]: Continue to focus City administrative facilities downtown <u>Downtown</u> by providing efficient expansion opportunities to fill future needs, good public service and access, and a quality civic architectural image for the downtown area. |
| Policy PF1.1 [Policy 1]: <u>The City will plan for and maintain adequate City facilities in the Downtown area.</u> Continue to implement the Civic Center Master Plan |
| Policy PF1.2 [Policy 2]: Develop clustered community facilities, including libraries, parks, schools, community centers, and public meeting places, to maintain high <u>high</u> -quality services at the neighborhood level. |
| <u>Policy PF1.3: Explore collaborative or co-location agreements with public and private organizations and businesses where needed facility expansion by the City is not feasible due to limited resources and/or space.</u> |
| [Policy 3]: Implement the Corporation Yard Master Plan, including consolidation and expansion of existing maintenance services, at the Hilltop site. |
| <u>Policy PF1.4: Ensure the costs of ongoing maintenance and operations are fully considered when planning and designing new capital facilities.</u> |
| Public Library System |
| Goal PF2.3 [Goal 3]: Create environments that encourage opportunities for self-learning, <u>and</u> cultural and civic engagement. |

| Table 2-1. Policy Changes included in the Proposed General Plan Update |
|---|
| Policy PF2.2 [Policy 2]: Maintain the library in downtown Downtown Roseville as a key public service to revitalizing Downtown Roseville. |
| Policy PF2.3 [Policy 3]: Provide libraries throughout the City to locally service residents, with a focus on Consideration should be given to accessible, relatively higher-density and infill areas that are along major transit routes that utilize public transportation . |
| Policy PF2.4 [Policy 4]: Provide branch libraries to service population increments of ≈ approximately 40,000. The City shall give priority to the construction of new libraries in communities that are deficient in library services. |
| Policy PF2.5 [Policy 5]: Plan for the clustering and connection of community facilities in neighborhood centers that include, including parks, libraries, and community centers, and other complementary uses . |
| Policy PF2.6 [Policy 6]: Continue to partner with local school districts, businesses, community members, and Placer County in the provision of high high -quality library services. |
| Policy PF2.7 [Policy 7]: Encourage the transition of libraries as multi-functional facilities, cultural centers, gathering spaces, and as venues for programs, including arts-related events and programs . |
| Schools |
| Goal PF3.1 [Goal 1]: The provision of adequate school facilities is a community priority. The school districts and the City will work closely together to obtain adequate funding and site identify locations for new school facilities. If necessary, and where legally feasible, new development may be required to contribute, on the basis of need generated, 100% of the cost for new facilities. |
| Goal PF3.2 [Goal 2]: The City and the school districts enjoy encourage a mutually-beneficial arrangement in the joint-use of school and public facilities. Joint-use facilities shall be encouraged in all cases unless there are overriding circumstances that make it impossible or detrimental to either the school district or the City's park and recreation facilities/programs. |
| [Goal 3]: School facilities shall be available for use in a timely manner. <i>[Addressed by Policy FP3.2]</i> |
| Policy PF3.1 [Policy 1]: The City and the school districts will work cooperatively with the school districts to explore all local and State funding sources in order to secure adequate funding for new school facilities. |
| [Policy 2 addressed by Policy FP3.2]: Adequate facilities must be shown to be available in a timely manner before approval will be granted to new residential development. |
| Policy PF3.2 [Policy 3]: Financing for new school facilities will be encouraged to should be identified and secured before new development is approved, where feasible . |
| Policy PF3.4 [Policy 5]: The City and the school districts will work together to develop criteria for the designation of school sites, and consider the opportunities for reducing the cost of land for school facilities, and work to minimize the impact of school traffic on the adjacent neighborhoods vehicular traffic by ensuring Encourage opportunities for bicycle and pedestrian connections . The City shall encourage the school districts to comply with City standards in the design and landscaping of school facilities. |
| Policy PF3.5 [Policy 6]: For proposed joint -use facilities, t The City and the school districts will prepare a joint use study for each school facility to determine the feasibility of joint-use facilities. If determined to be feasible, a joint-use agreement will be pursued will pursue joint -use agreements to maximize public use of facilities, minimize duplication of services provided, and identify operational and maintenance responsibilities , and facilitate shared financial and operational responsibilities. |
| Policy PF3.7 [Policy 8]: Schools, where feasible, shall should be located away from hazards or sensitive resource conservation areas, except where the proximity of resources may be of educational value and the protection of the resource is reasonably assured. |
| <u>Policy PF3.9: Higher educational opportunities are a priority to the City and the region. The City will look for opportunities to support the establishment of universities and colleges in Placer County.</u> |

| Table 2-1. Policy Changes included in the Proposed General Plan Update |
|--|
| Electric Utility |
| Goal PF4.1 [Goal 1]: Reliability: maintain a resilient and highly reliable electric system with sufficient resource capacity and reserves to meet current and future demand. <u>Reliability: maintain a resilient and highly reliable electric system with sufficient resource capacity and reserves to meet current and future demand.</u> municipal electric utility that provides an efficient, economical, and reliable electric system. |
| <u>Goal PF4.2: Affordability: fulfill customer electric service needs at just and reasonable rates.</u> |
| Goal PF4.3 [Goal 2]: <u>Compliance: Comply with applicable local, state, and federal mandates.</u> Provide electric services to all existing and future Roseville development areas through the City's Electric Utility. The provision of services by another provider may be considered where it is determined that such service is beneficial to the City and its utility customers or the provision of City services is not feasible. |
| [Goal 3]: Maintain adequate sufficient resource reserves capacity consistent with industry standards, sound utility planning, and applicable contracts. |
| [Goal 4]: Aggressively pursue cost effective and environmentally safe alternative sources of energy and energy conservation measures. |
| Policy PF4.1 [Policy 1]: Secure new <u>supply-side and demand-side</u> electric resources, and transmission as necessary, to meet projected demand levels <u>forecasted demand and reserve requirements.</u> |
| Policy PF4.2 [Policy 2]: Provide improvements to the sub-transmission and distribution system, consistent with facility planning studies, to ensure <u>maintain</u> a reliable source of electricity is maintained. |
| <u>Policy PF4.4: Comply with federal, state, and local greenhouse gas reduction targets, including the renewable portfolio standards and carbon-free electricity requirements.</u> |
| [Policy 4]: Extend existing resource contracts if found to be in the best interest of the City. |
| [Policy 5]: Explore the feasibility of the development of and participation in renewable energy resources. |
| Policy PF4.5 [Policy 6]: Adopt <u>Maintain an Integrated</u> load/r <u>Resource</u> management p Plan, incorporating energy efficiency, <u>demand- and supply-side management, greenhouse gas reduction, renewable portfolio standard compliance,</u> conservation, load management, and reliability strategies, identifying program objectives and implementation and monitoring mechanisms. |
| Policy PF4.6 [Policy 8]: Pursue reasonable and cost-effective energy efficiency, conservation, and load management programs <u>that provide benefits to the community,</u> pertinent to the electric utility system. |
| Policy PF4.7 [Policy 7]: Pursue effective measures to enhance reliability of through <u>through</u> interconnection of the <u>the</u> electric utility system to with the region-wide grid. |
| Policy PF4.9 [Policy 11]: Develop and implement public education programs designed to increase the public's awareness of energy issues, including conservation measures and practices. |
| [Policy 9]: Continue to pursue emergency electric supplies. |
| <u>Privately Owned Utilities</u> |
| Policy PF5.4 [Policy 4]: Work with non-City-owned utility providers to insure <u>ensure</u> that uses and equipment are planned and constructed in a manner consistent with adopted land use policies and design guidelines, to the extent feasible. |
| Water System |
| Goal PF6.1 [Goal 1]: Maintain a water system that adequately serves the existing community and planned growth levels <u>through buildout,</u> ensuring the ability to meet projected water demand and to provide needed improvements, repairs, and replacements in a timely manner. |
| Goal PF6.2 [Goal 2]: Provide water services to all existing and future Roseville water utility customers. The provision of services by another provider may be considered where it is determined that such service is beneficial to the City and its utility customers or the provisions of City services is not feasible. |
| Goal PF6.3 [Goal 3]: Ensure that safe drinking water standards are met and maintained, in accordance with State the <u>California State Water Resources Control Board, Division of Drinking Water</u> Department of Health Services and EPA regulations. |

| |
|--|
| Table 2-1. Policy Changes included in the Proposed General Plan Update |
| Goal PF6.4: [Goal 4] Actively pursue water conservation efficiency measures <u>to ensure compliance with all State of California mandates.</u> |
| Goal PF6.5 [Goal 5]: Actively pursue supplemental diverse water supplies, <u>including surface, groundwater, and other sources for water supply reliability and system improvements that increase reliability.</u> |
| <u>Goal PF6.6: Maintain systems that are resilient and reliable for treatment, conveyance, and energy infrastructure.</u> |
| Policy PF6.1 [Policy 1]: Secure and maintain sufficient and diverse sources of water to meet the needs of the existing community and planned growth. |
| Policy PF6.2 [Policy 2]: Provide sufficient water treatment capacity and infrastructure to meet projected water demand through City <u>buildout of the General Plan.</u> |
| Policy PF6.3 [Policy 3]: Initiate, upon 75% percent of treatment plant capacity, expansion studies to determine necessary improvements, <u>if any,</u> to meet projected water demand. |
| Policy PF6.4 [Policy 4]: Establish a process for monitoring Monitor growth trends to anticipate <u>and plan for future</u> water consumption demand needs. |
| Policy PF6.5 [Policy 5]: Ensure all development provides for and pays a New development shall pay a fair share of the cost for adequate water <u>supply, treatment and</u> distribution, including <u>extension of</u> water line mains extensions, easements <u>acquisitions,</u> and <u>treatment</u> plant expansions, <u>water storage, groundwater wells, and pumping expansions,</u> and <u>dry year reliability.</u> |
| Policy PF6.7 [Policy 7]: Provide an emergency back up system to add Develop a portfolio of energy supply and/or generation options to ensure sufficient energy reliability to for the potable water system <u>facilities</u> as determined by the Environmental Utilities Department. The City will continue to operates its surface water, groundwater, and recycled water systems conjunctively. Any additions to or expansions of the City water system shall include compatible facilities, infrastructure, and resource/supply mixes for like conjunctive operations, as determined by Environmental Utilities. |
| Policy PF6.8 [Policy 8]: Develop and expand pursue alternatives to continue delivery <u>conjunctive use of water</u> with from in collaboration with neighboring public agencies PCWA and SJWD water to Roseville. |
| Policy PF6.10 [Policy 10]: Develop and implement water conservation efficiency standards and measures as necessary elements of the water system. |
| Policy PF6.11 [Policy 11]: <u>Continue</u> Implement and the management and expansion of the <u>groundwater and</u> aquifer storage and recovery program <u>to increase resiliency and reliability of water supply during all supply conditions.</u> Any additions to, or expansions of the City's system shall include like facilities, infrastructure, and technologies for aquifer storage and recovery. |
| Policy PF6.12 [Policy 12]: Establish a process for Continue monitoring <u>and advocacy for legislative and regulatory requirements that would provide local benefits for the City's water</u> advocating for or against new legislative and regulatory requirements affecting/benefitting the manner in which services are provided to the city's utility customers. |
| Wastewater and Recycled Water Systems |
| Goal PF7.2 [Goal 2]: Provide wastewater services to all existing and future Roseville development through the City's wastewater utility. The provision of services by another provider may be considered when it is determined that such service is beneficial to the City and its utility customers or the provision of City services is not feasible. |
| Goal PF7.4 [Goal 4]: Meet State of California and EPA water quality State and federal standards for the discharge of treated wastewater, as well as meet State of California water quality standards for the production of recycled water. |
| [Policy 2]: Ensure adequate storm surge capacity at the wastewater treatment plants. |
| Policy PF7.2 [Policy 3]: Initiate, upon 75 percent utilization of treatment plant capacity, expansion studies to determine necessary <u>demand management and capacity</u> improvements to meet projected wastewater treatment demands. |
| Policy PF7.3 [Policy 4]: Ensure that wastewater treatment capacity is available for proposed <u>planned development and intensification</u> and that wastewater generation is minimized. |
| Policy PF7.5 [Policy 6]: Develop and plan, and provide incentives for the use of recycled water by the public and private sectors. |

| |
|---|
| Table 2-1. Policy Changes included in the Proposed General Plan Update |
| Policy PF7.7 [Policy 8]: <u>Continue monitoring and advocacy for legislative and regulatory requirements that would provide local benefits for the City's wastewater utility customers.</u> Establish a process for monitoring new legislative and regulatory requirements affecting the manner in which services are provided to the City's utility customers. |
| Solid Waste Collection and Disposal, Source Reduction & Recycling |
| Policy PF8.2 [Policy 2]: Comply with the source reduction and recycling standards mandated by the State by reducing the projected quantity of solid waste disposed at the regional landfill by 50%, as well as any mandated future reductions. |
| Policy PF8.3 [Policy 3]: Require a waste characterization profile as part of the initial study, under the California Environmental Quality Act (CEQA), for <u>proposed</u> large-scale commercial and industrial development projects. |
| Policy PF8.5 [Policy 5]: Develop <u>and implement</u> public education and recycling programs. |
| Water and Energy Efficiency |
| Goal PF9.1 [Goal 1]: Preserve scarce resources by recognizing the importance of <u>efficiency</u> conservation in water and energy management. |
| Goal PF9.2 [Goal 2]: Balance conservation <u>efficiency</u> efforts with water and energy supplies for the maximum benefit of Roseville's residents. |
| Policy PF9.1 [Policy 1]: Develop and implement water conservation <u>efficiency</u> standards. |
| [Policy 2]: Implement various water conservation plans developed by the Environmental Utilities Department. |
| Policy PF9.3 [Policy 4]: Protect the quality and quantity of the City's groundwater <u>by actively seeking, throughout the City, areas suitable for groundwater recharge with land areas with suitable soils and geology for ground-water recharge.</u> and consider designating areas as open space where recharge potential is high. |
| Policy PF9.4 [Policy 5]: Develop and adopt a landscape ordinance that provides <u>implement</u> standards for the use of drought tolerant, and water- conserving <u>efficient</u> landscape practices for both public and private projects. |
| Policy PF9.5 [Policy 6]: Develop and implement public education programs designed to increase public participation in energy, water conservation <u>efficiency</u> , and recycled water use. |
| Policy PF9.8 [Policy 9]: Preserve scarce <u>natural</u> resources by undertaking major projects in energy conservation and load management, including increasing efficiency in the City's electrical system. |
| Policy PF9.9 [Policy 10]: Continue and expand energy efficiency and conservation programs to serve all utility users. |
| Safety |
| Seismic and Geologic Hazards |
| Policy SAFE1.1 [Policy 1]: Continue to monitor seismic activity in the region and take appropriate action if significant seismic hazards, including potentially active faults, are discovered in the planning area <u>Planning Area.</u> |
| Policy SAFE1.3 [Policy 3]: Minimize soil erosion and sedimentation <u>through</u> by maintaining compatible land uses, suitable building <u>placement, maximum lot coverage standards, context-sensitive</u> designs, and appropriate construction techniques. |
| Flood Protection |
| Policy SAFE2.1 [Policy 1]: Continue to regulate, through land use, zoning, and other restrictions, all uses and development in areas subject to potential flooding and require new development to comply with the State Plan of Flood Control <u>requirements.</u> |
| Policy SAFE2.2 [Policy 2]: Monitor and regularly update City flood studies, modeling, and associated land use, zoning, <u>drainage fees and flood management projects,</u> and other development regulations. |
| Policy SAFE2.3 [Policy 3]: Continue to pursue a regional approach to flood issues. <u>Participate in efforts to secure adequate flood management funding.</u> |
| Policy SAFE2.4 [Policy 4]: Provide flood warning and forecasting information to <u>the</u> community residents to reduce impacts to personal <u>private</u> property. |

| |
|--|
| Table 2-1. Policy Changes included in the Proposed General Plan Update |
| Policy SAFE2.6 [Policy 6]: Require new developments to <u>evaluate potential flood hazards, and</u> provide mitigation to insure <u>ensure</u> that the cumulative rate of peak run-off is maintained at pre-development levels. |
| Policy SAFE2.8 [Policy 8]: Establish <u>and maintain</u> flood control assessment districts or consider other funding mechanisms to mitigate flooding impacts. |
| Police Services |
| Policy SAFE3.4 [Policy 4]: Establish programs that respond to community concerns of crime, gangs, drug abuse, <u>homelessness, mental health,</u> and traffic. |
| [Policy 6]: Continue to enforce, update, and expand the Building Security Ordinance. |
| Policy SAFE3.7 [Policy 7]: Design parks to facilitate <u>that are conducive to</u> surveillance by adjoining residents, security services, and police. |
| Policy SAFE3.9 [Policy 9]: Coordinate with park rangers <u>patrol officers</u> in patrolling parks, and open space, <u>and trails</u> areas and continue coordination with other law enforcement agencies. |
| Fire Protection |
| Goal SAFE4.1 [Goal 1]: Protect against the loss of life, property, and the environment by the application of appropriate preventive on , educational al , and operational measures. |
| Policy SAFE4.2 [Policy 2]: <u>Continue to follow service level response times, as listed in the City's Standards of Cover document.</u> Strive to achieve the following service levels: Strive to achieve the following service levels: –8 minute 12 second Total Response Time 11 minute 30 second Effective Response Force 90 Second Call Processing Time 90 Second Turnout Time 5 minute 12 second Travel Time Maintain ISO rating of 3 or better |
| [Policy 7]: Continue to completion the permanent fire training classroom facility at the Fire Training Center. |
| [Policy 8]: Provide a comprehensive emergency medical services program to provide Advance Life Support services and ensure reliable ambulance transport services to aid citizens in need of rescue or medical assistance. |
| Hazardous Materials |
| Policy SAFE5.1 [Policy 1]: Require the disclosure, of the use, and storage, <u>and disposal</u> of hazardous materials in existing and proposed industrial and commercial activities and siting of hazardous waste disposal facilities in accordance with to comply with Placer County guidelines and state law local, state, and federal safety standards. |
| Policy SAFE5.3 [Policy 3]: Cooperate fully with both public and private agencies, as defined in the City of Roseville Hazardous Materials Emergency Response Plan in the event of a hazardous material emergency. |
| [Policy 4]: Develop a hazardous materials truck route through the City of Roseville and limit pickup and delivery of hazardous materials of hazardous materials during peak traffic hours. |
| Health Services |
| Policy SAFE6.1 [Policy 1]: The City shall plan for the public health implications of climate change, including disease and temperature effects Encourage the establishment of a trauma center to service the South Placer area. <u>The City shall plan for the continued growth and establishment of health services, and expand healthcare access to serve the South Placer region.</u> |
| Noise |
| Policy N1.1 [Policy 1]: <u>The City's exterior noise compatibility standards for uses affected by transportation noise sources are included as Table IX-1. Exterior noise levels shall be mitigated to the extent feasible using site planning, building orientation, and/or other construction techniques or design features. Noise barriers should only be used</u> |

| |
|--|
| <p>Table 2-1. Policy Changes included in the Proposed General Plan Update</p> <p><u>after other feasible noise reduction strategies are exhausted, and not where they would interrupt existing or future community visual, pedestrian, or bicycle connectivity.</u> Allow the development of new noise sensitive land uses (which include but are not limited to residential, schools, and hospitals) only in areas exposed to existing or projected levels of noise from transportation noise sources which satisfy the levels specified in Table IX-1. Noise mitigation measures may be required to reduce noise in outdoor activity areas and interior spaces to the levels specified in Table IX-1.</p> <p>Recognizing that in increasingly urban areas it is difficult to maintain suburban noise standards, and in order to facilitate the City's goals to encourage reinvestment and economic development in the Riverside and Downtown Specific Plan areas, the City may elect to allow new noise sensitive land uses on a case by case basis in proximity to transportation sources. Noise mitigation, including an acoustical analysis, would be required to reduce interior space noise levels to the standards specified in Table IX-1. Exterior noise levels would require mitigation to the extent feasible using building orientation, construction and design features; however ultimately, noise levels may exceed the noise standards identified in Table IX-1.</p> |
| <p><u>Policy N1.2: The City's interior noise compatibility standards for uses affected by transportation noise sources are 45 dBA L_{dn} for noise-sensitive uses such as residences, lodging, hospitals, assisted living facilities, and other places where people normally sleep. For noise-sensitive uses where people do not sleep, such as offices, schools, and uses with similar noise sensitivity, noise levels should be no greater than 45 dBA L_{eq}. Proposed projects should incorporate noise reduction strategies, if necessary, to achieve these interior noise levels.</u></p> |
| <p><u>Policy N1.3: The City's exterior noise compatibility standards for uses affected by non-transportation-related noise are defined within the City's Noise Ordinance, and should be applied consistent with the Noise Ordinance.</u></p> |
| <p>Policy N1.4 [Policy 2]: <u>The City will require new transportation improvement projects to be designed to limit noise impacts consistent with the standards contained in Table IX-1, to the extent feasible, through the use of appropriate attenuation techniques.</u> Require new roadway improvement projects to be mitigated so as not to exceed the noise levels specified in Table IX-1 at outdoor activity areas or interior spaces of existing noise sensitive land uses.</p> |
| <p>[Policy 3]: Evaluate new transportation projects, such as light and heavy rail, using the standards contained in Table IX-1. However, noise from these projects may be allowed to exceed the standards contained in Table IX-1 if the City Council finds that there are special overriding circumstances.</p> |
| <p>Policy N1.5 [Policy 4]: <u>If existing noise levels exceed the noise compatibility standards in Table IX-1 or Policy N1.2, then feasible methods of reducing noise to levels consistent with standards should be considered, but are not required. However, if existing noise levels exceed noise compatibility standards and a project results in a significant increase in noise (as defined below), then feasible methods of reducing noise to avoid a significant noise increase should be applied. In no case should a project result in a Clearly Unacceptable noise level according to Table IX-1.</u></p> <ul style="list-style-type: none"> • <u>Where existing exterior noise is less than 60 dB, a ≥ 5 dBA increase in noise is significant.</u> • <u>Where existing exterior noise is between 60 and 65 dBA, a ≥ 3 dB increase in noise is significant.</u> • <u>Where existing exterior noise is greater than 65 dB ≥ 1.5 dBA increase in noise is significant.</u> <p>Require an acoustical analysis where:</p> <p>a. _____ Noise sensitive land uses are proposed in areas exposed to existing or projected noise levels exceeding the levels specified in Table IX-1;</p> <p>b. _____ Proposed transportation noise source projects are likely to produce noise levels exceeding the levels specified in Table IX-1 at existing or planned noise sensitive uses.</p> <p>An acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be considered in the project design.</p> |
| <p><u>Policy N1.6: In order to facilitate reinvestment and economic development, if noise mitigation is found to be infeasible or in conflict with other City policies regarding community design, the City may elect to allow noise levels that exceed the noise standards identified in Table IX-1, although in no case should application of this policy result in a Clearly Unacceptable noise level according to Table IX-1.</u></p> |
| <p>Policy N1.7 [Policy 5]: <u>The City will</u> work in cooperation with Caltrans and the Union Pacific <u>Railroad</u> to maintain noise level standards for both new and existing projects in compliance with Table IX-1.</p> |
| <p><u>Policy N1.8: Public events, such as school sporting events, community festivals, and similar community and temporary events, and noise associated with emergency vehicles, alarms, or signals are exempt from the noise standards outlined in this Element.</u></p> |

| Table 2-1. Policy Changes included in the Proposed General Plan Update |
|---|
| <p>[Policy 6]: Allow the development of new noise sensitive uses (which include, but are not limited to, residential, school, and hospitals) only where the noise level due to fixed (non transportation) noise sources satisfies the noise level standards of Table IX-3. Noise mitigation may be required to meet Table IX-3 performance standards.</p> <p>Recognizing that in increasingly urban areas it is difficult to maintain suburban noise standards, and in order to facilitate the City's goals to encourage reinvestment and economic development in the Riverside and Downtown Specific Plan areas, the City may elect to allow new noise-sensitive land uses on a case by case basis in a mixed-use environment. Noise levels would require mitigation to the extent feasible using building orientation, construction and design features; however ultimately, noise levels may exceed noise standards identified in Table IX-1.</p> |
| <p>[Policy 7]: Require proposed fixed noise sources adjacent to noise sensitive uses to be mitigated so as not to exceed the noise level performance standards of Table IX-3.</p> |
| <p>[Policy 8]: Require an acoustical analysis where:</p> <p>Noise sensitive land uses are proposed in areas where existing or anticipated future fixed noise sources may</p> <p style="padding-left: 40px;">a. Proposed non residential or other fixed noise sources are likely to produce noise levels exceeding the performance standards of Table IX-3 at existing or planned noise sensitive uses.</p> <p>An acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be considered during project design.</p> |
| <p>[Policy 9]: Where noise mitigation measures are required to achieve the standards of Tables IX-1 and IX-3, the emphasis of such measures should be placed on site planning and project design. These measures may include, but are not limited to, building orientation, setbacks, landscaping, and building construction practices. The use of noise barriers, such as soundwalls, should be considered as a means of achieving the noise standards only after all other practical design-related noise mitigation measures have been integrated into the project.</p> |
| <p>Policy N1.9 [Policy 10]: <u>Construction-related noise that is consistent with the City's Noise Ordinance is exempt from the noise standards outlined in this Element.</u> Regulate construction-related noise to reduce impacts on adjacent uses consistent with the City's Noise Ordinance.</p> |
| <p><u>Policy N1.10: Include all feasible measures necessary, as a part of proposed development and public infrastructure projects to avoid substantial annoyance for adjacent vibration-sensitive uses, consistent with California Department of Transportation and Federal Transit Agency guidance.</u></p> |

2.5.3 UPDATES TO THE FORMAT TO BE MORE USER FRIENDLY

This includes updates for clarity and concision, incorporating images and other graphics, and moving detailed existing conditions information that goes quickly out of date to the General Plan Update EIR, so that the goals and policies become the focus of the body of the General Plan. Whereas the existing General Plan includes lengthy Setting and Outlook sections with text and tables for each topical area in an Element, the proposed General Plan includes a brief description of the topical area and then proceeds immediately to the goals and policies section. Using the Functional Classification section of the Circulation Element as an example, before reaching the goals and policies the existing General Plan includes:

- ▶ A one-page Setting section describing, in detail, the definition of functional classification, how roadways work, the history of the City's roadway system, a description of each roadway classification and its function and relationship to the City, as well as a summary of truck routes.
- ▶ An Outlook section describing the long-range planning for functional classifications.
- ▶ Four pages for maps and tables identifying every roadway in the City and its classification.

In the proposed Update, the Functional Classification section includes:

- ▶ One page describing the purpose of a functional classification system, and what the City’s classification system includes.
- ▶ Two maps, one showing the City’s roadway classifications and the other showing truck routes.

Other descriptive text has either been deleted, because the information is already contained within the City’s Improvement Standards and other documentation, or has been moved to the General Plan Update EIR. These changes do not affect how the General Plan is implemented or understood, they simply remove extraneous background information to create a more focused and accessible document that is focused on achieving the City’s long-term, comprehensive vision.

2.5.4 REVISE OUTDATED INFORMATION

Throughout the General Plan Update, outdated information that is important for understanding the City’s long-term development and conservation goals is updated.

2.5.5 ELEMENTS OF THE GENERAL PLAN

The General Plan contains an introductory chapter and nine elements:

1. Land Use
2. Circulation
3. Air Quality and Climate Change
4. Open Space and Conservation
5. Parks and Recreation
6. Public Facilities
7. Safety
8. Noise
9. Housing

The General Plan also incorporates a glossary and an appendix. The appendix includes a list of references that were used in the preparation of the General Plan, including issue papers prepared by the consultant during scoping, the EIR, and specific plans. All referenced materials are available through the Roseville Development Services Department – Planning Division during normal business hours, or on the City’s webpage at www.roseville.ca.us.

Each Element of the General Plan includes some background information to establish the context for the goals and policies. This background information is followed by goals and policies. Goals are a statement of the desired future condition related to public health, safety, or general welfare of the community. Goals set directions for policies. Policies are statements or conditions that guide decision making in relation to managing land use change, prioritizing public investments, mitigating environmental effects, and other related actions. Policies convey the City’s position on particular topics. Implementation measures are actions necessary to carry forward the City’s policies.

2.5.6 PLANNED LAND USES

While this proposed General Plan Update does not include changes to land use designations², the EIR comprehensively addresses impacts associated with full buildout of the General Plan, as modified by the proposed General Plan Update, compared to existing, physical environmental conditions at the time the Notice of Preparation was issued. The complete analysis presented in this EIR is intended to streamline future environmental reviews, provide for an exhaustive consideration of effects and alternatives, ensure appropriate consideration of cumulative impacts, avoid duplicative reconsideration of basic policy considerations, and allow for consideration of mitigating policies that would be uniformly applied to future projects entitled under the updated General Plan. The analysis in this EIR is the first tier of environmental review and creates the foundation upon which future, project-specific CEQA documents can build.

The City has assigned land use designations to most portions of the Planning Area, with the exception of major road rights-of-way and developed areas that are outside the City limits, but within the City's Sphere of Influence (see Exhibit 2-3). For the purposes of analysis throughout this EIR, the City assumes buildout of the Planning Area with the approximate acreages per land use designation as shown in Table 2-2.

| Table 2-2. Acreage by General Plan Land Use Designation | |
|---|---------------|
| Land Use Designation | Acres |
| Residential | |
| Low-Density Residential | 11,000 |
| Medium-Density Residential | 1,300 |
| High-Density Residential | 800 |
| Commercial | |
| Neighborhood Commercial | 25 |
| Community Commercial | 1,900 |
| Regional Commercial | 340 |
| Office | |
| Business Professional | 800 |
| Industrial | |
| Light Industrial | 1,170 |
| Tech/Business Park | 30 |
| General Industrial | 1,140 |
| Transfer Station | 25 |
| Special Areas | |
| Central Business District | 60 |
| Public/Quasi-Public | 2,700 |
| Parks and Recreation | 2,140 |
| Open Space | 3,100 |
| Urban Reserve | 100 |
| TOTAL | 26,000 |
| Notes: Totals do not add due to rounding. The total acreage does not include approximately 3,000 acres in the Planning Area of undesignated road rights-of-way and other undesignated land. | |

² As noted throughout this EIR, this General Plan Update does not include any changes to land use designations, expansion to the City's Planning Area, or other major physical changes to areas planned for development compared to the existing General Plan.

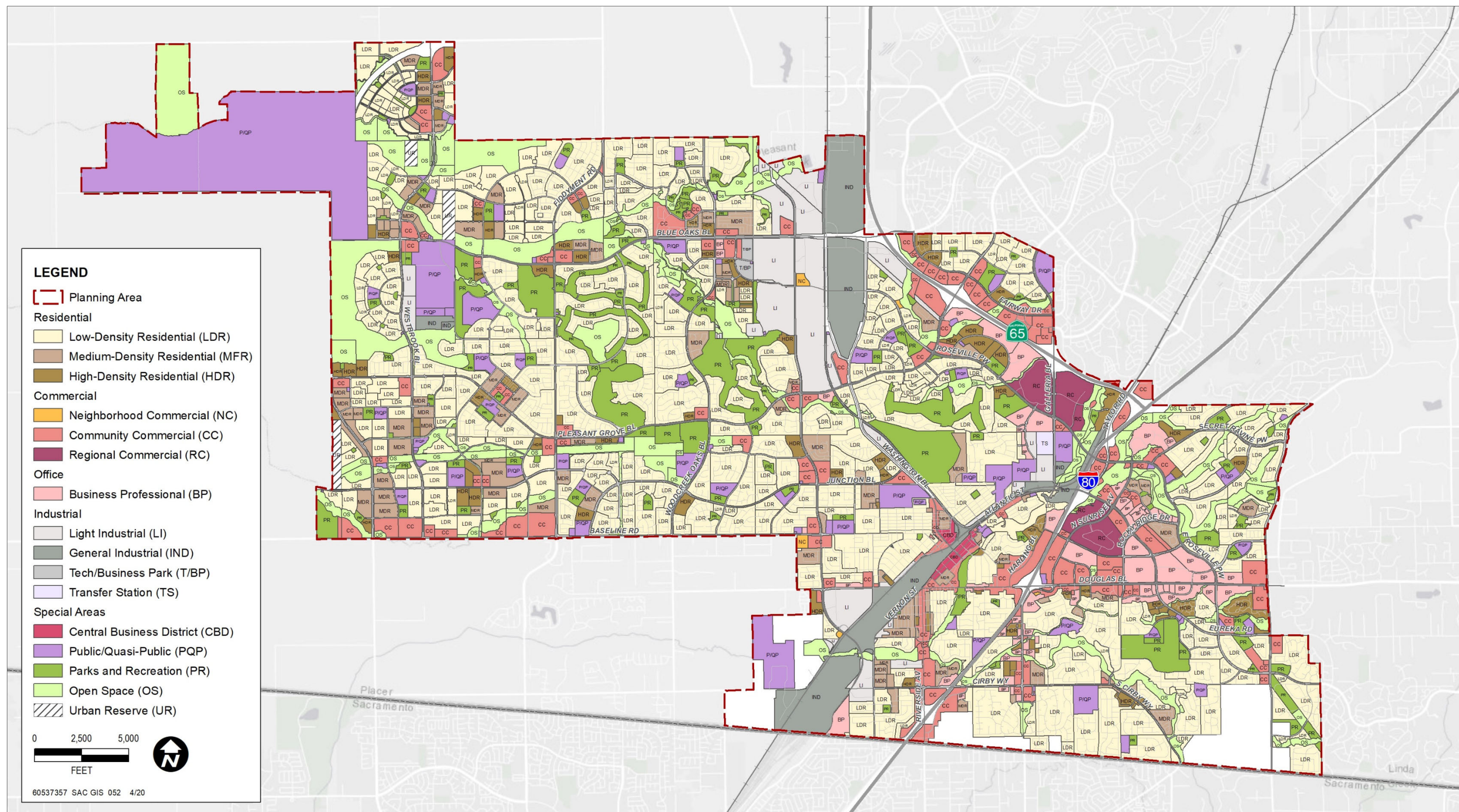


Exhibit 2-3.

Land Use Map

This page intentionally left blank

2.5.7 DEVELOPMENT ASSUMPTIONS

Although the General Plan is a policy document that does not directly propose construction projects, assumptions must be made for the purposes of the detailed analysis presented throughout this EIR. It is estimated that buildout of the General Plan could accommodate the construction of between 20,000 to 25,000 housing units and the addition of 25 to 30 million square feet of non-residential building space, and approximately 10,000 additional K–12 students, along with parks and other public facilities and infrastructure required to serve such development.³

Actual development between present conditions and General Plan buildout will depend on changes in the local and regional economy, demographic trends, and other factors, many of which are beyond the direct control of the City. Certain areas designated for urban use may or may not be developed during this planning horizon. Areas might be developed at the upper end or lower end of allowable density ranges, which may change actual development compared to what was assumed. Although the City has used the best available land use change assumptions, the information used to guide these assumptions will change. These changes, in part, create the need for future General Plan updates. The City may update land use change assumptions from time to time, either in the context of a General Plan amendment or update, or as a separate exercise for planning purposes.

2.5.8 PUBLIC INFRASTRUCTURE AND FACILITIES

Several utility improvements would be needed to support full buildout. Impacts related to utilities and service systems are included in Section 4.12 of this EIR, Utilities and Service Systems.

Roseville is a full-service city, providing all potable water (potable water service including treatment, storage, water distribution and water conservation), wastewater (collection and treatment), recycled water (irrigation), and stormwater (protecting the water quality of Roseville's creeks), solid waste collection, and electric utility services to Roseville's residents, businesses, and schools in its service area (the City limits).

The Environmental Utilities Department manages water, wastewater, recycled water, solid waste, and stormwater utilities. Electric utilities are provided by Roseville Electric (a City department).

2.5.8.1 WATER SUPPLY

The City's total water demand in 2015 was 26,941 acre feet per year (AFY). This included 22,881 AFY of surface water supplies and 4,060 AFY of recycled water use within the City. At buildout of the City's General Plan (2035), water demands are estimated to reach 54,405 AFY. Of this amount 5,643 AFY will be met by recycled water supplies leaving the remaining, 48,762, to be met by surface water supplies (West Yost 2016).

Surface Water

The City has a long-term water supply contract with the U.S. Bureau of Reclamation (USBR) for its primary source of water, which is Folsom Lake. To ensure water availability during fluctuations in supply allocation as determined by the USBR, the City also maintains contracts with the Placer County Water Agency (PCWA) and the San Juan Water District. In 2015, the City supplied approximately 22,881 acre feet (AF) of surface water to

³ The assumptions used for analysis are based on the existing Land Use Map since this General Plan Update does not include any changes to land use designations.

approximately 41,469 residential and non-residential connections located within its water service area. The water use projections for 2020 through 2040 are based on land use-based water demand projections documented in the City's General Plan.

Roseville's projected water demand is expected to increase to 50,907 AF in 2040, without water reduction strategies. Roseville has capacity for 66,000 AFY of surface water, and utilizes groundwater wells as well to meet the City's water demand. Foreseeable future development within the City of Roseville would exceed the City's currently contracted surface water supplies. The City has identified water conservation as one potential strategy to alleviate the potential water deficits that could occur in single-dry years and multiple dry years (West Yost 2016).

Roseville intends to improve its facilities to maximize the use of its surface water supplies, perhaps by increasing surface water diversion points. The City is also proposing to enter into an agreement with PCWA for wholesale treated water supplies from PCWA's Sunset/Foothills/Ophir water system to provide water supply. A capital improvement plan has been developed that includes the timeline and budget necessary to construct system wide facilities. Long-term water treatment plant capacity would be provided by the construction of the Ophir water treatment plant, which would be built on a site just south of the existing City of Auburn wastewater treatment plant. (City of Roseville 2016).

Groundwater

Roseville, the City of Lincoln (Lincoln), Placer County Water Agency (PCWA), and California American Water Company (CAW) cooperatively developed the Western Placer County Groundwater Management Plan (WPCGMP) in 2007 to maintain the quality and ensure the long-term availability of groundwater to meet backup, emergency, and peak demands without adversely affecting other groundwater uses within the area.

The City's current groundwater well facilities consists of six groundwater wells that are capable of delivering approximately 48 acre-feet per day of water supply, if run full time, which is the equivalent of approximately 17,000 AFY. Roseville is pursuing opportunities to use banked groundwater supplies for back up, and peak daily demands. Specifically, the City is exploring aquifer storage and recovery (ASR) as a component of its overall water supply strategy to fully utilize allocated surface water and the groundwater aquifer for its cost-effective and large-scale storage capacity. The ASR program allows the City to store treated surface water (potable water) in the aquifer for use when it is needed (i.e., during a drought). The long-term goal of Roseville's ASR Program is to implement a full-scale project of up to 12 wells, capable of injecting 10,000 acre-feet of water per year.

The City's Water Forum Agreement acknowledges extraction of up to 6,600 AFY of groundwater during the drier and driest year types but did not specify any groundwater extraction limits. The last instances of groundwater used to address drought conditions occurred in 1991 and again in 2014 (West Yost 2016).

2.5.8.2 WATER DISTRIBUTION

The City's potable water facilities are comprised of a 100 million gallon per day (MGD) capacity water treatment plant, 600 miles of pipes, three water tanks with combined capacity storage of 20 million gallons, booster pumping stations, groundwater wells and pressure regulating stations, and 4,500 hydrants. The City currently has two pumping stations in the City and two booster pump stations. The first, located along PFE Road will allow the City to access water supplies from the Sacramento Suburban Water District. The second booster pump station is located on Pleasant Grove Boulevard near Mahaney Park near the Pressure Zone 1 and Pressure Zone 4 boundary.

This pump station allows the City to move groundwater supplies. The City is beginning construction of two (6 million gallon) potable water storage tanks and a pump station in the West Roseville and Sierra Vista Specific Plan Areas (located along Westpark Drive and immediately south of the Pleasant Grove Wastewater Treatment Plant) to service customers in the western portion of the City (City of Roseville 2016).

2.5.8.3 WASTEWATER

The City's Wastewater Utility owns and (on behalf of the South Placer Wastewater Authority Partners), operates two regional wastewater treatment plants: Dry Creek and Pleasant Grove, which have the capacity to treat up to 30 MGD of water daily. The City's regional plants operate under the South Placer Wastewater Authority (SPWA) which includes the City of Roseville, South Placer Municipal District and Placer County. The SPWA is primarily a funding authority responsible for overseeing the Capital Improvement Program, and providing service to the SPWA member agencies.

The Wastewater Utility is responsible for management, operation, maintenance and capacity of the City's wastewater treatment plants, and collection system, which includes inspecting, cleaning, repairing and monitoring the gravity sewer lines, force mains and lift station.

The Wastewater Division provides service to approximately 43,894 residential and commercial sewer customers. The wastewater collection and conveyance system consists of 782 miles sewer pipe ranging in size of 4 to 72 inches in diameter, 11,154 manholes, and 16 neighborhood lift stations that convey an average dry weather flow of approximately 17 MGD.

The South Placer Regional Wastewater and Recycled Water Systems Evaluation (Systems Evaluation, June 2007 and updated December, 2009) provides baseline and projected characterizations of its regional wastewater and recycled water systems. The SPWA Wastewater Systems Evaluation identified short- and long-term Capital Improvement Projects needed to meet current and future build-out flow projections within the 2005 service area boundary for trunk sewers larger than 15 inches. Buildout of the 2005 service area boundary would result in 16.34 MGD average dry weather flow at the Dry Creek Wastewater Treatment Plant and 16.52 MGD average dry weather flow at the Pleasant Grove Wastewater Treatment Plant, totaling 32.86 MGD average dry weather flow (RMC 2009).

Recycled Water

Recycled water is generated at the Dry Creek and Pleasant Grove Wastewater Treatment Plants, which deliver approximately one billion gallons of recycled water annually, including to Roseville Electric, which uses recycled water for cooling processes at the Roseville Energy Park.

Recycled water demands within the City are expected to increase to a total recycled water demand of 5,643 AFY at buildout of the City's General Plan (West Yost 2016). According to the South Placer Wastewater Authority, on an annual average basis through 2050, there is sufficient supply for all future demand within the sewer service area. However, peak recycled water demands are significantly higher, and results of the analysis indicate water may not be available during peak months for all customers. The results indicate that there may be a need for alternative water supplies and customers outside the City limits (or seasonal storage) to supplement recycled water during peak demand periods. However, due to conservation or other changes in potential recycled water demand, the timing and quantity of alternative supplies needed may vary.

Identified improvements needed to support development include pump station and storage improvements, as well as pipeline improvements, phased as recycled water demand increases. The construction of a storage reservoir, pumping facilities, and extension of infrastructure up to the southern boundary was analyzed within the Creekview Specific Plan (CSP) Final EIR (City of Roseville 2011). The water storage and pumping facilities are located south of the Amoruso Ranch Specific Plan and immediately east of the Roseville Energy Park, and are slated for expansion to meet the needs of the region, including Amoruso Ranch Specific Plan, Creekview Specific Plan, and Sierra Vista Communities. The previously proposed expansion included the development of a 4-million-gallon recycled water storage tank. More information, including costs, can be found in the City of Roseville Recycled Water Systems Evaluation (City of Roseville 2016).

2.5.8.4 SOLID WASTE

Solid waste generated in the city of Roseville is collected and hauled by the City and delivered to the Western Regional Sanitary Landfill, operated by the Placer Waste Management Authority (WPWMA) for processing and disposal. The WPWMA is a Joint Powers Authority comprised of the cities of Roseville, Rocklin, and Lincoln and Placer County. The Western Regional Sanitary Landfill is a Class II/III municipal solid waste (non-hazardous) landfill, and is permitted to accept 1,900 tons of solid waste per day and 624 vehicles per day. The facility, which opened in 1995, receives, separates, processes, and markets recyclable materials removed from delivered solid waste. In addition to the landfill, the facility includes a public waste and recyclables drop-off area, a compost area, a construction and demolition (C&D) processing area, the Material Recovery Facility (MRF), and a household hazardous waste collection area. The majority of solid waste collected from the City of Roseville is delivered to the MRF for processing.

The permitted daily peak tonnage for the landfill is 1,900 tons per day (SFWP No 31-AA-0210). The daily average weekday tonnage of waste accepted at the landfill, as of August 2017, is approximately 1,045 tons per day, which equates to approximately 271,500 tons of waste disposed annually.

The landfill has a total capacity of 36.4 million cubic yards. As of June 30, 2017, the landfill had a remaining disposal capacity of approximately 24.5 million cubic yards. Based on projected waste disposal, which assumes a 2% average annual increase in municipal solid waste, the landfill is estimated to reach the end of its site life in 2058.

2.5.8.5 ELECTRICITY AND NATURAL GAS

Electricity

The City of Roseville Electric Department (Roseville Electric) provides electrical service to customers within the City limits. The City purchases wholesale electrical power from the Western Area Power Administration (WAPA), which is generated by the federal government's Central Valley Project, which produces 100 percent hydroelectric energy and consists of a system of dams, reservoirs, and power plants within central and northern California. The term of the existing contract with WAPA extends through December 31, 2024. Approximately 52 percent of the City's power during the 2013/2014 fiscal year was generated at the City owned Roseville Energy Park (REP).

In 2016, the City's electrical consumption was approximately 1,178,968 mega-watt hours (MWh). By the year 2020, the City's annual electrical consumption is projected to rise to 1,230,254 MWh. By 2030, the City's

consumption is projected to drop to 1,146,631 MWh due to conservation policies as well as energy efficiency improvements.

A substation is planned within the Creekview Specific Plan Area. The Creekview Substation is planned for a 0.98-acre site (Parcel C-81) on the northwest corner of Westbrook Boulevard and Benchmark Drive in the CSP Area, adjacent to open space. In addition, a 60-kV overhead transmission line (double circuit) is planned to be extended west on Blue Oaks Boulevard, northwest along the south side of Pleasant Grove Creek, then north up to the east side of Westbrook Boulevard to the future Creekview Substation. Long-range plans anticipate the line continuing north, then east through the Placer Ranch Area, where it will tie into existing Roseville Electric 60 kV facilities and complete a loop. Roseville Electric has specific requirements for public utility easements along all roadways that may require a 60-kV line.

Regional growth could require the construction of new or expanded facilities. WAPA has determined that the existing transmission lines in the greater Sacramento Area have reached their maximum power transfer limits for serving the area's energy demands. In order to correct the problem, WAPA proposes to construct approximately 31 miles of new, double circuit, 230 kV transmission lines between its O'Banion Substation and the area just south of the Sacramento Municipal Utilities District (SMUD) Elverta Substation. In addition, SMUD's existing 230/115kV transmission line between Elverta and Natomas Substations will be reconstructed.

Solar

The Roseville Community Solar Pilot Project is comprised of 3,348 photovoltaic (PV) panels to support a 1,103 kilowatt DC, 900 kilowatt AC solar facility to provide renewable energy to the City's electric grid. The project is intended to help the City meet state GHG reduction goals. The project allows Roseville residents to participate in a community solar project and receive benefits equal to that of a rooftop solar system, even if they do not own or have access to a roof compatible with solar power installation. Power provided by the solar facility feeds into Roseville Electric's grid through virtual net metering, allowing customers to receive credit for their share of energy generated each month at the facility. It is estimated that the lifetime operation of the project would reduce GHG emissions by approximately 12,266 metric tons CO₂e.

Natural Gas

PG&E is the natural gas service provider for the city. Expansion of natural gas and telecommunication facilities would be required to serve the growing population of the region, and would be constructed as new development is approved.

2.5.8.6 TRANSPORTATION

The City maintains a network of pedestrian and bicycle facilities of different types throughout City limits. Most residential streets have sidewalks. Arterial roadways in residential areas typically have wide sidewalks and arterials and collector roadways typically have designated bike lanes. A system of off-street, multi-use paths connects homes with destinations, such as schools, parks, libraries, and other services. The City's Bicycle Master Plan describes 119 miles of existing bicycle facilities. Buildout of the General Plan would add approximately 30 miles of Class I bikeways, approximately 36 miles of Class II bikeways, and approximately 42 miles of Class III bikeways (Exhibit 2-4 and 2-5).

The City's Pedestrian Master Plan identifies sidewalk gaps, some of which are planned for improvement under the City's Capital Improvement Program (CIP) and the remainder of which are private land owner responsibilities planned for construction with the required frontage improvements of the adjacent property when developed. Sidewalk gaps are prioritized based on proximity to the train station, bus stops, schools, medical services, government offices, major adult care facilities, and pedestrian districts. The City of Roseville has a Traffic Accident Analysis System to identify top pedestrian safety areas for improvement. The City's Americans with Disabilities Act (ADA) Transition Plan prioritizes locations with missing curb ramps at intersections for improvement.

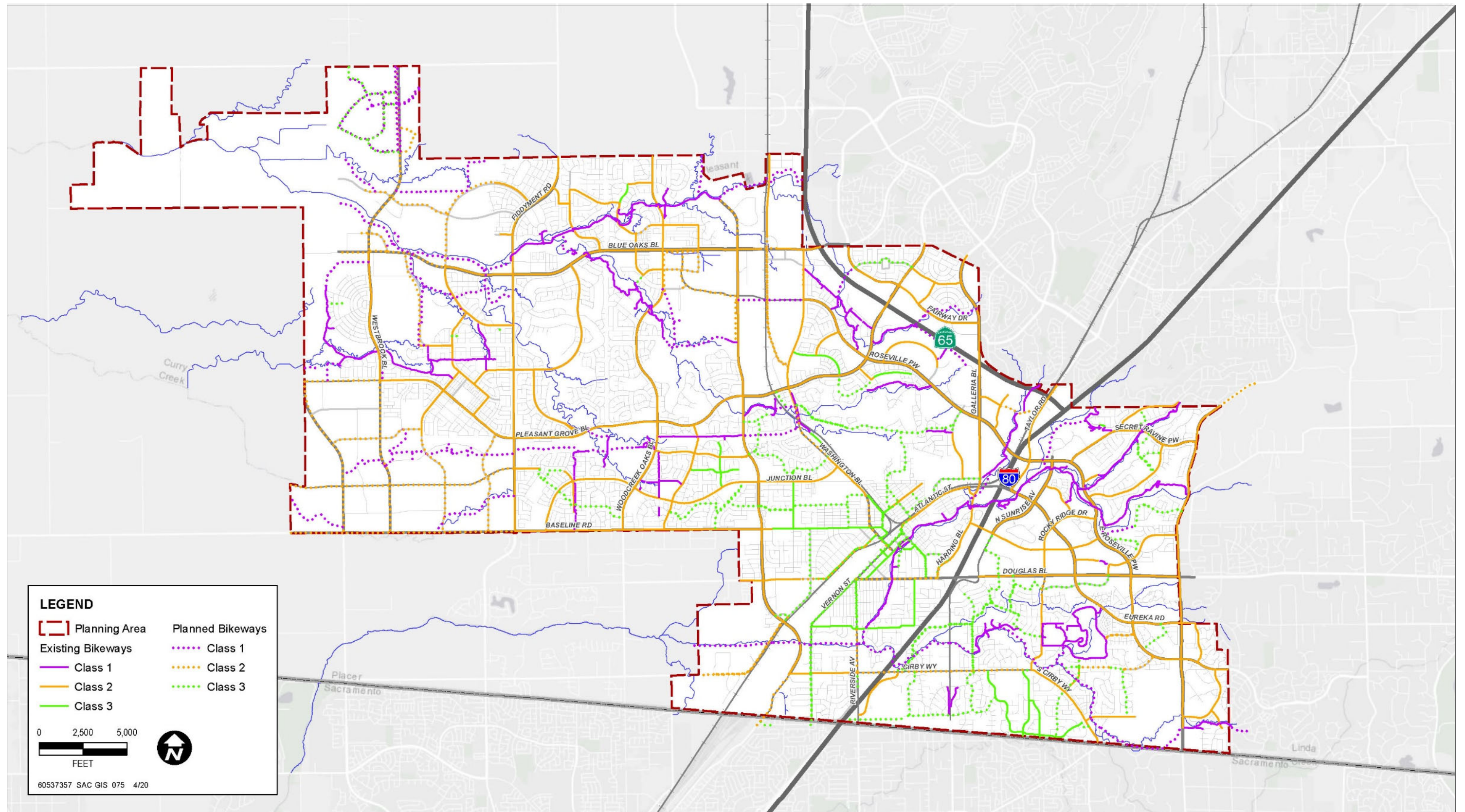
The City's Capital Improvement Program (CIP) identifies transportation improvements needed to serve vehicular travel demand resulting from existing and new development. The CIP, along with the associated traffic mitigation fees, are periodically updated to respond to changing conditions and guide the development of an adequate vehicular transportation system. The City Council sets priorities for the construction of individual CIP projects throughout the Planning Area. The CIP implements the City's General Plan Circulation Diagram (Exhibit 2-6) and therefore the environmental impacts associated with the CIP are analyzed and reported in this EIR, along with land use change anticipated under the proposed General Plan Update and construction and operation of other public utilities and facilities required to support buildout of the General Plan.

The City of Roseville operates Roseville Transit, which has a local fixed route service, a peak-hour commuter service, and a dial-a-ride service. Commuter Service is a fixed-route, weekday service currently with 10 morning and 10 afternoon commuter routes between Roseville and downtown Sacramento. Local service is a fixed-route service with 11 scheduled routes offered Monday through Friday from 5:45 a.m. to 10:00 p.m. and on Saturdays from 8:00 a.m. to 5:00 p.m. Dial-a-ride system is a reservation-based system offering general public and complementary paratransit service (per the Americans with Disabilities Act) Monday through Friday from 5:45 a.m. to 10:00 p.m. and on weekends from 8:00 a.m. to 5:00 p.m. The general public service is curb-to-curb, while the ADA paratransit service provides origin-to-destination service for individuals with disabilities that prevent them from using the Local Service.

2.6 INTENDED USES OF THE EIR

This EIR was prepared in compliance with the California Environmental Quality Act (CEQA) of 1970 (Public Resources Code Section 21000 et seq.) and the CEQA Guidelines (California Code of Regulations Section 15000 et seq.). This EIR evaluates the environmental impacts that could result from implementation of the updated General Plan.

The purpose of an EIR is not to recommend approval or denial of a project. An EIR is an informational document used in the planning and decision-making process by the lead agency and responsible and trustee agencies. An EIR describes the significant environmental impacts of a project, potentially feasible measures to mitigate potentially significant impacts, and potentially feasible alternatives to the project that can reduce or avoid significant environmental effects. CEQA requires decision-makers to balance the benefits of a project against its unavoidable environmental effects in deciding whether to carry out a project.

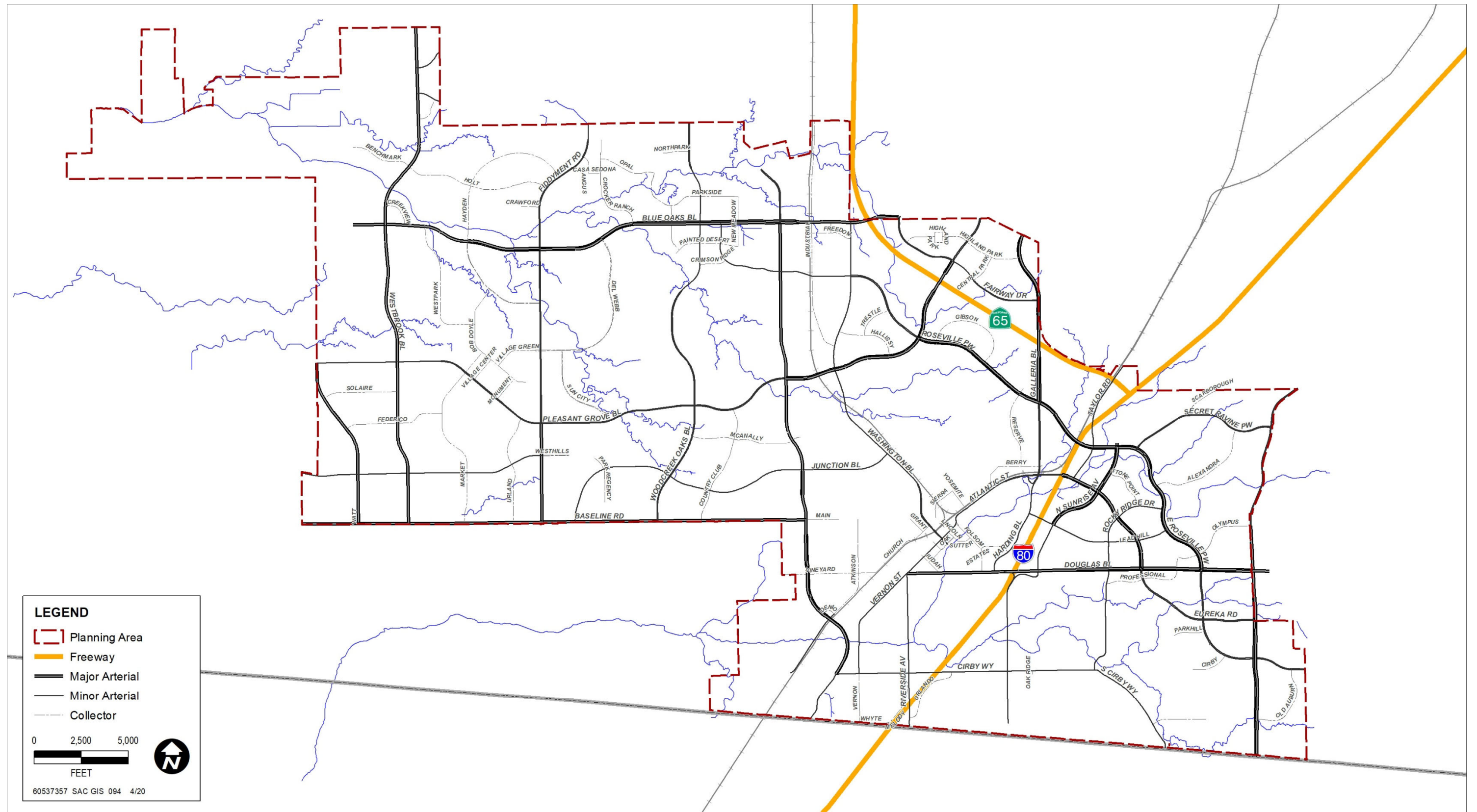


Source: City of Roseville

Exhibit 2-4

Existing and Planned Bikeways

This page intentionally left blank



Source: City of Roseville

Exhibit 2-5.

Roadway Functional Classification

This page intentionally left blank

The CEQA Guidelines charge public agencies with the responsibility of avoiding or minimizing environmental damage that could result from implementation of a project, where feasible. As part of this responsibility, public agencies are required to balance various public objectives, including economic, environmental, and social issues.

The lead agency is the public agency with primary responsibility over the proposed project. In accordance with CEQA Guidelines Section 15051(b)(1), “the lead agency will normally be the agency with general governmental powers, such as a city or county, rather than an agency with a single or limited purpose.” The City, as the lead agency, has prepared this EIR to evaluate the environmental impacts of implementation of this proposed General Plan Update.

In addition, subsequent actions under the General Plan, such as the adoption of specific and community plans and specific development projects, will require CEQA documentation. This EIR is designed to serve as a basis for “tiering.” Under the tiering concept provided in Sections 15152 and 15385 of the CEQA Guidelines, these subsequent CEQA documents may “tier” from the programmatic General Plan EIR by incorporating by reference the general environmental information provided in this document and focus narrowly on those project or site-specific issues not fully addressed in this EIR.

Pursuant to Public Resources Code 21083.3 and CEQA Guidelines 15183, additional environmental review is not required for projects that are consistent with a qualified plan for which a prior EIR was prepared and certified, except where issues “peculiar to the project or its site” would require subsequent analysis. Lead agencies can use programmatic EIRs for the general plan to analyze impacts of projects that are consistent with the plan, and greatly limit later project-level analysis to project-specific and site-specific issues. CEQA Guidelines Section 15183 (f) establishes that impacts are not peculiar to the project or to the site if uniformly applied development policies or standards substantially mitigate that environmental effect. The determination of whether or not uniformly applied development policies or standards would substantially mitigate each environmental effect shall be based on substantial evidence which need not include an EIR.

In order to maximize the value of the General Plan EIR to future projects that promote the City’s General Plan goals, the City has used the environmental review process to identify proposed policy revisions that can serve as uniformly applied standards and substantially limit the scope of analysis for projects consistent with the updated General Plan.

The General Plan would be implemented through zoning regulations, infrastructure plans, capital improvement programs, specific plans, and project-level approvals such as tentative maps, building permits, grading permits, and other actions. The City will seek to use applicable CEQA tiering and streamlining, as appropriate, to support future actions.

2.7 RELATIONSHIP TO OTHER AGENCIES, PLANS, AND REGULATIONS

A number of other jurisdictional and permit-granting agencies have authority or jurisdiction over specific environmental concerns in the City. These agencies are likely to use this document to ensure that their plans and activities conform to the goals, objectives, policies, and implementation strategies and/or mitigation measures presented in this document. The General Plan and this EIR both make reference to laws, plans, and regulations administered by other public agencies. In many instances, the City’s policies are specifically designed to achieve consistency with regulations of another public agency. In other cases, the City commits to seeking input from other agencies on issues that may arise over the course of implementing the updated General Plan. Unless

otherwise specified, any reference to “consulting with” or “coordinating with” other agencies in no way delegates to other agencies the City’s responsibilities for land use permitting and entitlement or lead agency responsibilities for managing land use change. Some of the key areas of interaction with other agencies are described below.

2.7.1 FEDERAL GOVERNMENT

Although no federal plans directly control local land use policies, a number of federal laws have an important bearing on land use decisions at the municipal levels. Examples of such regulations include the Endangered Species Act and Section 404 of the Clean Water Act. Multiple agencies have jurisdiction over biological or other resources in the Planning Area, and through the permitting process may exert influence on local land use processes. Individual topic areas of this EIR include a thorough discussion of relevant federal plans, policies, and regulations.

- ▶ U.S. Army Corps of Engineers (Section 404 of the Clean Water Act permit), and
- ▶ U.S. Fish and Wildlife Service (incidental take permits pursuant to the federal Endangered Species Act).State Government

2.7.2 STATE GOVERNMENT

The State of California influences local policy decisions through a variety of State laws, regulations, and procedures. For example, the California Department of Housing and Community Development (HCD) develops housing policy and building codes (i.e., the California Building Standards Code) and administers housing finance, economic development, and community development programs. California Department of Transportation (Caltrans) plans and oversees the State highway system and works with other governmental agencies and local jurisdictions to plan, develop, manage, and maintain California’s transportation system. Roseville is located in Caltrans District 3, which includes the Sacramento Valley counties of Sutter, Yolo, Yuba, Colusa, Glenn, Butte, Sacramento, and four mountain counties (Placer, El Dorado, Nevada, and Sierra). Caltrans has permitting authority for all access to and from State highways and therefore works closely with the City to ensure the safe and efficient function of State routes. The California Department of Fish and Wildlife administers compliance with the California Endangered Species Act and Fish and Game Code. Individual topic areas of this EIR include a thorough discussion of relevant State plans, policies, and regulations.

- ▶ California Department of Conservation, California Geological Survey (expertise in evaluating geologic and seismic hazards, as well as mineral resource issues);
- ▶ California Department of Fish and Wildlife (streambed alteration agreement pursuant to Section 1600 of the California Fish and Game Code);
- ▶ California Department of Transportation (encroachment permits);
- ▶ California Department of Housing and Community Development (reviews the adequacy of housing elements and funding for affordable housing programs); and
- ▶ California Public Utilities Commission (certificate of public convenience and necessity).

2.7.3 REGIONAL GOVERNMENT

Regional governmental agencies, such as Sacramento Area Council of Governments (SACOG), the Placer County Air Pollution Control District (PCAPCD), and the Central Valley Regional Water Quality Control Board (CVRWQCB), have been established in recognition of the fact that planning issues extend beyond the boundaries of individual cities. Efforts to address regional planning issues, such as air and water quality, transportation, affordable housing, and habitat conservation have resulted in the adoption of regional plans. The policies adopted by Roseville will be affected by these plans, and will in turn have effects on these other plans. Individual topic areas of this EIR include a thorough discussion of relevant regional plans, policies, and regulations.

- ▶ CVRWQCB (water quality certification pursuant to Section 401 of the Clean Water Act, National Pollutant Discharge Elimination System permit);
- ▶ Placer County Local Agency Formation Commission (annexations or other service boundary changes); and
- ▶ SACOG (transportation planning and the Airport Land Use Commission).
- ▶ Placer County APCD (monitors air quality and has permit authority over certain types of facilities); and
- ▶ Central Valley Flood Protection Board (strategic flood protection plan).

This page intentionally left blank

3 EXECUTIVE SUMMARY

3.1 PURPOSE

As required by CEQA Guidelines Section 15123(a), “[a]n EIR shall contain a brief summary of the proposed action and its consequences.” This executive summary includes (1) a summary description of the proposed project, (2) a synopsis of environmental impacts and recommended mitigation measures (Table 3-1) and a summary description of significant and unavoidable impacts (Table 3-2), (3) identification of the alternatives evaluated, and (4) a discussion of the areas of controversy associated with the proposed project.

3.2 PROJECT SUMMARY

3.2.1 PROJECT SETTING

The City of Roseville is located in Placer County, approximately 15 miles northeast of downtown Sacramento. The “project site” for the analysis in this EIR is the same as the General Plan Planning Area. The Planning Area includes all areas within the City limits and those areas outside City limits that are within the City’s Sphere of Influence. The Planning Area encompasses approximately 29,000 acres (45 square miles).

3.2.2 PROJECT DESCRIPTION

The proposed project that is the subject of analysis in this EIR is the City of Roseville 2035 General Plan Update (“proposed General Plan Update”). The proposed General Plan Update consists of revisions to goals, policies, and implementation measures in the City’s existing 2035 General Plan, which was adopted in 2016 (“existing General Plan”). The purpose of this update is to comply with new State laws, revise outdated information, improve and clarify policy language, and make the General Plan more readable and user-friendly. The proposed General Plan Update does not include changes to the land use plan or Sphere of Influence. The Housing Element (last updated in 2013) is being updated to the new more readable format, but its content is not proposed for any amendment.

3.2.2.1 LAND USE SCENARIO

This proposed General Plan Update does not include changes to existing land use designations. However, the EIR comprehensively addresses impacts associated with full buildout of the General Plan, as modified by the proposed General Plan Update, compared to existing, physical environmental conditions at the time the Notice of Preparation was issued.

3.2.2.2 INFRASTRUCTURE AND SERVICES

Roseville is a full-service city, providing all potable water (potable water service including treatment, storage, water distribution and water conservation), wastewater (collection and treatment), recycled water (irrigation), and stormwater (protecting the water quality of Roseville’s creeks), solid waste collection, and electric utility services to Roseville’s residents, businesses, and schools in its service area (the City limits). The Environmental Utilities Department manages water, wastewater, recycled water, solid waste, and stormwater utilities. Electric utilities are provided by Roseville Electric (a City department). Impacts related to improvements to utilities and service systems that would be needed to support full buildout are evaluated in Section 4.12, “Utilities and Service Systems,” of this EIR.

3.2.3 PROJECT OBJECTIVES

The proposed General Plan Update does not include any changes to land use designations, expansion of the City's Planning Area, or other physical changes to areas planned for development compared to the existing General Plan. Rather, this Update revises goals, policies, and implementation measures to comply with recently adopted State law, improves and clarifies policy language, replaces outdated information, and improves the organization and user friendliness of the document. The project objectives for the proposed General Plan Update are as follows:

- ▶ Revise goals and policies, as appropriate, to address recent changes in State law;
- ▶ Prepare a detailed estimate of existing and future greenhouse gas (GHG) emissions associated with implementing the General Plan and feasible mitigating policies that would reduce emissions;
- ▶ Take advantage of GHG reduction strategies that offer co-benefits, such as more practical bicycle, pedestrian, and transit mobility options; reductions in household and business transportation and utility costs; and improvements to air quality and public health;
- ▶ Identify ongoing programs that reduce GHG emissions and incorporate such efforts as policy or implementation measures;
- ▶ Prepare estimates of existing and future vehicular travel demand and identify feasible mitigating policies and implementation measures that would reduce vehicular travel demand;
- ▶ Revise policies and implementation measures, as appropriate, to ensure an appropriate balance between managing traffic congestion and facilitating infill development, promoting public health through active transportation, and reducing GHG emissions;
- ▶ Incorporate changes to the Noise Element that are more appropriate for current and future conditions in Roseville; and
- ▶ Integrate the environmental analysis and policy planning process to promote the City's planning, environmental, economic, and fiscal goals.

3.3 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Table 3-1 (located at the end of this section) provides a summary of impacts and proposed mitigation measures that would avoid, eliminate, minimize, or reduce potential impacts. The level of significance of the impact following implementation of each mitigation measure is identified. Each impact and its significance conclusion are followed by the mitigation requirement. For detailed descriptions of project impacts and mitigation measures, please see Sections 4.1 through 4.15 of this EIR.

3.4 SUMMARY OF PROJECT ALTERNATIVES

CEQA Guidelines Section 15126.6 requires that an EIR describe a range of reasonable alternatives to the proposed project that could feasibly attain the basic objectives of the project and avoid and/or lessen one or more

of the significant environmental effects of the project. Chapter 6, “Alternatives,” of this EIR provides a comparative analysis between the proposed project and the following alternatives: Infill Housing Alternative, Reduced Growth Alternative, and No Project Alternative.

3.4.1 INFILL HOUSING ALTERNATIVE

The intent of this alternative is to decrease the rate of GHG emissions and VMT and associated adverse physical environmental effects. This alternative would amend the General Plan Land Use Map in the City’s Infill area to allow up to 30 units per acre (a designation of High Density Residential 30) for underutilized multi-family areas that have existing multi-family zoning or land use designations. This alternative would add approximately 1,400 multi-family dwelling units in the City’s Infill Area, in addition to the development of 20,000 to 25,000 new housing units assumed under the proposed General Plan Update. This alternative would also involve an additional focus on non-vehicular transportation facility investments in infill locations around the additional multi-family residential development. The proposed General Plan Update new and revised goals, policies, and implementation measures, as presented in Chapter 2, “Project Description,” would also occur under this alternative.

3.4.2 REDUCED GROWTH ALTERNATIVE

The intent of this alternative is to decrease the rate of GHG emissions and VMT and associated adverse physical environmental effects, and the biological resources and cultural resources impacts associated with conversion of open space to developed use. This alternative would reduce 2035 buildout to the amounts identified by the Sacramento Area Council of Governments (SACOG) for Roseville in the *2020 Metropolitan Transportation Plan/Sustainable Communities Strategy* (MTP/SCS). Under this alternative, the development that would occur by 2035 would focus on existing developed areas, comprised of the “Center and Corridor” and “Established” Community types identified in the MTP/SCS. Instead of the additional 20,000 to 25,000 housing units and 38,000 to 68,000 new jobs under the proposed General Plan Update assumed to occur by 2035, this alternative would result in an approximate 21 percent reduction in housing units and a 46 to 70 percent reduction in new jobs by 2035 (i.e., there would be 4,500 fewer housing units and 17,320–47,320 fewer jobs). The proposed General Plan Update new and revised goals, policies and implementation measures, as presented in Chapter 2, “Project Description,” would also occur under this alternative.

3.4.3 NO PROJECT ALTERNATIVE

The No Project Alternative has been included to meet the requirements of CEQA Guidelines Section 15126.6(e). The No Project Alternative would consist of the continuation of the existing General Plan with no revisions. The existing General Plan includes the same level of development as would occur under the proposed General Plan Update. However, under the No Project Alternative, there would be no content revisions to the existing General Plan goals, policies, and implementation measures, and no new General Plan goals, policies, and implementation measures, all of which have been developed under the proposed General Plan Update to help reduce VMT, provide more detailed and updated implementation measures that can reduce potential impacts, comply with State law changes, provide additional clarity in General Plan language, and make other changes detailed in Chapter 2, “Project Description,” of this EIR. There would also be no revisions to policies that would help to facilitate infill development.

3.4.4 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

CEQA Guidelines Section 15126.6 requires identification of an environmentally superior alternative from among the proposed project and the alternatives evaluated. As discussed in detail in Chapter 6, “Alternatives,” and shown in Table 6-1, the environmentally superior alternative is the Reduced Growth Alternative.

3.5 AREAS OF CONTROVERSY

CEQA Guidelines Section 15123 requires that the summary of an EIR identify areas of controversy known to the lead agency, including issues raised by agencies and the public. Based on comments and input received to date, areas of interest that are related to adverse physical environmental effects consist of:

- ▶ transportation and circulation impacts and mitigation measures;
- ▶ use of Vehicle Miles Traveled (VMT) to identify transportation impacts per Senate Bill 743;
- ▶ cultural resources impacts and Native American Tribal consultation (compliance with Assembly Bill 52 and Senate Bill 18);
- ▶ hydrology and water quality permitting requirements;
- ▶ hydraulic impacts related to flooding;
- ▶ reduction of stormwater runoff from new development; and
- ▶ biological resources impacts, mitigation measures, and permitting.

3.6 PUBLIC REVIEW OF THE DRAFT EIR

Copies of the proposed General Plan Update and this EIR are available through the City of Roseville Development Services Department. The City has circulated the document to public agencies, other public and private organizations, property owners, developers, and other interested individuals. Detailed information related to the proposed General Plan Update and this EIR are available at the City of Roseville City Hall and online at the General Plan Update Website: www.roseville.ca.us/GeneralPlan

Comments on the EIR are invited in writing or via email to:

Gina McColl, General Plan Update Project Manager
City of Roseville Planning Division
311 Vernon Street
Roseville, CA 95678
gmccoll@roseville.ca.us

Comments should be focused on the adequacy and completeness of the EIR, or should address questions about the environmental consequences of project implementation. “Adequacy” is defined as the thoroughness of the EIR in addressing significant adverse physical environmental effects, identifying mitigation measures for those impacts, and supplying enough information for public officials to make decisions about the merits of the project (CEQA Guidelines Section 15151).

| Table 3-1: Summary of Project Impacts and Mitigation Measures | | | |
|--|--------------------------------|----------------------------|-------------------------------|
| Impacts | Significance before Mitigation | Mitigation Measures | Significance after Mitigation |
| 4.1: Land Use | | | |
| Impact 4.1-1: Physically Divide an Established Community. Buildout of the existing General Plan would not physically divide an established community. The City's land use designations and roadway locations were planned comprehensively through the Specific Plan process to provide connected communities. The proposed General Plan Update policies continue to require new development areas and associated community-wide facilities to be linked and oriented to existing developed areas of the community through road networks, public transit systems, open space systems, bikeway and pedestrian systems, and other physical connections and encourage a development pattern that is contiguous with existing developed areas of the City. Policy changes augment the existing language to ensure that transportation options within the City are multi-modal and connect residential areas to supporting land uses such as schools and parks. | LTS | No mitigation is required. | LTS |
| Impact 4.1-2: Conflict with Applicable Land Use Plan, Policy, or Regulation. The proposed General Plan Update was designed to ensure consistency with other relevant plans, programs, and regulations that were developed to reduce or avoid environmental impacts. There are no inconsistencies between the proposed General Plan Update and other plans that would result in a significant environmental impact not already addressed in this EIR. | LTS | No mitigation is required. | LTS |
| Impact 4.1-3: Conflict with Existing Agricultural Operations. Buildout of the General Plan would locate urban land uses adjacent to existing grazing lands along the northwestern, western, and southern boundaries outside of the Planning Area. Consistent with the City's General Plan policy to provide separation between City and County uses, development would be set back from on-going grazing activities and a physical separation would be provided by open space, road rights-of-way, fences, and walls. No long-term conflicts with grazing lands would occur as future approved urban development occurs in unincorporated Placer County. Therefore, buildout of the General Plan would not involve other changes in the existing environment | LTS | No mitigation is required. | LTS |

NI = No Impact

CC = Cumulatively Considerable

LTS = Less than Significant

PS = Potentially Significant

S = Significant

SU = Significant and Unavoidable

| Table 3-1: Summary of Project Impacts and Mitigation Measures | | | |
|--|---------------------------------------|---|--------------------------------------|
| Impacts | Significance before Mitigation | Mitigation Measures | Significance after Mitigation |
| which, due to their location or nature, could result in conversion of grazing lands. | | | |
| 4.2 Population and Housing | | | |
| Impact 4.2-1: Induce Substantial Unplanned Population Growth. The proposed General Plan Update does not change the City's Land Use Map or Sphere of Influence, and does not include any new growth. Therefore, the project will not directly induce unplanned growth. Furthermore, the majority of the vacant land adjacent to the City's boundaries are within existing adopted Specific Plans within Placer County, and are already planned for urbanization and development. Therefore, the project does not have the potential to indirectly induce substantial unplanned growth outside of the Planning Area. | LTS | No mitigation is required. | LTS |
| Impact 4.2-2: Displacement of a Substantial Number of Existing People or Housing. The proposed General Plan Update does not propose converting established residential areas to a nonresidential land use or redeveloping existing residential areas with new residences by removing existing dwelling units. Although the proposed General Plan Update is not expected to result in substantial displacement of people or housing necessitating construction of housing elsewhere, if there is unanticipated displacement, the existing General Plan land use plan includes capacity for the construction of 22,300 residential dwelling units, which would provide housing for any displaced residents. | LTS | No mitigation is required. | LTS |
| 4.3 Transportation | | | |
| VMT Per Capita Exceeds the Threshold of 12.8 VMT Per Capita. The VMT generated by buildout of the existing General Plan is 15.4 VMT per capita under financially constrained network conditions and 14.9 VMT per capita under financially unconstrained network conditions. This exceeds the significance threshold. | S | Mitigation Measure 4.3.1 – The proposed General Plan Update should be amended as follows: Implementation Measure Proposed development projects that could have a potentially significant VMT impact shall consider reasonable and feasible project modifications and other measures during the project design and environmental review stage of project development that would reduce VMT effects in a manner consistent with state guidance on VMT reduction. The below list of potential measures is not intended to be exhaustive, and not all measures may be feasible, reasonable, or applicable to all projects. The purpose of this list is to identify options for future development proposals, not to constrain projects to this list, or to require that a project examine or | SU |

NI = No Impact

CC = Cumulatively Considerable

LTS = Less than Significant

PS = Potentially Significant

S = Significant

SU = Significant and Unavoidable

| Table 3-1: Summary of Project Impacts and Mitigation Measures | | | |
|---|--------------------------------|--|-------------------------------|
| Impacts | Significance before Mitigation | Mitigation Measures | Significance after Mitigation |
| | | <p>include all measures from this list. Potential measures include:”</p> <ul style="list-style-type: none"> – improve or increase access to transit; – increase access to common goods and services, such as groceries, schools, and daycare; – incorporate affordable housing into the project; – incorporate neighborhood electric vehicle network; – orient the project toward transit, bicycle and pedestrian facilities; – improve pedestrian or bicycle networks, or transit service; – provide traffic calming; – provide bicycle parking; – unbundle parking costs; – provide parking cash-out programs; – implement roadway pricing; – implement or provide access to a commute reduction program; – provide car-sharing, bike sharing, and ride-sharing programs; – provide transit passes; – shifting single occupancy vehicle trips to carpooling or vanpooling, for example providing ride-matching services; – providing telework options; – providing incentives or subsidies that increase the use of modes other than single-occupancy vehicle; – providing on-site amenities at places of work, such as priority parking for carpools and vanpools, secure bike parking, and showers and locker rooms; – providing employee transportation coordinators at employment sites; – providing a guaranteed ride home service to users of non-auto modes; – locate the project near transit; – increase project density; – increase the mix of uses within the project or within the project's surroundings; – increase connectivity and/or intersection density on the project site; and/or | |

| Table 3-1: Summary of Project Impacts and Mitigation Measures | | | |
|--|---|---|---|
| Impacts | Significance before Mitigation | Mitigation Measures | Significance after Mitigation |
| | | <p>– deploy management strategies (e.g., pricing, vehicle occupancy requirements) on roadways or roadway lanes.</p> <p>The City shall evaluate the feasibility of a local or regional VMT impact bank or exchange. Such an offset program, if determined feasible, would be administered by the City or a City-approved agency, and would offer demonstrated VMT reduction strategies through transportation demand management programs, impact fee programs, mitigation banks or exchange programs, in-lieu fee programs, or other land use project conditions that reduce VMT in a manner consistent with state guidance on VMT reduction. If, through on-site changes, a subject project cannot demonstrate consistency with state guidance on VMT reduction, the project can contribute on a pro-rata basis to a local or regional VMT reduction bank or exchange, as necessary, to reduce net VMT impacts.</p> | |
| Impact 4.3-2: Roadway System Level of Service (Informational Analysis). Transportation network changes under the proposed General Plan Update and land use change under buildout of the General Plan would not conflict with the City’s policy of at least 70 percent of signalized intersections achieving LOS C or better during the a.m. and p.m. peak hours. | Consistent with City policy, informational only | No mitigation is required. | Consistent with City policy, informational only |
| Impact 4.3-3: Increase Hazards Due to a Design Feature, Incompatible Uses, or Inadequate Emergency Access. The proposed General Plan Update would not increase hazards due to a design feature, incompatible uses, or inadequate emergency access. All new facilities and facility improvements contained in the Circulation Diagram would be constructed according to the City’s Design and Construction Standards, which have been created to ensure a safe and reliable multi-modal network. | LTS | No mitigation is required. | LTS |
| Impact 4.3-4: Conflict with Adopted Policies, Plans, or Programs Regarding Public Transit, Bicycle, or Pedestrian Facilities, or Create or Exacerbate Disruptions to the Performance or Safety of these Systems. Land use and transportation network changes could result in conflicts with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. | LTS | No mitigation is required. | LTS |

NI = No Impact

CC = Cumulatively Considerable

LTS = Less than Significant

PS = Potentially Significant

S = Significant

SU = Significant and Unavoidable

| Table 3-1: Summary of Project Impacts and Mitigation Measures | | | |
|---|--------------------------------|--|-------------------------------|
| Impacts | Significance before Mitigation | Mitigation Measures | Significance after Mitigation |
| 4.4 Air Quality | | | |
| Impact 4.4-1: Generation of Short-Term Construction-Related Emissions of Criteria Air Pollutants and Precursors that Would Result in a Cumulatively Considerable Net Increase of Any Criteria Pollutant for which the Project Region is in Nonattainment, and Conflict with or Obstruct an Air Quality Plan. Emissions of criteria air pollutants and precursors could exceed an ambient air quality standard or contribute substantially to an existing or predicted air quality exceedance. | S | No feasible mitigation measures are available that would reduce the impact to LTS. | SU |
| Impact 4.4-2: Generation of Long-Term Operational Emissions of Criteria Air Pollutants and Precursors that Would Result in a Cumulatively Considerable Net Increase of Any Criteria Pollutant for which the Project Region is in Nonattainment, and Conflict with or Obstruct an Air Quality Plan. Long-term operational emissions would be generated from day-to-day activities associated with residential and non-residential land uses under the proposed General Plan Update. Operational emissions associated would exceed applicable PCAPCD thresholds. The level of operational emissions could conflict with or obstruct implementation of the applicable air quality plan. | S | Mitigation Measure 4.4-2a – The proposed General Plan Update should be amended as follows: Implementation Measure Projects that could have a potentially significant effect, as demonstrated by exceedance of the PCAPCD-recommended thresholds of significance, shall incorporate applicable PCAPCD-recommended standard operational mitigation measures, as listed below or as they may be updated in the future, or those design features determined by the City to be as effective: <ul style="list-style-type: none">– Wood burning or pellet stoves shall not be permitted. Natural gas or propane fired fireplaces shall be clearly delineated on plans submitted to obtain building permits.– Where natural gas is available, gas outlets shall be provided in residential backyards for use with outdoor cooking appliances such as gas barbeques.– Electrical outlets should be installed on the exterior walls of both the front and back of residences to promote the use of electric landscape maintenance equipment.– All newly constructed residential buildings including one- and two-family dwellings, townhomes, and multi-family units in low-rise and high-rise residential buildings shall comply with the California Green Building Standards Code (CalGreen).– Covenants, Conditions & Restrictions (CC&Rs) shall include the required distribution of educational information on how homeowners can increase energy efficiency and conservation in their new homes. The information shall be delivered as part of a “move-in” packet prior to occupancy of the residence.– Streets should be designed to maximize pedestrian access to transit stops. | SU |

NI = No Impact CC = Cumulatively Considerable LTS = Less than Significant PS = Potentially Significant S = Significant SU = Significant and Unavoidable

| Table 3-1: Summary of Project Impacts and Mitigation Measures | | | |
|--|--------------------------------|---|-------------------------------|
| Impacts | Significance before Mitigation | Mitigation Measures | Significance after Mitigation |
| | | <ul style="list-style-type: none"> Site design shall maximize access to transit, to accommodate bus travel, and to provide lighted shelters at transit access points. A pedestrian access network shall link complementary land uses. Provide bicycle storage to promote bicycling. Vanpool parking only spaces and preferential parking for carpools should be required for employment-generating uses. Consider using concrete or other non-polluting materials for paving parking lots instead of asphalt. Landscaping should be designed to eventually shade buildings and parking lots. | |
| | | <p>Mitigation Measure 4.4-2b – The proposed General Plan Update should be amended as follows: Implementation Measure If, following implementation of Mitigation Measure 4.4-2a, a project's operational emissions would still exceed PCAPCD-recommended thresholds of significance, the City would require the project to offset remaining project emissions in excess of thresholds by establishing off-site mitigation or participation in PCAPCD's Off-site Mitigation Program. .</p> | SU |
| <p>Impact 4.4-3: Expose Sensitive Receptors to Substantial Pollutant Concentrations. During construction and operation of the General Plan, localized air pollutant emissions would be generated that could affect existing and proposed sensitive receptors. Construction activities would generate diesel particulate matter (diesel PM) emissions that could affect existing and proposed sensitive receptors. Existing regulations and policies, as well as revised policies would reduce potential exposure to substantial pollutant concentrations.</p> | S | <p>Mitigation Measure 4.4-3 – The proposed General Plan Update should be amended as follows: Implementation Measure</p> <ul style="list-style-type: none"> The City shall require, as part of plans for development within the Planning Area, the implementation of ARB's Air Quality and Land Use Handbook: A Community Health Perspective guidance concerning land use compatibility and recommended setback distances with regard to sources of TAC emissions and sensitive land uses, or related guidance as it may be updated in the future. As an alternative to these buffer distances, proposed sensitive receptors, uses that involve substantial truck trips, and large gas stations may provide a site-specific health risk assessment, using methods consistent with applicable guidance from the Office of Environmental Health Hazard Assessment, with mitigation, if necessary, to demonstrate compliance with applicable PCAPCD-recommended health risk thresholds. When health risk impacts exceed PCAPCD-recommended thresholds, feasible on-site mitigation measures to reduce TAC exposure shall be implemented to mitigate health risk impacts below PCAPCD-recommended | SU |

Table 3-1: Summary of Project Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measures | Significance after Mitigation |
|---------|--------------------------------|--|-------------------------------|
| | | <p>thresholds. On-site measures could include but are not limited to providing enhanced filtration systems (e.g., MERV 13 or greater) for near-by sensitive receptor buildings, use of solid barriers to pollution, and vegetation to reduce pollutant concentrations, changes to the TAC emission source's operation (e.g. technology or management practices that reduce harmful emissions at the Rail Yard), and positioning of exhaust and intake for ventilation systems to minimize exposure, among others.</p> <p>– The City shall require, as part of development of land uses associated with sensitive receptors within 500 feet of high-volume roadways (defined as roadways carrying an average of 100,000 or more vehicles per day), the incorporation of feasible design measures to reduce exposure by sensitive receptors of substantial emissions of TACs from nearby high-volume roadways and operation of the Roseville Rail Yard. Design measures shall include recommended strategies from the ARB Technical Advisory, as listed below or as they may be updated in the future, or those design features determined by the City to be as effective:</p> <ul style="list-style-type: none"> • Design that promotes air flow and pollutant dispersion along street corridors, including the use of wider sidewalks, bicycle lanes, and dedicated transit lanes, which create space for better air flow and pollutant dispersion along with increasing active transportation and mode shift; • Installation of solid barriers, particularly in the downwind direction. Note that consideration of this strategy should also weigh the negative effect of dividing neighborhoods and obscuring sightlines. • Installation of vegetation for pollutant dispersion; maximum benefit of this strategy is typically seen when combined with solid barriers. • Installation of indoor high-efficiency filtration systems and devices to remove pollutants from the air. If this strategy is selected, a plan for ongoing operation and maintenance of the systems must also be developed to ensure long-term efficiency is achieved as intended by the system. | |

Table 3-1: Summary of Project Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measures | Significance after Mitigation |
|--|--------------------------------|--|--|
| Impact 4.4-4: Result in Concentrated Carbon Monoxide Levels (“hotspots”). Buildout of the General Plan would contribute vehicles to local intersections that could cause a CO hotspot (i.e., exceedance of the CO ambient air quality standard). However, due to requirements for cleaner vehicle emissions, proposed land use and transportation goals and policies, and use of intelligent transportation system equipment, it is not anticipated that the General Plan’s land uses would contribute substantial vehicle volumes to existing or future intersections that could cause a CO hotspot. | LTS | No mitigation is required. | LTS |
| Impact 4.4-5: Result in Other Emissions (such as those leading to odors) Adversely Affecting a Substantial Number of People. The proposed General Plan Update includes policies that would avoid exposure of a substantial number of people to objectionable odors. | S | Mitigation Measure 4.4-5 – The proposed General Plan Update should be amended as follows: Implementation Measure All new Specific Plans and proposed amendments to Specific Plans shall be evaluated for odor impacts using the SMAQMD-recommended screening distances for odor sources, or the most current adopted or recommended version. If the minimum buffer distance is not feasible, as an alternative to these buffer distances, technology- and design-based measures shall be evaluated as part of the Specific Plan design guidelines to minimize, contain, or prevent the generation of odor-causing emissions and the dispersion of such emissions to nearby sensitive receptors. For example, in the case of siting odor-producing sources, activities could be maintained within an enclosed space and appropriate air filtration systems could be implemented to reduce odors expelled from the building. For developments that would host sensitive receptors, design would include air site layout, landscaping, indoor air filtration systems, or other appropriate measures to minimize exposure of proposed sensitive receptors to odors. | Short-Term: LTS Long-Term: SU |
| 4.5: Greenhouse Gas | | | |
| Impact 4.5-1: Generation of Greenhouse Gas Emissions or Conflict with an Applicable Plan, Policy, or Regulation Adopted for the Purpose of Reducing the Emissions of GHGs. Buildout of the General Plan would involve land use change and construction and operation of public facilities and infrastructure that would result in construction and operational GHG emissions. | CC | Mitigation Measure 4.5-1a: Implement Mitigation Measure 4.4-2a. Mitigation Measure 4.5-1b: Implement Mitigation Measure 4.3-1. Mitigation Measure 4.5-1c. The proposed General Plan Update should be amended as follows: Implementation Measure Area Sources – The City shall utilize electric landscape maintenance equipment to the extent feasible on parks and public/quasi-public lands. – The installation of wood-burning fireplaces or appliances in new | SU |

NI = No Impact

CC = Cumulatively Considerable

LTS = Less than Significant

PS = Potentially Significant

S = Significant

SU = Significant and Unavoidable

Table 3-1: Summary of Project Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measures | Significance after Mitigation |
|---------|--------------------------------|---|-------------------------------|
| | | <p>development shall not be permitted.</p> <p>Energy</p> <ul style="list-style-type: none"> – The City will pursue within existing and future City facilities and may partner with other public agencies and organizations to promote replacement of appliances and office equipment with energy-efficient models with a priority from highest to lowest in terms of typical GHG reductions, on: water heater, vending machine, copier, refrigerator, printer, dishwasher, water cooler, computer, and clothes washer. – The City will pursue improvements to existing and future City facilities and may partner with other public agencies and organizations to implement comprehensive building efficiency improvements, inclusive of, but not limited to, implement lighting efficiency upgrades, improved building temperature controls, building air sealing, duct air sealing and duct replacement, upgrading and/or insulating water heaters, ensuring proper functioning and efficiency of heating and air conditioning systems, reducing heat loss through and around windows, installation of cool roofs, and implementing energy conservation education. – The City will support education and outreach to promote rebates, incentives, and other programs (as they become available) which would promote reductions in greenhouse gas emissions, and use available information on rebates used by consumers to determine where to focus education and outreach, including programs designed to promote electric appliances and replace natural gas appliances, and programs related to lighting. – The City will promote the U.S. Department of Housing and Urban Development Energy Efficient Mortgage (EEM) program and similar programs that assist buyers in purchasing homes meeting energy-efficiency criteria. – The City will partner with other agencies and organizations to expand the City’s urban forest to promote sequestration, but also with a focus on selection and placement that reduces the need for air conditioning and the urban heat island effect. <p>Land Use and Transportation</p> <ul style="list-style-type: none"> – The City will direct its own investments and review proposed development projects to reduce vehicular travel demand, promote non-vehicular travel, and facilitate local purchase and use of electric | |

Table 3-1: Summary of Project Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measures | Significance after Mitigation |
|--|--------------------------------|---|-------------------------------|
| | | <p>vehicles.</p> <ul style="list-style-type: none"> – The City will continue to direct its own investments and pursue outside funding for infrastructure and operational programs to promote ease and convenience of pedestrian, bicycle, and transit travel for daily trips. – The City will integrate its land use and transportation planning and review and condition proposed projects to better situate residents in proximity to workplaces, goods and services, and recreational opportunities, making updates to implementing plans, such as the Capital Improvement Program, Bicycle Master Plan, Pedestrian Master Plan, Transportation Systems Management program, transportation impact fee program, and transit plans. – The City will support applications for affordable housing funds from agencies that reward and incentivize good planning, such as infill housing and housing built close to jobs, transportation, and amenities. – The City will partner with other agencies and proposed developments to expand bicycle parking and other facilities, pedestrian facilities and amenities, and electric vehicle charging stations, with a focus on daily destinations. – The City will support a reduction of parking requirements for projects with a location, design, surrounding mix of uses, access to non-vehicular transportation facilities, and/or ongoing travel demand management programs that would reduce the need for vehicular trips. | |
| 4.6 Noise and Vibration | | | |
| Impact 4.6-1: Potential for Substantial Temporary, Short-Term Exposure to Construction Noise. Short-term construction source noise levels could exceed the applicable City standards at nearby noise-sensitive receptors. In addition, if construction activities were to occur during more noise-sensitive hours, construction source noise levels could also result in annoyance and/or sleep disruption to occupants of existing and proposed noise-sensitive land uses and create a substantial temporary increase in ambient noise levels. The proposed General Plan Update includes policies and implementation measures to reduce construction noise levels. The City cannot demonstrate at this time that the implementation of these policies and implementation | S | No feasible mitigation measures are available. | SU |

| Table 3-1: Summary of Project Impacts and Mitigation Measures | | | |
|--|--------------------------------|--|-------------------------------|
| Impacts | Significance before Mitigation | Mitigation Measures | Significance after Mitigation |
| measures would avoid temporary construction noise impacts in all instances. | | | |
| Impact 4.6-2: Potential for Long-Term Noise Exposure. Existing and planned noise-sensitive land uses under the General Plan could occur in areas that either are currently adversely affected by transportation and non-transportation noise sources or will be in the future. This could expose noise-sensitive uses to noise levels in excess of the existing General Plan noise policies or the proposed modified General Plan Update policies. Buildout of the General Plan would also permanently and substantially increase existing ambient noise levels in certain locations. The General Plan establishes the City’s standards for land use and noise compatibility and strategies for addressing conflicts. While the policy approach would reduce adverse noise exposure impacts, the City cannot demonstrate that potentially significant impacts would be avoided in every case. | S | No feasible mitigation measures are available. | SU |
| Impact 4.6-3: Increases in Vibration Levels. Construction of projects under buildout of the General Plan could cause a temporary, short-term disruptive vibration if it were to occur near sensitive receptors, and future development of new vibration-sensitive land uses could occur within vibration-generating areas (e.g., railroad). | LTS | No mitigation is required. | LTS |
| 4.7 Geology, Soils, and Paleontological Resources | | | |
| Impact 4.7-1: Substantial Adverse Impacts Related to Seismic Ground Shaking. Development occurring through buildout of the General Plan and utilities and public facilities required to serve such development could subject people and structures to hazards associated with seismic ground shaking. Implementation of the policies in the proposed General Plan Update, and compliance with relevant laws and ordinances, would reduce the potential for loss or damage from seismic hazards. | LTS | No mitigation is required. | LTS |
| Impact 4.7-2: Substantial Adverse Impacts Related to Soil Erosion. Development occurring through buildout of the General Plan and utilities and public facilities required to serve such development would result in substantial grading, excavation, and movement of earth associated with site preparation activities. These activities would increase the | LTS | No mitigation is required. | LTS |

| Table 3-1: Summary of Project Impacts and Mitigation Measures | | | |
|--|--------------------------------|--|-------------------------------|
| Impacts | Significance before Mitigation | Mitigation Measures | Significance after Mitigation |
| potential for soil erosion from wind and water, and the potential for siltation of local drainages. Implementation of the policies in the proposed General Plan Update, combined with relevant laws and ordinances, would reduce the potential for soil erosion. | | | |
| Impact 4.7-3: Geologic Hazards Related to Unstable and Expansive Soils. Development occurring as a part of General Plan buildout would result in the construction of buildings and infrastructure in areas of unstable soils and soils with a moderate to high shrink-swell potential. Implementation of the policies in the proposed General Plan Update, combined with relevant laws and ordinances, would reduce the potential for hazards from unstable and expansive soils. | LTS | No mitigation is required. | LTS |
| Impact 4.7-4: Damage or Destruction of Unique Paleontological Resources, Sites, or Unique Geologic Features During Earthmoving Activities. The Planning Area contains paleontologically sensitive rock formations, and therefore construction activities associated with new and/or infill development under buildout of the General Plan and public infrastructure required to serve such development could result in accidental damage to, or destruction of, unknown subsurface paleontological resources. | PS | Mitigation Measure 4.7-4 – The proposed General Plan Update should be amended as follows: Implementation Measure Paleontological Resources Where there is potential for a significant impact to paleontological resources: 1. Consult the Paleontological Sensitivity Map. 2. For projects located in geologic units that are not identified as paleontologically sensitive and which do not involve ground disturbance to a depth greater than 5 feet below the ground surface, no further actions related to paleontological resources shall be required. 3. For projects that would be located in paleontologically sensitive geologic units, or those that would be located in non-paleontologically sensitive surficial units but would involve ground disturbance to a depth greater than 5 feet, provide a site-specific analysis of the project's potential to damage or destroy unique paleontological resources, and measures designed to protect unique paleontological resources, as needed and appropriate. Such measures may include, but are not limited to, construction worker personnel training, periodic monitoring during construction activities, stopping work within 50 feet of any fossil that is discovered, evaluation of the fossil by a qualified paleontologist, and proper recordation and curation of the specimen. | LTS |

| Table 3-1: Summary of Project Impacts and Mitigation Measures | | | |
|--|--------------------------------|--|-------------------------------|
| Impacts | Significance before Mitigation | Mitigation Measures | Significance after Mitigation |
| 4.8 Biological Resources | | | |
| Impact 4.8-1: Loss and Degradation of Special-status Plant Habitat and Potential Loss of Special-status Plants. Full buildout of the General Plan would involve conversion of habitat that may be suitable for special-status plant species to developed use. In addition to direct removal of special-status plants, development would result in habitat modification that could degrade habitat quality to a degree that it is no longer suitable for special-status plants to regenerate, and these plant populations could eventually die out. | PS | Mitigation Measure 4.8-1 – The proposed General Plan Update should be amended as follows: Implementation Measure for Special-Status Plants and Habitat As appropriate to each individual project or Specific Plan, the following actions or those determined to be equally as effective by the City shall be implemented where there may be an adverse impact on special-status plants or habitat a. In conjunction with environmental review pursuant to CEQA, for projects that could directly affect special-status plants or habitat, the City shall require that resource field surveys, including special-status plant surveys, be submitted concurrent with development applications inventorying the type, quantity, and quality of existing open space resources and conditions. This requirement may be waived if determined by the City that the proposed project area is already sufficiently surveyed, is within an adopted specific plan area, or contains resources considered less than significant. b. The City and project proponents will identify feasible opportunities to preserve special-status plant species occurrences and sensitive habitats through design and planning. c. If the City determines it is reasonable and feasible to do so, the City will require preservation of occupied special-status plant species habitat and sensitive habitat types as a condition of project approval. If adverse effects cannot be avoided, project proponents shall be required to mitigate all adverse effects in accordance with guidance from the appropriate state or federal agency charged with the protection of the subject species and habitat, including surveys conducted according to applicable standards and protocols, where necessary, implementation of impact minimization measures based on accepted standards and guidelines and best available science, and compensatory mitigation for unavoidable loss of special-status plant species and sensitive habitats. d. If the project would result in take of state or federally listed species, the City will require project proponent/s to obtain take authorization from the USFWS and/or the CDFW, as appropriate, depending on species status, and comply with all conditions of the take authorization. e. The City will require project proponents to develop and implement a mitigation and monitoring plan reflective of permit conditions required by State and/or federal regulatory agencies, to compensate for effects to or loss of special-status species and sensitive habitats. The mitigation and monitoring plan will describe in detail how impacts to | LTS |

Table 3-1: Summary of Project Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measures | Significance after Mitigation |
|---|--------------------------------|--|-------------------------------|
| | | <p>special-status species or sensitive habitats shall be avoided or offset, including details on restoration and creation of habitat, compensation for the temporal loss of habitat, management and monitoring to avoid indirect habitat degradation (e.g., management of invasive plant species, maintenance of required hydrology), success criteria ensuring that habitat function goals and objectives are met and target special-status species cover and density parameters are established, performance standards to ensure success, and remedial actions if performance standards are not met. The plan will include detailed information on the habitats present within the preservation and mitigation areas, the long-term management and monitoring of these habitats, legal protection for the preservation and mitigation areas (e.g., conservation easement, declaration of restrictions), and funding mechanism information (e.g., endowment).</p> <p>f. If available, purchase of mitigation credits at an agency-approved mitigation bank (i.e., approved by the agency with jurisdiction over the affected species or habitat) in Placer County, will be acceptable for compensatory mitigation for special-status species.</p> | |
| Impact 4.8-2: Loss and Degradation of Habitat for Special-status Wildlife Species and Potential Direct Take of Individuals. Full buildout of the General Plan would involve conversion of habitat that may be suitable for special-status wildlife species to developed use. In addition to direct removal of special-status habitat, development would result in habitat modification that could degrade habitat quality to a degree that it is no longer suitable for special-status wildlife to reproduce, and these wildlife populations could eventually die out. Also, development would include construction activities that could result in direct take of individual special-status wildlife species. | PS | <p>Mitigation Measure 4.8-2 – The proposed General Plan Update should be amended as follows:</p> <p>Implementation Measure for Special-Status Wildlife</p> <p>If feasible, the City will require preservation of occupied special-status wildlife species habitat and sensitive habitat types as a condition of project approval. If adverse effects cannot be avoided, project proponents shall be required to mitigate all adverse effects in accordance with guidance from the appropriate state or federal agency charged with the protection of the subject species and habitat, including surveys conducted according to applicable standards and protocols, where necessary, implementation of impact minimization measures based on accepted standards and guidelines and best available science, and compensatory mitigation for unavoidable loss of special-status wildlife species and sensitive habitats.</p> | LTS |
| Impact 4.8-3: Loss and Degradation of Riparian Habitat or Other Sensitive Natural Communities. Buildout of the General Plan would involve conversion of riparian habitat and other sensitive natural communities to developed use. In addition to direct removal of habitat, buildout of the General Plan would result in habitat modification that could degrade habitat quality to a degree that it is no longer suitable for riparian plants or other sensitive natural communities to | PS | <p>Mitigation Measure 4.8-3 – The proposed General Plan Update should be amended as follows:</p> <p>Implementation Measure for Riparian Habitat and Sensitive Natural Communities</p> <p>If a proposed project would result in fill or alteration of a waterway or any body of water supporting riparian forest habitat, the City will require project proponent/s to notify the California Department of Fish and Wildlife, obtain a Lake and Streambed Alteration Agreement if</p> | LTS |

NI = No Impact

CC = Cumulatively Considerable

LTS = Less than Significant

PS = Potentially Significant

S = Significant

SU = Significant and Unavoidable

| Table 3-1: Summary of Project Impacts and Mitigation Measures | | | |
|---|--------------------------------|---|-------------------------------|
| Impacts | Significance before Mitigation | Mitigation Measures | Significance after Mitigation |
| regenerate, and these habitats and communities could eventually die out. | | determined necessary by the California Department of Fish and Wildlife, and comply with all conditions of the Lake and Streambed Alteration Agreement. Measures for riparian habitat and sensitive natural communities protection include, but are not limited to, avoid impacts by establishing a buffer zone between adjacent land uses and riparian habitat and sensitive natural communities; protect and preserve riparian habitat and sensitive natural communities to the extent feasible; and compensate for loss of riparian habitat and sensitive natural communities by creating, restoring, or preserving off-site habitat in coordination with the applicable resource agencies. Implement Mitigation Measure 4.8-1 (Implementation Measure for Special-Status Plants and Habitat) Implement Mitigation Measure 4.8-2 (Implementation Measure for Special-Status Wildlife) | |
| Impact 4.8-4: Loss and Degradation of Wetlands and Other Waters. Buildout of the General Plan would involve conversion of wetlands and other waters to developed use. In addition to direct removal of wetlands and other waters, buildout of the General Plan would result in wetlands modification that could degrade habitat quality. | PS | Mitigation Measure 4.8-4 – The proposed General Plan Update should be amended as follows: Implementation Measure for Wetlands and Other Waters If a project would result in ground disturbance on sites containing waterways or other aquatic habitats, the City will require project proponent/s to complete a delineation of waters of the United States according to U.S. Army Corps of Engineers’ methods, and to submit the completed delineation to the U.S. Army Corps of Engineers for jurisdictional determination. If the project would result in fill of wetlands or other waters of the United States, the City will require project proponent/s to obtain a Section 404 Clean Water Act permit from the U.S. Army Corps of Engineers and water quality certification from the Regional Water Quality Control Board pursuant to Section 401 of the Clean Water Act. If the project involves work in areas containing waters disclaimed by the USACE, project applicants shall obtain a Waste Discharge Requirement permit from the Regional Water Quality Control Board pursuant to the Porter Cologne Act. Project applicants shall be required to obtain all needed permits prior to project implementation, to abide by the conditions of the permits, including all mitigation requirements, and to implement all requirements of the permits in the timeframes required therein. Implement Mitigation Measure 4.8-1 (Implementation Measure for Special-Status Plants and Habitat) Implement Mitigation Measure 4.8-2 (Implementation Measure for Special-Status Wildlife) Implement Mitigation Measure 4.8-3 (Implementation Measure for | LTS |

| Table 3-1: Summary of Project Impacts and Mitigation Measures | | | |
|---|---------------------------------------|---|--------------------------------------|
| Impacts | Significance before Mitigation | Mitigation Measures | Significance after Mitigation |
| | | Riparian Habitat and Sensitive Natural Communities) | |
| Impact 4.8-5: Substantial Interference with Wildlife Movement Corridors and Nursery Sites. Buildout of the General Plan would involve conversion of habitat to developed use that could provide wildlife movement corridors and nursery sites. In addition to direct removal of habitat, buildout of the General Plan would result in habitat modification that could degrade habitat quality to a degree that it is no longer suitable for use as wildlife movement corridors and/or nursery sites. | PS | Implement Mitigation Measure 4.8-1 (Implementation Measure for Special-Status Plants and Habitat) Implement Mitigation Measure 4.8-2 (Implementation Measure for Special-Status Wildlife) Implement Mitigation Measure 4.8-3 (Implementation Measure for Riparian Habitat and Sensitive Natural Communities) Implement Mitigation Measure 4.8-4 (Implementation Measure for Wetlands and Other Waters) | LTS |
| Impact 4.8-6: Conflict with Local Ordinances Protecting Biological Resources. Buildout of the General Plan would involve conversion of habitat to developed use that will require oak tree removal, which would be subject to the City's ordinances and policies regarding oak tree preservation and mitigation. The City of Roseville Tree Preservation Ordinance requires a permit and mitigation for all oak trees removed. | LTS | No mitigation is required. | LTS |
| Impact 4.8-7: Conflict with Provisions of an Adopted Habitat Conservation Plan, Natural Conservation Community Plan, or Other Approved Conservation Plan. There is no adopted HCP, NCCP, or other approved local, regional, or State HCP that applies to the Planning Area. | LTS | No mitigation is required. | LTS |
| 4.9 Cultural and Tribal Cultural Resources | | | |
| Impact 4.9-1: Cause a Substantial Adverse Change in the Significance of a Historical Resource Pursuant to Section 15064.5. It is possible that development planned as a part of General Plan buildout could adversely affect historical resources through modification of existing buildings and structures through demolition, deconstruction, relocation, or alteration, or adversely impact the setting through new land uses. However, the existing and proposed General Plan, the 2009 Downtown Specific Plan, and Chapter 19.61 of the City of Roseville's Zoning Ordinance contain goals and policies which would ensure that potential historical resources are assessed for their significance in advance of future development. Implementation of these goals and policies would reduce impacts, but if historical resources are | S | Mitigation Measure 4.9-1a – The General Plan Update should be amended as follows: Implementation Measure As appropriate to each individual project or Specific Plan, the following actions or those determined to be equally as effective by the City shall be implemented where there may be an adverse impact on potential historical resources: a Consult the City's Master List of Historical Resources Inventory and, as necessary, seek updated information from the North Central Information Center or other applicable data repositories to determine whether the project area has been surveyed, and whether historic built environment resources were identified. b. If a survey of the property or the area in which the property is located has not been conducted, a qualified architectural historian shall | SU |

NI = No Impact

CC = Cumulatively Considerable

LTS = Less than Significant

PS = Potentially Significant

S = Significant

SU = Significant and Unavoidable

Table 3-1: Summary of Project Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measures | Significance after Mitigation |
|---|--------------------------------|---|-------------------------------|
| substantially adversely affected by future development. | | <p>conduct a study of the project area for the presence of historic built environment resources.</p> <p>c. If a study is required, it will evaluate the significance of built environment resources greater than 45 years in age that may be directly or indirectly impacted by project activities. The study may include a field survey; background, archival and historic research; and consultation with local historical societies, museums or other interested parties; as necessary.</p> <p>d. If necessary, the qualified architectural historian's study will recommend appropriate protection or mitigative treatment, if any, and include recordation of identified built environment resources. Recommended treatment for historical resources identified in the report shall be implemented.</p> <p>e. If no significant historic built environment resources are identified in the study or prior survey of the project area that may be directly or indirectly impacted by project activities, there is no adverse change to documented built environment historical resources and no further action is required.</p> <p>f. If a significant built environment historical resource could be directly or indirectly impacted by project activities, avoidance shall be considered the primary mitigation option. If avoidance is not feasible, then the maintenance, repair, stabilization, rehabilitation, restoration, preservation, conservation, or reconstruction of the historical resource, conducted in a manner consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties will reduce impacts to an acceptable level. If adherence to the Secretary of the Interior's Standards cannot avoid materially altering in an adverse manner the physical characteristics or historic character of the surrounding environmental setting that contribute to a resource's historic significance, additional mitigation may be required.</p> <p>g. If avoidance is not feasible and minimizing impacts through adherence to the Secretary of the Interior's Standards for the Treatment of Historic Properties is not feasible, documentation is required using, as appropriate, Historic American Buildings Survey (HABS), Historic American Engineering Record (HAER), and/or Historic American Landscapes Survey (HALS) guidelines before the property is potentially altered during project activities.</p> | |

Table 3-1: Summary of Project Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measures | Significance after Mitigation |
|---|--------------------------------|---|-------------------------------|
| Impact 4.9-2: Cause a Substantial Adverse Change in the Significance of an Archaeological Resource pursuant to Section 15064.5. Individual development and infrastructure projects within the Planning Area would involve grading, excavation or other ground-disturbing activities which could disturb or damage unique archaeological resources. | S | Mitigation Measure 4.9-2a – The proposed General Plan Update should be amended as follows: Implementation Measure Projects that could have significant adverse impacts to potentially significant archaeological resources shall be required to assess impacts and provide feasible mitigation. The following steps, or those determined to be equally as effective by the City, will be followed: a. Request information from the California Native American Heritage Commission to obtain a review of the Sacred Lands File and a list of local Native American groups and individuals that may have specific knowledge of cultural resources in the area that could be affected by project implementation. Each Native American group and individual identified by the Native American Heritage Commission will be contacted to obtain any available information on cultural resources in the project area. Additional consultation with relevant tribal representatives may be appropriate, depending on the relative level of cultural sensitivity. b. Request updated information from the North Central Information Center of the California Historical Resources Information System (California State University, Sacramento) to determine whether the project area has been previously surveyed and whether archaeological resources were identified. In the event the records indicate that no previous survey has been conducted or existing survey data is greater than five years old, the applicant will retain the services of a qualified archaeologist to assess the adequacy of the existing data (if any) and assess the archaeological sensitivity of the project area. If the survey did not meet current professional standards or regulatory guidelines, or relies on outdated information, a qualified archaeologist will make a recommendation on whether a survey is warranted based on the sensitivity of the project area for archaeological resources. c. If a survey is warranted, it will include all necessary background research in addition to an archaeological pedestrian survey. Based on findings of the survey, additional technical studies may be required, such as geoarchaeological sensitivity analysis, or other analysis scaled according to the nature of the individual project. A report will document the results of the survey and provide appropriate management recommendations, and include recordation of identified archaeological resources on appropriate California Department of Parks and Recreation site record forms and cultural resources reports. d. Management recommendations may include, but are not limited to | SU |

Table 3-1: Summary of Project Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measures | Significance after Mitigation |
|---------|--------------------------------|---|-------------------------------|
| | | <p>additional studies to evaluate identified sites or archaeological monitoring at locations determined by a qualified archaeologist to be sensitive for subsurface cultural resource deposits.</p> <p>e. Once approved by the City, provide the North Central Information Center with appropriate California Department of Parks and Recreation site record forms and cultural resources reports for any resources identified. Any subsequent reports completed as a result of additional technical work will likewise be submitted to the Northcentral Information Center.</p> <p>f. If no archeological resources are identified that may be directly or indirectly impacted by project activities, mitigation is complete as there would be no adverse change to documented archeological resources. The exception would be in the event of the discovery of a previously unknown archaeological site inadvertently exposed during project implementation. In such an event, a qualified archaeologist will be retained to assess the discovery and provide management recommendations as necessary.</p> <p>g. When a project will impact a known archaeological site, and avoidance is not a feasible option, a qualified archaeologist shall evaluate the eligibility of the site for listing in the California Register of Historical Resources. If the archaeological site is found to be a historical resource as per CEQA Guidelines Section 15064.5 (a)(3), the qualified archaeologist shall recommend further mitigative treatment which could include preservation in place or data recovery.</p> <p>h. If a site to be tested is prehistoric, local tribal representatives should be afforded the opportunity to monitor the ground-disturbing activities. Appropriate mitigation may include curation of artifacts removed during subsurface testing.</p> <p>i. If significant archaeological resources that meet the definition of historical or unique archaeological resources are identified in the project area, the preferred mitigation of impacts is preservation in place. If impacts cannot be avoided through project design, appropriate and feasible treatment measures are required, which may consist of, but are not limited to actions, such as data recovery excavations. If only part of a site will be impacted by a project, data recovery will only be necessary for that portion of the site. Data recovery will not be required if the implementing agency determines prior testing and studies have adequately recovered the scientifically consequential information from the resources. Studies and reports resulting from the data recovery shall be deposited with the North Central Information</p> | |

NI = No Impact

CC = Cumulatively Considerable

LTS = Less than Significant

PS = Potentially Significant

S = Significant

SU = Significant and Unavoidable

Table 3-1: Summary of Project Impacts and Mitigation Measures

| Impacts | Significance before Mitigation | Mitigation Measures | Significance after Mitigation |
|---------|--------------------------------|---|-------------------------------|
| | | Center. Archaeological sites known to contain human remains shall be treated in accordance with the provisions of Section 7050.5 of the Health and Safety Code.. | |
| | | <p>Mitigation Measure 4.9-2b – The General Plan Update should be amended as follows:</p> <p>Implementation Measure</p> <p>Projects that could have significant adverse impacts to undiscovered, potentially significant archaeological resources shall be required to implement the following steps, or those determined to be equally as effective by the City:</p> <p>a During ground-disturbing activities necessary to implement proposed development and infrastructure projects, if any prehistoric or historic subsurface archaeological resources are discovered, all work within 100 feet of the resources shall be halted and a qualified archaeologist shall be consulted within 24 hours to assess the significance of the find, according to CEQA Guidelines Section 15064.5, and implement, as applicable, CEQA Guidelines Sections 15064.5(d), (e), and (f).</p> <p>b. If any find is determined to be a historical resource according to CEQA Guidelines Section 15064.5, representatives from the City and the archaeologist will meet to determine the appropriate avoidance measures or other appropriate mitigation. Cultural resources shall be recorded on appropriate Department of Parks and Recreation forms, and all significant cultural materials recovered shall be, as necessary and at the discretion of the qualified archaeologist and in consultation with the local Native American community if the discovery is prehistoric in age, subject to scientific analysis, professional curation, and documentation according to professional standards. If it is determined that the proposed development or infrastructure project could damage a historical resource or a unique archaeological resource (as defined pursuant to the CEQA Guidelines), mitigation shall be implemented in accordance with Section 21083.2 of the California Public Resources Code and CEQA Guidelines Section 15126.4, with a preference for preservation in place. Work may proceed on other parts of the project site while mitigation for historical resources or unique archaeological resources is being carried out. Preservation in place may be accomplished by planning construction to avoid the resource; incorporating the resource within open space; capping and covering the resource; or deeding the site into a permanent conservation easement.</p> <p>c. If avoidance is not feasible, the qualified archaeologist shall develop and oversee the execution of a treatment plan. The treatment plan shall</p> | SU |

NI = No Impact

CC = Cumulatively Considerable

LTS = Less than Significant

PS = Potentially Significant

S = Significant

SU = Significant and Unavoidable

| Table 3-1: Summary of Project Impacts and Mitigation Measures | | | |
|--|--------------------------------|--|-------------------------------|
| Impacts | Significance before Mitigation | Mitigation Measures | Significance after Mitigation |
| | | include, but shall not be limited to, data recovery procedures based on location and type of archaeological resources discovered and a preparation and submittal of report of findings to the Northwest Information Center of the California Historical Resources Information System. Data recovery shall be designed to recover the significant information the archaeological resource is expected to contain, based on the scientific/historical research questions that are applicable to the resource, what data classes the resource is expected to possess, and how the expected data classes would address the applicable resource questions. Data recovery, in general, should be limited to the portions of the historical property that could be adversely affected by project proponents' actions. Destructive data recovery methods shall not be applied to portions of the archaeological resources if nondestructive methods are practical. | |
| Impact 4.9-3: Disturb Any Human Remains, Including Those Interred Outside of Formal Cemeteries. The general project vicinity is known to have been heavily used by Native American groups prehistorically; in addition, Roseville was settled by European immigrants by the mid-19th century. While some burial ground locations (generally from the historic-era) are known, there is the possibility that ground disturbing activities in the general plan update area could encounter prehistoric, historic-era, or other human remains. | S | Mitigation Measure 4.9-3 – The General Plan Update should be amended as follows: Implementation Measure Management of Tribal Cultural Resources and Consultation The City will develop and implement guidance for consultation and management of cultural and tribal cultural resources. This guidance should have two parts. First is the City's position on tribal participation during the project planning and approval process for discretionary projects. This includes both private sector and public (City) projects, which are subject to State and local laws and regulations that are under the jurisdiction of the City. It should also include guidance for City planners on determining when mitigation measures related to Native American participation are warranted under CEQA, standard treatment and mitigation measures that can be used consistently in project planning, and guidance on the City's use of public funding when conducting consultation. Second, this guidance document should also provide information and guidance for City staff and contractors during the project construction and implementation phases. This includes thresholds for payment for tribal participation, instructions for contractors in the event of an unanticipated discovery, and guidance for City staff in assessing and acting upon unanticipated discoveries. The City may update this guidance periodically, as appropriate. | SU |

NI = No Impact

CC = Cumulatively Considerable

LTS = Less than Significant

PS = Potentially Significant

S = Significant

SU = Significant and Unavoidable

| Table 3-1: Summary of Project Impacts and Mitigation Measures | | | |
|---|---------------------------------------|---|--------------------------------------|
| Impacts | Significance before Mitigation | Mitigation Measures | Significance after Mitigation |
| Impact 4.9-4: Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource. Buildout of the General Plan Planning Area would result in development projects throughout the Planning Area that would involve earthmoving activities. The Planning Area and vicinity are known to have been heavily used by Native American groups prehistorically and UAIC has indicated that TCRs are located within the Planning Area. | S | Mitigation Measure 4.9-4 – Implement Mitigation Measure 4.9-3. | SU |
| 4.10 Hazards, Hazardous Materials, and Wildfire | | | |
| Impact 4.10-1: Create a Significant Hazard Through Routine Transport, Use, or Disposal or Possible Release of Hazardous Materials from Upset or Accident Conditions. Future population growth with buildout of the General Plan would result in an increase in the routine transport, use, and/or disposal of hazardous materials, which could result in greater exposure of the public to such materials and exposure of increasing numbers of people through either routine use or accidental release. Implementation of proposed General Plan Update policies, in combination with existing federal and state regulations, would reduce the potential impacts related to the routine transportation of hazardous materials. | LTS | No mitigation is required. | LTS |
| Impact 4.10-2: Emission or Handling of Hazardous or Acutely Hazardous Materials, Substances, or Waste within One-Quarter Mile of an Existing or Proposed School. Buildout of the General Plan could result in development of uses that would emit or handle hazardous waste in proximity to new or existing schools. | LTS | No mitigation is required. | LTS |
| Impact 4.10-3: Public Health Hazards from Locating Project Development on a Known Hazardous Materials Site Compiled Pursuant to Government Code Section 65962.5. Several sites within the City are listed on the Cortese List as known hazardous materials sites. New and infill development proposed in the proposed General Plan Update could expose construction workers to hazards and hazardous materials from these sites during construction activities, and hazardous materials on-site could create an environmental or health hazard if left in place. | LTS | No mitigation is required. | LTS |
| Impact 4.10-4: Impair Implementation of or Physical | LTS | No mitigation is required. | LTS |

NI = No Impact

CC = Cumulatively Considerable

LTS = Less than Significant

PS = Potentially Significant

S = Significant

SU = Significant and Unavoidable

| Table 3-1: Summary of Project Impacts and Mitigation Measures | | | |
|--|--------------------------------|----------------------------|-------------------------------|
| Impacts | Significance before Mitigation | Mitigation Measures | Significance after Mitigation |
| Interference with an Adopted Emergency Response Plan or an Emergency Evacuation Plan. Buildout of the General Plan would add additional traffic and residences requiring evacuation in case of an emergency. Implementation of proposed General Plan Update policies would ensure conformance with local emergency-response programs and continued cooperation with emergency-response service providers. | | | |
| Impact 4.10-5: Exposure of People and Structures to Significant Risk of Urban and Wildland Fires. Buildout of the General Plan could potentially increase risk to fire for both people and property. However, implementation of proposed General Plan Update policies and actions, along with existing regulations would ensure that people and structures would not be exposed to a significant risk of loss of injury involving fires. | LTS | No mitigation is required. | LTS |
| 4.11 Public Services and Recreation | | | |
| Impact 4.11-1: Increased Demand for Police Protection Facilities. The increase in the number of people in the City and amount of development would require additional Roseville Police Department staff in order for the department to maintain its present level of service. The addition of new staff would not result in the need for new or physically altered police protection facilities, the construction of which could potentially have adverse impacts on the physical environment, to maintain acceptable response times or other performance objectives for police protection. | LTS | No mitigation is required. | LTS |
| Impact 4.11-2: Increased Demand for Fire Protection Services and Facilities. Buildout of the General Plan would result in additional population and structures within the Planning Area that would create additional demands for fire protection services over current demand levels. The addition of new staff would not result in the need for new or physically altered fire protection facilities, the construction of which could potentially have adverse impacts on the physical environment, to maintain acceptable response times or other performance objectives for fire protection. | LTS | No mitigation is required. | LTS |

NI = No Impact

CC = Cumulatively Considerable

LTS = Less than Significant

PS = Potentially Significant

S = Significant

SU = Significant and Unavoidable

| Table 3-1: Summary of Project Impacts and Mitigation Measures | | | |
|---|--------------------------------|----------------------------|-------------------------------|
| Impacts | Significance before Mitigation | Mitigation Measures | Significance after Mitigation |
| Impact 4.11-3: Demand for Additional School Services and Facilities. Buildout of the General Plan accommodates the construction of between 20,000 to 25,000 housing units that generate approximately 10,000 additional K-12 students. The impacts of construction and operation of school facilities has been analyzed throughout this EIR. The proposed General Plan Update includes mitigating policies and measures, where necessary, that would reduce or avoid impacts. School impact fees would be collected in accordance with SB 50 to ensure the development of adequate school facilities, and the California Legislature has declared that payment of the State-mandated school impact fee is deemed to be full and adequate mitigation under CEQA (California Government Code Section 65996). | LTS | No mitigation is required. | LTS |
| Impact 4.11-4: Need for New or Expanded Parks and/or Recreation Facilities and Potential for Accelerated or Substantial Deterioration of Existing Parks and Recreation Facilities from Increased Use. Buildout of the General Plan would result in the development of new residences in Roseville, which would add new population and increase demand for new and existing parks, as well as recreation facilities. This additional population would be likely to use existing park facilities potentially resulting in the accelerated physical deterioration of existing facilities. Buildout of the General Plan could accommodate approximately 1,100 additional acres of developed parkland, the construction of which could result in adverse impacts on the physical environment. However, the impacts of construction and operation of these facilities has been analyzed throughout this EIR, and within EIRs for each of the City's Specific Plans. The proposed General Plan Update includes mitigating policies and measures, where necessary, that would reduce or avoid impacts. In addition, dedication of parkland or payment of in-lieu fees could also be used by the City to improve, expand, and maintain existing City parks to ensure that accelerated deterioration does not occur. | LTS | No mitigation is required. | LTS |

NI = No Impact

CC = Cumulatively Considerable

LTS = Less than Significant

PS = Potentially Significant

S = Significant

SU = Significant and Unavoidable

| Table 3-1: Summary of Project Impacts and Mitigation Measures | | | |
|---|--------------------------------|--|-------------------------------|
| Impacts | Significance before Mitigation | Mitigation Measures | Significance after Mitigation |
| 4.12 Utilities and Service Systems | | | |
| Impact 4.12-1: Require or Result in the Relocation of or the Construction of New or Expanded Utilities and Service Systems Facilities, the Construction of Which Could Cause Significant Environmental Effects. Buildout of the General Plan would require the relocation of or the construction of new or expanded water and wastewater infrastructure, stormwater drainage facilities, and electrical and natural gas infrastructure. The impacts of construction of these facilities have been analyzed throughout this EIR. The proposed General Plan Update includes mitigating policies and measures, where necessary, that would reduce or avoid most impacts to a less-than-significant level. Buildout of the General Plan would contribute to the need to develop the Ophir water treatment plant, and new development under the General Plan would indirectly contribute to significant and unavoidable air quality impacts from construction of the water treatment plant. | Direct LTS Indirect S | No feasible mitigation measures are available that would reduce the impact to LTS. | SU |
| Impact 4.12-2: Have Sufficient Water Supplies. Buildout of the General Plan would increase water demand. By adhering to the goals, policies, and implementation measures proposed in the proposed General Plan Update, as well as local and State laws and regulations, the City would ensure adequate water supply is available to meet future demand. The City's UWMP determined that water supply is projected to be sufficient in normal water years over the UWMP's 20-year planning period (i.e., 2015 to 2035). Although water supply in single-dry years and some multiple-dry years is insufficient to meet demand within the City service area over the 20-year planning period, water conservation and/or groundwater use will ensure sufficient water supplies are available to meet demands. | LTS | No mitigation is required. | LTS |
| Impact 4.12-3: Adequacy of Wastewater Treatment Capacity. Buildout of the General Plan would result in new residential, commercial, office, and industrial development that would generate additional wastewater that increases demand for wastewater treatment. By adhering to the goals, policies, and implementation measures proposed in the proposed General Plan Update, the City would ensure | LTS | No mitigation is required. | LTS |

NI = No Impact

CC = Cumulatively Considerable

LTS = Less than Significant

PS = Potentially Significant

S = Significant

SU = Significant and Unavoidable

| Table 3-1: Summary of Project Impacts and Mitigation Measures | | | |
|--|--------------------------------|----------------------------|-------------------------------|
| Impacts | Significance before Mitigation | Mitigation Measures | Significance after Mitigation |
| adequate wastewater treatment capacity is available to meet future demand. | | | |
| Impact 4.12-4: Generation of Solid Waste in Excess of Capacity and Compliance with Solid Waste Statues and Regulations. Buildout of the General Plan would accommodate an increase in population and employees. Future development would be required to comply with applicable federal, State, or local solid waste regulations or statutes. In addition, the proposed General Plan Update would not generate solid waste in excess of state or local standards or in excess of capacity of local infrastructure. The Western Regional Sanitary Landfill has sufficient landfill capacity available to accommodate solid-waste disposal needs for development under the General Plan. Therefore, impacts related to sufficient landfill capacity and compliance with applicable statutes and regulations related to solid waste are considered less than significant. | LTS | No mitigation is required. | LTS |
| 4.13 Hydrology and Water Quality | | | |
| Impact 4.13-1: Violation of Water Quality Standards or Waste Discharge Requirements or Conflict with a Water Quality Control Plan. Buildout of the General Plan would convert large areas of undeveloped land to residential, commercial, industrial, and mix-uses, as well as intensify land uses through infill development in existing downtown and major corridor areas, resulting in additional discharges of pollutants to receiving water bodies. Such pollutants would result in adverse changes to the water quality of local water bodies and could conflict with the Basin Plan. | LTS | No mitigation is required. | LTS |
| Impact 4.13-2: Substantial Interference with Groundwater Recharge or Substantial Depletion of Groundwater Supplies that would Impede Implementation of a Groundwater Sustainable Plan. Buildout of the General Plan would result in additional impervious surfaces, which could reduce the amount of groundwater recharge and in turn, affect the yield of hydrologically connected wells. However, a substantial reduction in groundwater recharge is not anticipated because most of the Planning Area soils provide only a low level of groundwater recharge. Future development would also result | LTS | No mitigation is required. | LTS |

| Table 3-1: Summary of Project Impacts and Mitigation Measures | | | |
|--|--------------------------------|----------------------------|-------------------------------|
| Impacts | Significance before Mitigation | Mitigation Measures | Significance after Mitigation |
| in a need for increased potable water. However, the City's UWMP and the Western Placer County GMP provide for sustainable management of groundwater supplies, and a GSP is in process. | | | |
| Impact 4.13-3: Substantial Alteration of Drainage Patterns Resulting in Substantial Erosion or Siltation. Construction and grading activities associated with buildout of the General Plan could result in excess runoff, soil erosion, and stormwater discharges of suspended solids and increased turbidity. Such activities could mobilize other pollutants from project construction sites as contaminated runoff to on-site and ultimately off-site drainage channels. Many construction-related wastes have the potential to degrade existing water quality. Construction activities that are implemented without mitigation could violate water quality standards or cause direct harm to aquatic organisms. | LTS | No mitigation is required. | LTS |
| Impact 4.13-4: Substantial Alteration of Drainage Patterns Resulting in Runoff that Would Exceed the Capacity of Stormwater Drainage Systems and/or Cause an Increase in Flooding or Provide Additional Sources of Polluted Runoff. Buildout of the General Plan would increase the amount of impervious surfaces, thereby increasing surface runoff. This increase in surface runoff would result in an increase in both the total volume and the peak discharge rate of stormwater runoff, and therefore could result in greater potential for erosion, sedimentation, hydromodification, and on- and off-site flooding. | LTS | No mitigation is required. | LTS |
| Impact 4.13-5: Release of Pollutants in Flood Hazard, Tsunami, or Seiche Zones. Buildout of the General Plan could result in short-term, temporary, storage of materials in flood hazard zones only if a flood encroachment permit is issued. The Roseville Municipal Code contains requirements that are specifically intended to prevent downstream transport of pollutants in a flood zone. With implementation of policies contained in the proposed General Plan Update and adherence to the Municipal Code, | LTS | No mitigation is required. | LTS |

| Table 3-1: Summary of Project Impacts and Mitigation Measures | | | |
|--|---------------------------------------|--|--------------------------------------|
| Impacts | Significance before Mitigation | Mitigation Measures | Significance after Mitigation |
| 4.14 Aesthetics | | | |
| Impact 4.14-1: Substantial Adverse Effect on a Scenic Vista. Buildout of the General Plan would change views of farmland from individual parcels at the western and northwestern edges of the Planning Area, but it would not have a substantial adverse effect on a scenic vista. There are no scenic vistas in the Planning Area. | LTS | No mitigation is required. | LTS |
| Impact 4.14-2: In a Non-Urbanized Area, Substantially Degrade the Existing Visual Character or Quality of the Site and its Surroundings and in an Urbanized Area, Conflict with Applicable Zoning and Other Regulations Governing Scenic Quality. Buildout of the General Plan would include development and public infrastructure and facilities that would change the existing visual character of the Planning Area. Implementation of proposed General Plan Update policies, along with adherence to the City's Community Design Standards, as well as the requirements of the City's Municipal Code, and other adopted plans would ensure the continuation of high-quality design and preservation of open space such that the proposed General Plan Update would not conflict with applicable zoning or other regulations governing scenic quality. | S | No feasible mitigation measures are available. | SU |
| Impact 4.14-3: Create a New Source of Substantial Light or Glare that Would Adversely Affect Day or Nighttime Views in the Area. Buildout of the General Plan would create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. | S | No feasible mitigation measures are available. | SU |
| 4.15 Energy | | | |
| Impact 4.15-1: Significant Environmental Impacts Due to the Wasteful, Inefficient, or Unnecessary Consumption of Energy Resources. Buildout of the General Plan would require energy in the forms of fossil fuels, natural gas, and electricity. A large body of existing regulations would have the effect of reducing energy demand and would reduce potential adverse environmental effects associated with energy demand. The proposed General Plan Update also includes many policies that promote additional energy conservation and savings and that would reduce peak demand and associated environmental | LTS | No mitigation is required. | LTS |

NI = No Impact

CC = Cumulatively Considerable

LTS = Less than Significant

PS = Potentially Significant

S = Significant

SU = Significant and Unavoidable

| Table 3-1: Summary of Project Impacts and Mitigation Measures | | | |
|---|--------------------------------|----------------------------|-------------------------------|
| Impacts | Significance before Mitigation | Mitigation Measures | Significance after Mitigation |
| effects. | | | |
| Impact 4.15-2: Conflict with or Obstruct a State or Local Plan for Renewable Energy or Energy Efficiency. Buildout of the proposed General Plan Update would not conflict with or obstruct a State or local plan for increasing renewable energy or energy efficiency. Policies and implementation measures in the proposed General Plan Update include actions to increase the use and implementation of renewable energy resources. | LTS | No mitigation is required. | LTS |

3.7 SIGNIFICANT UNAVOIDABLE ADVERSE IMPACTS

Project implementation would result in significant and unavoidable adverse impacts after mitigation implementation related to transportation, air quality, noise and vibration, cultural and tribal resources, utilities and service systems, and aesthetics. Furthermore, the proposed project would make a cumulatively considerable incremental contribution to these same topic areas plus greenhouse gas emissions, as shown in Table 3-2 (and discussed in more detail in Chapter 5, “Other CEQA Considerations”).

| Table 3-2. Summary of Significant and Unavoidable Impacts | | |
|--|----------------------|--|
| Chapter Name/Issue Area | Impact Number | Impact Title |
| Transportation | 4.3-1 | VMT Per Capita Exceeds the Threshold of 15 Percent Below the City Baseline |
| Air Quality | 4.4-1 | Generation of Short-Term Construction-Related Emissions of Criteria Air Pollutants and Precursors for Which the Project Region is in Nonattainment, and Conflict with or Obstruct an Air Quality Plan |
| | 4.4-2 | Generation of Long-Term Operational Emissions of Criteria Air Pollutants and Precursors for Which the Project Region is in Nonattainment, and Conflict with or Obstruct an Air Quality Plan |
| | 4.4-3 | Expose Sensitive Receptors to Substantial Pollutant Concentrations (long-term operation only) |
| | 4.4-5 | Result in Other Emissions (Such as Those Leading to Odors) Adversely Affecting a Substantial Number of People (long-term operation only) |
| Noise and Vibration | 4.6-1 | Potential for Substantial Temporary, Short-Term Exposure to Construction Noise |
| | 4.6-2 | Potential for Long-Term Noise Exposure |
| Cultural and Tribal Cultural Resources | 4.9-1 | Cause a Substantial Adverse Change in the Significance of a Historical Resource Pursuant to Section 15064.5 |
| | 4.9-2 | Cause a Substantial Adverse Change in the Significance of an Archaeological Resource pursuant to Section 15064.5 |
| | 4.9-3 | Disturb any Human Remains, Including Those Interred Outside of Formal Cemeteries |
| | 4.9-4 | Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource |
| Utilities and Service Systems | 4.12-1 | Require or Result in the Relocation of or the Construction of New or Expanded Utilities and Service Systems Facilities, the Construction of Which Could Cause Significant Environmental Effects (indirect short-term impacts only, related to construction of the Ophir Water Treatment Plant) |
| Aesthetics | 4.14-2 | In a Non-Urbanized Area, Substantially Degrade the Existing Visual Character or Quality of the Site and its Surroundings |
| | 4.14-3 | Create a New Source of Substantial Light or Glare that Would Adversely Affect Day or Nighttime Views in the Area |
| Significant and Unavoidable Cumulative Impacts | | |
| Greenhouse Gas Emissions | 4.5-1 | Generation of Greenhouse Gas Emissions |

| Table 3-2. Summary of Significant and Unavoidable Impacts | |
|--|---|
| Chapter Name/Issue Area | Impact Title |
| Transportation | Contribution to Increased VMT Per Capita |
| Air Quality | Generation of Short-Term Construction-Related Emissions of Criteria Air Pollutants and Precursors for Which the Project Region is in Nonattainment, and Conflict with or Obstruct an Air Quality Plan |
| | Generation of Long-Term Operational Emissions of Criteria Air Pollutants and Precursors for Which the Project Region is in Nonattainment, and Conflict with or Obstruct an Air Quality Plan |
| | Expose Sensitive Receptors to Substantial Pollutant Concentrations (long-term operation only) |
| Noise and Vibration | Long-Term Noise: Operational Traffic Noise and Long-Term Noise: Stationary Sources |
| Biological Resources | Special-Status Plants, Loss or Degradation of Riparian Habitat/Sensitive Natural Communities or Wetlands and Other Waters |
| | Loss of Habitat and Special-Status Wildlife Species |
| Cultural and Tribal Cultural Resources | Cause a Substantial Adverse Change in the Significance of a Historical Resource Pursuant to Section 15064.5 |
| | Cause a Substantial Adverse Change in the Significance of an Archaeological Resource pursuant to Section 15064.5 |
| | Disturb any Human Remains, Including Those Interred Outside of Formal Cemeteries |
| | Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource |
| Utilities and Service Systems | Indirect Short-Term Impacts Related to Construction of the Ophir Water Treatment Plant |
| Aesthetics | In a Non-Urbanized Area, Substantially Degrade the Existing Visual Character or Quality of the Site and its Surroundings |
| | Create a New Source of Substantial Light or Glare that Would Adversely Affect Day or Nighttime Views in the Area |
| Source: Data compiled by AECOM in 2020 | |

This page intentionally left blank

4 ENVIRONMENTAL IMPACT ANALYSIS

4.0 APPROACH TO THE ENVIRONMENTAL ANALYSIS

4.0.1 INTRODUCTION

In accordance with the CEQA Guidelines, this EIR includes an evaluation of potentially significant effects on the physical environment associated with implementing the proposed General Plan Update and identifies feasible mitigation for those effects. CEQA Guidelines Section 15126.2 states:

An EIR shall identify and focus on the significant effects of the proposed project on the environment. In assessing the impact of a proposed project on the environment, the lead agency should normally limit its examination to changes in the existing physical conditions in the affected area as they exist at the time the notice of preparation is published, or where no notice of preparation is published, at the time environmental analysis is commenced. Direct and indirect significant effects of the project on the environment shall be clearly identified and described, giving due consideration to both the short-term and long-term effects. The discussion should include relevant specifics of the area, the resources involved, physical changes, alterations to ecological systems, and changes induced in population distribution, population concentration, and human use of the land (including commercial and residential development), health and safety problems caused by the physical changes, and other aspects of the resource base such as water, historical resources, scenic quality, and public services. The EIR shall also analyze any significant environmental effects the project might cause or risk exacerbating by bringing development and people into the area affected.

This EIR describes potentially feasible measures that could avoid or minimize significant adverse impacts (as required by CEQA Guidelines Section 15126.4(a)(1)) and feasible and practicable measures that are fully enforceable through permit conditions, agreements, or other legally binding process (as required by CEQA Guidelines Section 15126.4(a)(2)). In the case of the adoption of a plan, policy, regulation, or other public project—as is the case for this proposed General Plan Update EIR—CEQA Guidelines Section 15126.4(a)(2) provides that mitigation measures can be incorporated into the plan, policy, regulation, or project design. Mitigation measures are not required for impacts that are found to be less than significant.

The following discussion introduces Chapter 4 of this EIR, which addresses the environmental setting, regulatory framework, environmental impacts, and mitigation measures for each environmental issue area, and explains the organization and general assumptions used in the analysis. Specific assumptions, methodology, and thresholds of significance used in the analysis and determination of significance of impacts are contained in each individual EIR chapter and impact topic section.

4.0.2 CONTENTS OF EIR SECTIONS AND DEFINITION OF TERMS

Chapter 4 of this EIR is organized by issue area, generally corresponding to topics in the CEQA Environmental Checklist (CEQA Guidelines Appendix G). As described below, each section follows the same format.

4.0.2.1 ENVIRONMENTAL SETTING

The “Environmental Setting” subsection provides an overview of the physical environmental conditions (i.e., the environmental baseline) in the Planning Area, and surrounding areas as appropriate, in accordance with the CEQA Guidelines Section 15125(a)(2), at the time the notice of preparation (NOP) was published.

4.0.2.2 REGULATORY FRAMEWORK

The “Regulatory Framework” subsection identifies the plans, policies, laws, regulations, and ordinances that are relevant to each topical section.

4.0.2.3 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

The “Environmental Impacts and Mitigation Measures” subsection identifies the impacts of the proposed General Plan Update on the existing physical environment, in accordance with the CEQA Guidelines Sections 15125 and 15143. The following discussions are included in this subsection.

- ▶ **Methodology** describes the methods, process, procedures, and/or assumptions used to formulate and conduct the impact analysis.
- ▶ **Thresholds of Significance** describes the criteria established by the City to define at what level an impact would be considered significant in accordance with CEQA. Thresholds may be quantitative or qualitative; they may be based on examples found in the CEQA Guidelines; scientific and factual data related to the City’s jurisdiction; legislative or regulatory performance standards of federal, state, regional, or local agencies relevant to the impact analysis; City goals or policies (e.g., General Plan goals or policies) or other locally-adopted policies; policies or adopted standards of affected jurisdictions; or other factors. Generally, however, the thresholds of significance used are derived from Appendix G of the CEQA Guidelines, as amended; factual or scientific information and data; and regulatory standards of federal, state, regional, and local agencies.
- ▶ **Impact Analysis** describes potential adverse physical environmental effects associated with implementation of the proposed General Plan Update. This assessment also specifies why impacts are found to be significant and unavoidable, significant or potentially significant, or less than significant, or why there is no environmental impact, based on the identified thresholds of significance.

The impacts are listed numerically and sequentially throughout each section. For example, impacts in Section 4.3 are identified as 4.3-1, 4.3-2, and so on. An impact statement precedes the discussion of each impact and provides a summary of the impact. The discussion that follows the impact statement includes the evidence on which a conclusion is based regarding the level of impact.

The level of impact is determined by comparing the environmental effects of the proposed project with baseline environmental conditions. Under CEQA, the physical environmental conditions as they exist at the time the NOP is published (as defined above and as described in the “Environmental Setting” sections of Chapter 4) normally represents baseline physical conditions.

Proposed changes to the existing General Plan goals and policies are listed within each impact, shown in **bold underlined** text for additions and ~~strike through~~ text for deletions. An evaluation of the potential impacts of these policy changes is provided.

Relevant proposed General Plan Update policies and implementation measures that would reduce or avoid impacts are summarized and the mitigating benefits of these policies and programs are described.

- ▶ **Mitigation Measures** to avoid, minimize, rectify, reduce, or compensate for significant and potentially significant impacts of the proposed General Plan Update, in accordance with the CEQA Guidelines Sections 15370, 15002(a)(3), 15021(a)(2), and 15091(a)(1), where feasible, are recommended for each significant impact. Each mitigation measure is identified numerically to correspond with the number of the impact being reduced by the measure. For example, Impact 4.3-1 would be mitigated by Mitigation Measure 4.3-1. Where no mitigation is required because the impact conclusion is “less than significant,” the conclusion “no mitigation measures are required” is stated. Where no feasible mitigation is available to reduce impacts to a less-than-significant level, the impacts are identified as remaining “significant and unavoidable” and the conclusion “no feasible mitigation measures are available” is stated with an explanation. (In some cases, all feasible and available mitigation measures are not sufficient to reduce an impact to a “less-than-significant” level. When this occurs, the impacts are described as remaining “significant and unavoidable.”) Significant and unavoidable impacts are also summarized in Chapter 5, “Other CEQA Considerations,” under the subsection “Significant and Unavoidable Environmental Impacts.”
- ▶ **Cumulative Impacts** are discussed in Chapter 5, “Other CEQA Considerations.” Cumulative impacts are those impacts of the proposed General Plan Update that would result from the incremental effect of implementing the proposed General Plan Update in combination with other past, present, and reasonably foreseeable future projects producing related impacts, and which are cumulatively considerable.

4.0.2.4 TERMINOLOGY USED TO DESCRIBE IMPACTS

Determining the Level of Impact

The EIR for this project uses the following terminology to denote the significance of environmental impacts of the proposed General Plan Update:

- ▶ **No impact** indicates the environmental resource being discussed would not be adversely affected by implementation of the proposed General Plan Update. It means no change from existing conditions. This impact level does not need mitigation.
- ▶ A **less-than-significant impact** is one that would not result in a substantial or potentially substantial adverse change in the physical environment. Under CEQA, this impact level does not require mitigation, even if feasible.
- ▶ A **significant impact** would have a substantial adverse effect on the physical environment, but can be reduced to a less-than-significant level with mitigation. Impacts may also be considered “potentially significant” if the analysis cannot definitively conclude that an impact would occur as a result of the implementation of the proposed General Plan Update. Under CEQA, mitigation measures must be identified, where feasible, to reduce the magnitude of significant or potentially significant impacts.

- ▶ A **significant and unavoidable impact** is one that would result in a substantial adverse effect on the environment, and no known feasible mitigation measures are available to reduce the impact to a less-than-significant level. Under CEQA, a project with significant and unavoidable impacts may be approved, but the lead agency (in this case, the City) must prepare a “statement of overriding considerations” in accordance with CEQA Guidelines Section 15093, explaining how the benefits of the project outweigh the potential for significant impacts.

Impact Mechanisms

Mechanisms that could cause impacts are discussed for each issue area. Impacts from implementing the proposed General Plan Update fall into the following categories:

- ▶ A **temporary impact** would occur only during construction or demolition activities.
- ▶ A **short-term impact** would last from the time construction ceases to within 3 years following construction.
- ▶ A **long-term impact** would last longer than 3 years following completion of construction. In some cases, a long-term effect could be considered a permanent effect.
- ▶ A **direct impact** is an effect that would be caused by an action and would occur at the same time and place as the action.
- ▶ An **indirect impact** is an effect that would be caused by an action but would occur later in time, or at another location, yet is reasonably foreseeable in the future.

4.1 LAND USE PLANNING AND AGRICULTURAL RESOURCES

4.1.1 INTRODUCTION

This chapter describes potential impacts to existing land uses, including agricultural uses, in the Planning Area associated with the proposed General Plan Update. To provide context for the impact analysis, this section begins with an environmental setting describing the existing land uses and land use designations in the Planning Area. Next, the regulatory framework is described, which informs the selection of the significance thresholds used in the impact analysis. The regulatory framework also includes existing General Plan policies related to the impact analysis of this chapter. The section concludes with the applicable significance thresholds, the impacts of the proposed changes to adopted Land Use Element policies, recommended mitigation measures, and the significance conclusion.

The land use impact analysis relies primarily on an examination of existing land uses and adopted plans that affect land use planning, such as the City's General Plan land use plan, the California Department of Conservation's Farmland Mapping and Monitoring Program, and the Sacramento Area Council of Government's Metropolitan Transportation Plan/Sustainable Communities Strategy. The proposed General Plan Update is compared with these plans for areas of conflict or impact.

As part of the impact analysis, NOP comments were reviewed to help guide the analysis, and any comments were integrated into the analysis. However, no NOP comments related to land use planning or agricultural resources were received.

4.1.2 ENVIRONMENTAL SETTING

4.1.2.1 PLANNING AREA

Roseville is the largest city in Placer County and is located 15 miles northeast of downtown Sacramento. Roseville is surrounded by agricultural uses in unincorporated Placer County to the west, the cities of Rocklin to the north and Citrus Heights to the south, and the unincorporated communities of Antelope to the southwest and Granite Bay to the east. Exhibit 2-1 in Chapter 2, "Project Description," shows Roseville in its regional context.

The Planning Area for this proposed General Plan Update includes all areas within the City limits and those areas outside City limits that are within the City's Sphere of Influence (see Exhibit 2-2 in Chapter 2). The Planning Area is approximately 29,000 acres or 45 square miles in total land area.

4.1.2.2 EXISTING LAND USE AND LAND USE DESIGNATIONS

Within the City limits, there are 16 subareas that have been defined for planning purposes. These are the Infill Area, the North Industrial Area, and the City's 14 Specific Plan Areas. The City's 14 Specific Plan Areas are shown in Exhibit 4.1-1 and further described under Section 4.1.3.3, "Regional and Local." The Infill Area has vacant and underutilized properties where the City will encourage infill opportunity areas, but overall is mostly built out. The North Industrial Area is a planning subarea of the City that provides a major opportunity for industrial and employment development serving the south Placer region.

Development in the vicinity of Interstate 80 and State Route 65 consists primarily of relatively large-scale commercial, office, and industrial uses. Single-family residential neighborhoods with some multi-family

development occupy the remainder of the Planning Area to the north, west, and east. Residential development in the vicinity of Interstate 80, near the southern Planning Area boundary, consists of older single-family homes on relatively small to medium sized lots, interspersed with commercial development, parks, and schools.

The City has assigned land use designations to most portions of the Planning Area, with the exception of major road rights-of-way and developed areas that are outside the City limits, but within the City's Sphere of Influence (see Exhibit 2-3 in Chapter 2). The City assumes buildout of the Planning Area with the approximate acreages per land use designation as shown in Table 4.1-1. The General Plan Update does not propose changes to land use designations; therefore, land use designations shown in Table 4.1-1 are the same in the existing General Plan and the proposed General Plan Update.

Within the existing developed portions of the City's Planning Area, residential development occupies approximately 30 percent of the total land area and vacant land accounts for another 20 percent. Public uses, open space, and recreational uses occupy approximately 20 percent of the Planning Area. Approximately 15 percent of the Planning Area is dedicated to road rights-of-way. Commercial and industrial land occupies approximately 10 percent of the Planning Area. The balance of the Planning Area is currently in agricultural production.

| Table 4.1-1 Acreage by General Plan Land Use Designation | |
|---|---------------|
| Land Use Designation | Acres |
| Residential | |
| Low-Density Residential | 11,000 |
| Medium-Density Residential | 1,300 |
| High-Density Residential | 800 |
| Commercial | |
| Neighborhood Commercial | 25 |
| Community Commercial | 1,900 |
| Regional Commercial | 340 |
| Office | |
| Business Professional | 800 |
| Industrial | |
| Light Industrial | 1,170 |
| Tech/Business Park | 30 |
| General Industrial | 1,140 |
| Transfer Station | 25 |
| Special Areas | |
| Central Business District | 60 |
| Public/Quasi-Public | 2,700 |
| Parks and Recreation | 2,140 |
| Open Space | 3,100 |
| Urban Reserve | 100 |
| TOTAL | 26,000 |
| Notes: Totals do not add due to rounding. The total acreage does not include approximately 3,000 acres in the Planning Area of undesignated road rights-of-way and other undesignated land. | |

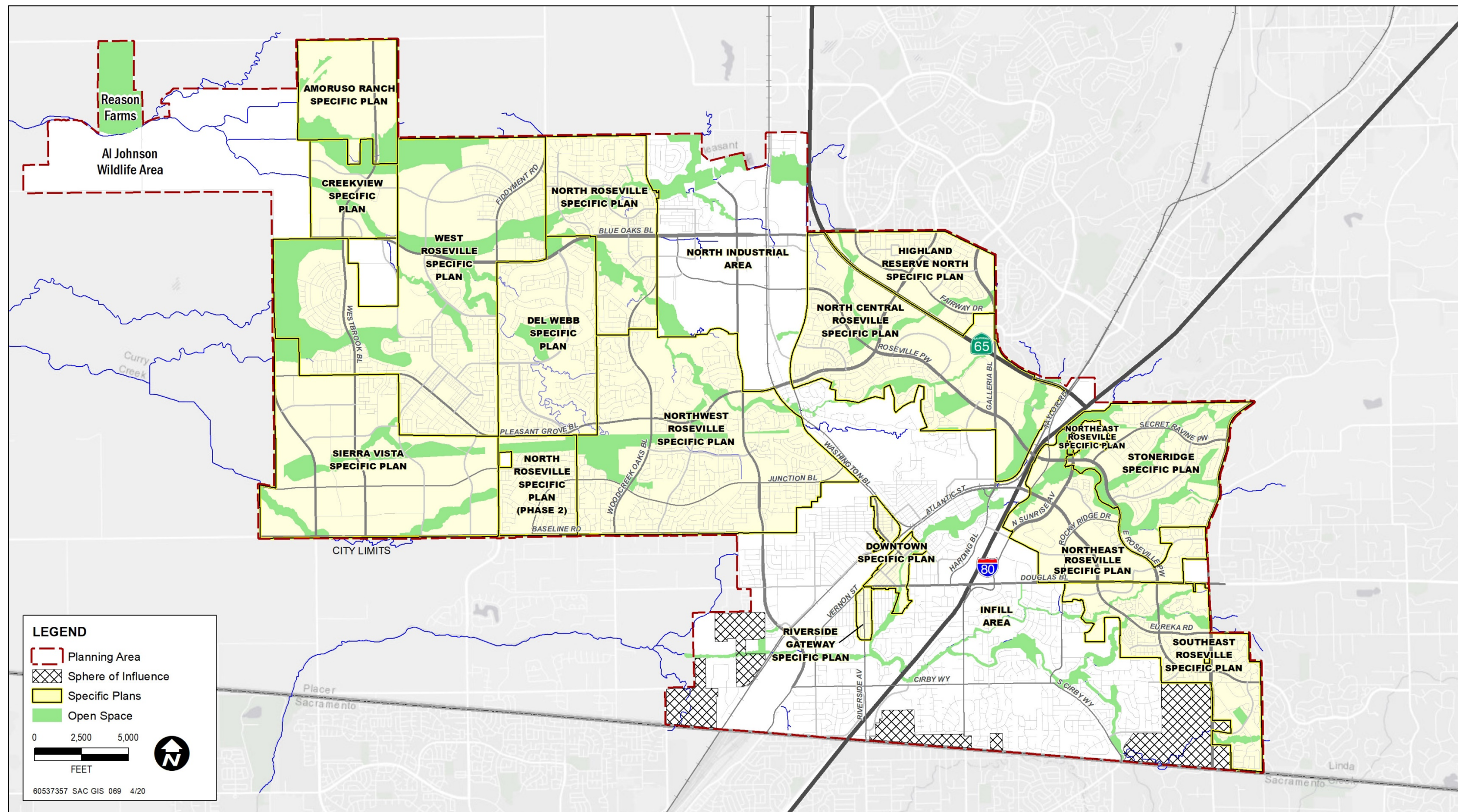


Exhibit 4.1-1

Specific Plan Areas

This page intentionally left blank

4.1.2.3 AGRICULTURAL RESOURCES

Row crops, grain crops, orchards, and grassland that supports livestock grazing is located north of Baseline Road, in the western and northwestern portions of the Planning Area. The Creekview, Amoruso Ranch, and Sierra Vista Specific Plan Areas were previously used for livestock grazing, dry land farming, and irrigated crops (City of Roseville 2010, 2011, 2016).

The California Department of Conservation's Important Farmland classifications—Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance—recognize the land's suitability for agricultural production by considering the physical and chemical characteristics of the soil, such as soil temperature range, depth of the groundwater table, flooding potential, rock fragment content, and rooting depth. The classifications also consider location, growing season, and moisture available to sustain high-yield crops. Together, Important Farmland and Grazing Land are defined by the California Department of Conservation as "Agricultural Land" (California Public Resources Code, Sections 21060.1 and 21095).

According to the Placer County Important Farmland map, published by the California Department of Conservation's Division of Land Resource Protection, the majority of the Planning Area is designated as Farmland of Local Importance, Grazing Land, Other Land, and Urban and Built-Up Land (California Department of Conservation 2016). Approximately 20 acres of Prime Farmland borders Pleasant Creek within Reason Farms (California Department of Conservation 2016).

The Planning Area is not zoned for agricultural uses (Placer County 2020, City of Roseville 2020). No parcels within the Planning Area are under Williamson Act contracts (Placer County 2020).

4.1.3 REGULATORY FRAMEWORK

4.1.3.1 FEDERAL

There are no relevant federal policies, regulations, or laws related to land use planning.

4.1.3.2 STATE

State Planning and Zoning Laws

California Government Code Section 65300 *et seq.* establishes the obligation of cities and counties to adopt and implement general plans. The general plan is a comprehensive, long-term, and general document that describes plans for the physical development of a city or county and of any land outside its boundaries that, in the city's or county's judgment, bears relation to its planning. The general plan addresses a broad range of topics, including, at a minimum, land use, circulation, housing, conservation, open space, noise, and safety. In addressing these topics, the general plan identifies the goals, objectives, policies, principles, standards, and plan proposals that support the city's or county's vision. The general plan is a long-range document required to address physical development and conservation over a 20-year or longer period. Although the general plan serves as a blueprint for future development and identifies the overall vision for a community's planning area, it remains general enough to allow for flexibility in the approach taken to achieve the plan's goals.

Zoning ordinances, which define allowable land uses within a specific zone district, are required to be consistent with the applicable general plan and any applicable specific plans. When amendments to the general plan are

made, corresponding changes in the zoning ordinance may be required within a reasonable time to ensure that the land uses designated in the general plan would also be allowable by the zoning ordinance (California Government Code Section 65860[c]).

A specific plan is a planning tool used to guide land use change, conservation, and public facilities and infrastructure improvements for a subarea of a general plan. Specific plans must be consistent with the overarching general plan (California Government Code, Section 65450). Specific plans describe the distribution, location, and extent of the land uses and the associated infrastructure, as well as standards governing future development. Specific plans must include a statement of the relationship between it and the general plan (California Government Code, Section 65451, subd. [b]).

California Sustainable Communities and Climate Protection Act

The California Sustainable Communities and Climate Protection Act (Senate Bill [SB] 375) requires regional planning agencies to develop regional land use plans (sustainable communities strategies) to meet greenhouse gas emission reduction goals set forth in the California Global Warming Solutions Act (Assembly Bill 32). These plans address reducing vehicle miles traveled by co-locating uses to shorten necessary trips and by coordinating land use and transportation/transit planning. Coordination is enforced by requiring transportation planning projects to comply with the sustainable community standards to receive state funding. SB 375 also allows projects that meet regional sustainable community standards to qualify for California Environmental Quality Act exemptions or streamlining.

Local Agency Formation Commissions

The Cortese-Knox Local Government Reorganization Act (sec. 56000 et. seq. of the Government Code) is the framework within which proposed city annexations are considered. This law sets forth the functions for a Local Agency Formation Commission (LAFCO), which are agencies that were created by state legislation to ensure that changes in local governmental organization occur in a manner that provides efficient and good-quality services and preserves open space land resources. In 1963, the California Legislature established LAFCOs in each county and gave them regulatory authority over local agency boundary changes. In the 1970s, the legislature recognized the connection between decisions concerning governmental organization and the issues of urban sprawl and loss of prime agricultural land. In response to these concerns, LAFCOs were charged with implementing changes in governmental organization in a manner that preserves agricultural and open space land resources, as well as provides the delivery of services. In 2000, the Cortese-Knox-Hertzberg Act was further amended as a result of Assembly Bill 2838.

The general policies of LAFCOs include:

- ▶ encourage planned, well-ordered, efficient urban development patterns;
- ▶ encourage the logical formation and determination of boundaries;
- ▶ ensure that affected populations receive efficient governmental services; and
- ▶ guide development away from open space and prime agricultural land uses unless such actions would not promote planned orderly and efficient development.

Placer County LAFCO oversees the establishment or revision of boundaries for local municipalities and independent special districts for Placer County (see discussion below under “Regional and Local”).

California Important Farmland Inventory System and Farmland Mapping and Monitoring Program

The Farmland Mapping and Monitoring Program (FMMP) was established by the State of California in 1982 to continue the Important Farmland mapping efforts begun in 1975 by the Soil Conservation Service (now Natural Resources Conservation Service). The California Department of Conservation implements the FMMP and establishes agricultural easements in accordance with California Public Resources Code Sections 10250–10255.

The California Department of Conservation FMMP maps are updated every two years using aerial photographs, a computer mapping system, public review, and field reconnaissance. The following list describes the categories mapped by the California Department of Conservation:

- ▶ **Prime Farmland**—Land that has the best combination of features for the production of agricultural crops.
- ▶ **Farmland of Statewide Importance**—Land other than Prime Farmland that has a good combination of physical and chemical features for the production of agricultural crops.
- ▶ **Unique Farmland**—Land of lesser quality soils used for the production of the state’s leading agricultural cash crops.
- ▶ **Farmland of Local Importance**—Land that is of importance to the local agricultural economy. For Placer County, this includes lands zoned for agriculture by County Ordinance; dry farmed lands, irrigated pasture lands, and other agricultural lands of significant economic importance to the County; and lands that have a potential for irrigation from Placer County water supplies.
- ▶ **Grazing Land**—Land with existing vegetation that is suitable for grazing.
- ▶ **Urban and Built-up Lands**—Land occupied by structures with a density of at least one dwelling unit per 1.5 acres.
- ▶ **Land Committed to Nonagricultural Use**—Vacant areas; existing lands that have a permanent commitment to development but have an existing land use of agricultural or grazing lands.
- ▶ **Other Lands**—Land that does not meet the criteria of the remaining categories.

Important Farmland is classified by the California Department of Conservation as Prime Farmland, Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance. Under CEQA, the designations for Prime Farmland, Farmland of Statewide Importance, and Unique Farmland are defined as “agricultural land” or “farmland” (Public Resources Code Sections 21060.1 and 21095; CEQA Guidelines Appendix G).

4.1.3.3 REGIONAL AND LOCAL

Sacramento Area Council of Governments 2020 Metropolitan Transportation Plan/Sustainable Communities Strategy

On November 19, 2019, the Sacramento Area Council of Governments (SACOG) approved the *2020 Metropolitan Transportation Plan/Sustainable Communities Strategy* (2020 MTP/SCS), which is a regional transportation plan and land use strategy designed to support good growth patterns, including:

- ▶ Increased housing and transportation options;
- ▶ Inwardly focused growth and improved economic viability of rural areas;
- ▶ Minimized direct and indirect transportation impacts on the environment;
- ▶ A transportation system that delivers cost-effective results and is feasible to construct and maintain;
- ▶ Effective connections between people and jobs;
- ▶ Improved opportunities for businesses and citizens to easily access goods, jobs, services, and housing; and
- ▶ Real, viable choices for methods of travel.

The 2020 MTP/SCS includes a land use strategy to improve mobility and reduce travel demand from passenger vehicles by prioritizing compact and transit-oriented development, reducing the growth in vehicle miles traveled and associated greenhouse gas emissions. The 2020 MTP/SCS also includes projections for the location of growth within the region, between jurisdictions and among housing place types (i.e., infill and greenfield development).

In the 2020 MTP/SCS, SACOG categorized the urbanized land within its jurisdiction into four Community Types according to land use and density/intensity. According to the 2020 MTP/SCS, three Community Types are represented in Roseville, as follows¹:

- ▶ **Center and Corridor Communities.** Land uses are typically higher density and more mixed than surrounding land uses. These areas are identified in local plans as historic downtowns, main streets, commercial corridors, rail station areas, central business districts, town centers, or other high-density destinations. They typically have more compact development patterns, a greater mix of uses, and a wider variety of transportation infrastructure compared to the rest of the region. *In Roseville, this Community Type designation is applied to Downtown Roseville around the Roseville Intermodal Station and along Douglas Boulevard.*
- ▶ **Developing Communities.** These areas are typically, though not always, situated on vacant land at the edge of existing urban or suburban development; they are the next increment of urban expansion. Areas are identified in local plans as special plan areas, specific plans, or master plans and may be residential-only, employment-only, or a mix of residential and employment uses. Transportation options in Developing Communities often depend, to a great extent, on the timing of development. *In Roseville, this Community Type designation is applied to the Amoruso Ranch Specific Plan, Creekview Specific Plan, and Sierra Ranch Specific Plan areas.*

¹ The fourth Community Type, which is not represented in Roseville, is Rural Residential. Rural Residential communities are typically located outside of urbanized areas and are predominately very low-density residential, with some small-scale hobby or commercial farming.

- **Established Communities.** Typically, these areas are adjacent to, or surrounding, Center and Corridor Communities. Local land use plans aim to maintain the existing character and land use pattern. Land uses are typically made up of existing low- to medium-density residential neighborhoods, office and industrial parks, or commercial strip centers. *This Community Type represents all areas of Roseville outside those noted in the Community Types above.*

In addition, the area corresponding to the Downtown Specific Plan Area north of the Union Pacific Railroad tracks in the vicinity of the Roseville Intermodal Station is also within a Transit Priority Area, which is defined as an area of the region within 0.5 mile of a major transit stop (existing or planned light rail, street car, or train station) or an existing or planned high-quality transit corridor included in the 2020 MTP/SCS.

SACOG Region Blueprint

The Sacramento Blueprint is a smart growth vision for the Sacramento region that was adopted by the SACOG Board of Directors in December 2004. The SACOG Preferred Blueprint Scenario, referred to as the Blueprint, is a voluntary framework for regional transportation and land use planning that was developed to aid the jurisdictions in the six-county greater Sacramento area in guiding development through 2050.

The Blueprint is intended to suggest different development patterns and density in the future compared to past trends in part to provide for more efficient public facilities and infrastructure, to reduce vehicle miles traveled regionally, to reduce air pollutant emissions, and reduce other environmental impacts. The Blueprint Principles focus on high-quality design for compact development that provides walkable communities; compact development that helps preserve open space, allows multi-modal transportation access, and facilitates more efficient infrastructure provision; reinvestment to allow better use of existing infrastructure; mixed-use development that provides for more vibrant neighborhoods; and open space that is incorporated into development and conserved on the fringes of the developed region for agriculture and habitat. These Blueprint Principles are broad, and are expected to have different application in different parts of the Sacramento region.

Placer County Local Area Formation Commission

The Placer County LAFCO is responsible for reviewing, approving, or disapproving changes in organization to cities and special districts, including annexations, detachments, new formations, and incorporations. LAFCOs must, by law, create municipal-service reviews and update spheres of influence for each independent local governmental jurisdiction within their Countywide jurisdiction. The most recent municipal service review for Roseville was prepared in 2017.

Existing City of Roseville General Plan Policies

The existing Roseville General Plan (City of Roseville 2016) includes the following goals and policies related to land use planning.

Community Form Goal 1: Roseville will strive to be a balanced community with a reasonable mix of land uses, housing types and job opportunities.

- **Community Form – General Policy 1:** Ensure high quality development in new and existing development areas as defined through specific plans, the development review process and community design guidelines.

- ▶ **Community Form – General Policy 5:** Promote land use patterns that result in the efficient use of urban lands and preservation of open space as specified in the Open Space and Conservation Element.
- ▶ **Community Form – General Policy 6:** Through development approvals and City programs (e.g., revitalization, capital improvement program, parks and recreation programs, etc.) assure that all portions of the community are linked and integrated.
- ▶ **Community Form – Relationship to Transit, Pedestrian, Air Quality Policy 1:** Promote land use patterns that support a variety of transportation modes and accommodate pedestrian mobility.
- ▶ **Community Form – Relationship to Transit, Pedestrian, Air Quality Policy 2:** Allow for land use patterns and mixed use development that integrate residential and non-residential land uses, such that residents may easily walk or bike to shopping, services, employment and leisure activities.
- ▶ **Community Form – Relationship to Transit, Pedestrian, Air Quality Policy 3:** Concentrate higher intensity uses and appropriate support uses within close proximity of transit and bikeway corridors as identified in the Bicycle Master Plan. In addition, some component of public use such as parks, plazas, public buildings, community centers and/or libraries should be located within the corridors.
- ▶ **Community Form – Relationship to Transit, Pedestrian, Air Quality Policy 4:** Promote and encourage the location of employee services such as childcare, restaurants, banking facilities, convenience markets, etc., within major employment centers for the purpose of reducing midday service-related vehicle trips.
- ▶ **Community Form – Relationship to Transit, Pedestrian, Air Quality Policy 5:** Where feasible, improve existing development areas to create better pedestrian and transit accessibility.
- ▶ **Community Form – Relationship to Transit, Pedestrian, Air Quality Policy 6:** Through City land use planning and development approvals, require that neighborhood serving uses (e.g. neighborhood commercial uses, day care, parks, schools, and other community facilities) be physically linked with adjacent residential neighborhoods.
- ▶ **Community Form – Relationship of New Development Policy 1:** Require that new development areas and associated community-wide facilities (open space resources, parks, libraries, etc.) be linked and oriented to existing developed areas of the community through road networks, public transit systems, open space systems, bikeway and pedestrian systems, and other physical connections.
- ▶ **Community Form – Jobs/Housing and Economic Development Policy 1:** Strive for a land use mix and pattern of development that provides linkages between jobs and employment uses, will provide a reasonable jobs/housing balance, and will maintain the fiscal viability of the City.

Growth Management Goal 1: The City shall proactively manage and plan for growth.

Growth Management Goal 3: Growth shall mitigate its impacts through consistency with the General Plan goals and policies and shall provide a positive benefit to the community.

Growth Management Goal 4: The City shall continue a comprehensive, logical planning process, rather than an incremental, piecemeal approach.

Growth Management Goal 10: Growth should be planned in a way that addresses the appropriate interface between City and County lands.

Growth Management Goal 11: New growth should be designed to meet the Guiding Principles.

- ▶ **Growth Management – General Policy 3:** The City shall encourage a development pattern that is contiguous with existing developed areas of the City.
- ▶ **Growth Management – General Policy 6:** The City shall use the specific plan process to ensure a comprehensive, logical growth process for new development areas (e.g., annexations) or any areas where significant land use changes are considered.
- ▶ **Growth Management – General Policy 10:** work aggressively to address traffic generated outside of Roseville by working in collaboration with neighboring jurisdictions, regional, state, and federal entities to ensure traffic through Roseville is mitigated by regional solutions. Ensure that transportation solutions are supported by land-use and design policies that promote walking, biking, and transit, consistent with the Growth Management Visioning Committee’s Vision Statement.
- ▶ **Growth Management – Annexations and Sphere of Influence Policy 2:** The City may consider annexations that:
 - a. Are contiguous with City boundaries and provide for a logical expansion of the City;
 - b. Create clear and reasonable boundaries;
 - c. Are beneficial from a fiscal standpoint to the City and its residents;
 - d. Are consistent with State Law and Placer County Local Agency Formation Commission (LAFCO) standards and criteria;
 - e. Ensure the preservation of open space and agriculture lands; and
 - f. Are consistent with the General Plan.
- ▶ **Growth Management – Annexations and Sphere of Influence Policy 3:** The City may consider expanding its sphere of influence to incorporate areas that, in the future, should be logically planned and serviced by Roseville. The City shall consider the following factors, as identified by LAFCO, when making determinations involving sphere of influence boundaries:
 - a. Present and planned land uses in the area;
 - b. Present and probable need for public facilities and services in the area;
 - c. Present capacity of public facilities and adequacy of public services;
 - d. Existence of any social or economic communities of interest in the area; and
 - e. Open space and agricultural lands.
- ▶ **Growth Management – Growth Areas Policy 3:** The City shall require the submittal of a specific plan for the consideration of new development areas or any areas where a significant modification to the General Plan land use allocation is proposed. The specific plan process shall, at a minimum, include the following:
 - a. General Plan Amendment
 - b. Development Agreement

- c. Zoning Entitlements
- d. Environmental Impact Report
- e. Phasing, Financing, Capital Improvements Plan
- f. Fiscal Impact Analysis

- ▶ **Growth Management – Growth Areas Policy 4:** Specific plans will be evaluated based on the following minimum criteria:

- a. Government Code requirements for specific plans
- b. Demonstrated consistency with General Plan goals and policies
- c. Demonstrated consistency with the identified City-wide studies and holding capacity analysis
- d. Justification for proposed specific plan boundaries
- e. Community benefit
- f. Ability to mitigate impacts
- g. Impact on the City's growth pattern

Each specific plan proposal shall include, with its initial submittal, a full analysis of how the plan complies with and relates to the above factors. The specific plans' consistency with the General Plan, and its relation to other identified criteria, will be a primary factor in determining whether the proposal will or will not be considered by the City.

- ▶ **Growth Management – Growth Areas Policy 6:** As new development is proposed in or outside the City's Sphere of Influence, project proponents shall provide a transitional area between City and County lands, through a system of interconnecting Open Space land areas or other buffers, such as separation by arterial roadways.
- ▶ **Growth Management – Growth Areas Policy 8:** New development proposals to the west of Fiddymint Road within the County/City Memorandum of Understanding Transition Area shall meet the objectives and terms of the Memorandum of Understanding between the City of Roseville and the County of Placer.
- ▶ **Growth Management – Growth Areas Policy 9:** Development proposed on the western edge of the City shall provide a distinctive open space transition to create a physical and visual buffer between the City and County to assure that the identity and uniqueness of the City and County will be maintained.
- ▶ **Circulation – Transit Policy 1:** Pursue and support transit services within the community and region and pursue land use, design and other mechanisms that promote the use of such services.
- ▶ **Circulation – Transit Policy 2:** Pursue all available sources of funding for sustainable transit services.
- ▶ **Circulation – Transit Policy 3:** Continue to study options for introducing Bus Rapid Transit or extending light rail service to Roseville.
- ▶ **Circulation – Transit Policy 4:** Support and remain actively involved in planning for the expansion of Capitol Corridor rail service, as well as other regional linkages.
- ▶ **Transportation Systems Management Policy 1:** Continue to enforce the City's TSM ordinance and monitor its effectiveness.

- ▶ **Transportation Systems Management Policy 2:** Work with appropriate agencies to develop measures to reduce vehicular travel demand and total vehicle miles traveled and meet air quality goals.

Specific Plans

Roseville has 14 Specific Plan Areas (Exhibit 4.1-1). Under State law, specific plans are required to be consistent with the community's General Plan. The Specific Plans establish detailed policies and implementation programs for portions of the City, consistent with the goals and policies established in the proposed General Plan Update. Specific Plan land use designations are shown on the General Plan Land Use Map, but Specific Plans may use new land use categories, as well, that are more specific or tailored to a particular situation. Most commonly, these are the City's mixed-use land use designations, such as Commercial Mixed Use, which is subordinate to the City's Community Commercial land use designation. The City's Specific Plans are consistent with the Land Use Element of the General Plan. The proposed General Plan Update assumes development consistent with the following adopted Specific Plans:

- ▶ **Southeast Roseville Specific Plan (1985)** – This mixed-use Specific Plan represents the City's first effort to use the specific plan process to master plan a new development area.
- ▶ **Northeast Roseville Specific Plan (1987)** – This Specific Plan is primarily intended for commercial and employment-generating uses but also has significant residential and open space components.
- ▶ **Northwest Roseville Specific Plan Area (1989)** – The predominant land uses in this Specific Plan Area are single- and multi-family development, but the Specific Plan also provides for commercial, office, open space, and public uses.
- ▶ **North Central Roseville Specific Plan (1990)** – This Specific Plan Area includes residential, commercial, and office uses, along with a large area for wetland preservation and creation.
- ▶ **Del Webb Specific Plan (1993)** – This Specific Plan Area is planned as an age-restricted community consisting of single-family homes focused around recreational facilities with supportive private and public uses.
- ▶ **Highland Reserve North Specific Plan (1997)** – This Specific Plan accommodates single- and multi-family residential development, along with commercial and other supportive uses.
- ▶ **North Roseville Specific Plan (1997)** – This multi-phase Specific Plan includes single- and multi-family dwelling units, commercial uses, parks and other public facilities, and open space.
- ▶ **Stoneridge Specific Plan (1998)** – This Specific Plan accommodates single- and multi-family residential development, commercial and office uses, parks and other public facilities, and open space.
- ▶ **West Roseville Specific Plan (2004)** – This Specific Plan accommodates single- and multi-family dwelling units, including age-restricted units, commercial uses, industrial development, parks and other public facilities, and open space.

- ▶ **Riverside Gateway Specific Plan (2006)** – The Riverside Gateway Specific Plan is intended to guide public improvements and facilitate commercial and residential infill development between Douglas Boulevard and Darling Way.
- ▶ **Downtown Specific Plan (2009)** – This Specific Plan encourages mixed-use infill development throughout the Historic Old Town and the Vernon Street District. The associated Downtown Code implements the Plan, physically applying the Plan’s guidance to properties within the Plan Area.
- ▶ **Sierra Vista Specific Plan (2010)** – This Specific Plan accommodates single- and multi-family units, including age-restricted units, commercial development, parks and other public facilities, and open space.
- ▶ **Creekview Specific Plan (2012)** – This Specific Plan accommodates single- and multi-family dwelling units, commercial and office development, parks and other public facilities, and open space.
- ▶ **Amoruso Ranch Specific Plan (2016)** – This Specific Plan accommodates single- and multi-family dwelling units, commercial development, parks and other public facilities, and open space.

City of Roseville Zoning Ordinance (Title 19 of the Roseville Municipal Code)

Roseville’s Zoning Ordinance (Title 19 of the Roseville Municipal Code) is the key regulatory tool meant to implement the General Plan, specifically the Land Use Element. The purpose of the ordinance is to protect and promote the public health, safety, and welfare of the City and to provide the economic and social advantages which result from an orderly, planned use of the environment. The Zoning Ordinance establishes specific, enforceable standards with which development must comply such as minimum lot size, maximum building height, minimum building setback, and a list of allowable uses. Zoning applies parcel-by-parcel basis, whereas the General Plan has a community-wide perspective.

City of Roseville/Placer County Memorandum of Understanding

In 2000, the City and County entered into a Memorandum of Understanding (MOU) to promote interagency communication and foster cooperative land use planning. Recognizing that future development was likely to occur, the MOU established a transition area (MOU Transition Area) that covers approximately 5,527 acres of land area adjacent to the City’s western boundary. In this area, any proposed development must be reviewed by both the City and County and meet certain standards to mitigate any development-related impacts.

The MOU states that, regardless of whether the County or the City processes an application for development within the MOU area, environmental review must be conducted and “all identified Fiscal, Transportation and Circulation, Utilities and Services, Affordable Housing, and Groundwater impacts of proposed development will be mitigated to a level that is less than significant, unless both the County and the City agree that specific overriding considerations render such mitigation measures infeasible.” In addition, the MOU states that “to the greatest extent practically and legally feasible, the City and County will process development applications in the Transition Area such that development proceeds in an orderly east-to-west progression.”

4.1.4 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

4.1.4.1 METHODOLOGY

The proposed General Plan Update does not include any changes to land use designations, expansion of the City's Planning Area, or other major physical changes to areas planned for development compared to the existing General Plan, but does include changes to goals, policies, and implementation measures, the impact of which are analyzed as a part of this EIR. This EIR analyzes buildout of the Planning Area consistent with the existing General Plan land use designations compared to existing conditions, which constitute the baseline physical conditions for determining whether potential impacts are significant. In addition, this analysis compares the proposed General Plan Update to land use plans, policies, and regulations with a focus on inconsistencies that could result in adverse physical effects under CEQA.

The evaluation of potential impacts on agricultural resources was based on a review of the Department of Conservation Important Farmland map and Williamson Act Contract map for Placer County (Department of Conservation 2016, Placer County 2020). Appendix G of the CEQA Guidelines focuses the analysis on conversion of agricultural land on Prime Farmland, Farmland of Statewide Importance, or Unique Farmland; therefore, any conversion of these lands would be considered a significant impact under CEQA.

4.1.4.2 THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines, a land use planning and agricultural resources impact is considered significant if the proposed project would:

- ▶ Physically divide an established community;
- ▶ Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect;
- ▶ Convert Important Farmland (i.e., Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency), to nonagricultural use;
- ▶ Conflict with existing zoning for agricultural use or a Williamson Act contract;
- ▶ Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to nonagricultural use.

4.1.4.3 ISSUES NOT DISCUSSED FURTHER

Conversion of Important Farmland—As discussed previously, approximately 20 acres of Prime Farmland borders Pleasant Creek within Reason Farms. The remainder of the Planning Area is designated by the Placer County Important Farmland map as Farmland of Local Importance, Grazing Land, Other Land, and Urban and Built-Up Land (California Department of Conservation 2016). These designations are not considered Important Farmland under CEQA (Public Resources Code Sections 21060.1 and 21095 and CEQA Guidelines Appendix G). The areas of Prime Farmland with Reason Farms is not proposed for conversion to urban land uses. Therefore,

buildout of the General Plan would not convert Important Farmland to nonagricultural uses. No impact would occur.

Conflict with Agricultural Zoning or a Williamson Act Contract—The Planning Area is not zoned for agricultural uses and no parcels are under Williamson Act contracts (Placer County 2020). Therefore, buildout of the General Plan would not conflict with existing zoning for agricultural uses or a Williamson Act contract. No impact would occur.

4.1.4.4 IMPACT ANALYSIS

IMPACT 4.1-1 **Physically Divide an Established Community.** *Buildout of the existing General Plan would not physically divide an established community. The City's land use designations and roadway locations were planned comprehensively through the Specific Plan process to provide connected communities. The proposed General Plan Update policies continue to require new development areas and associated community-wide facilities to be linked and oriented to existing developed areas of the community through road networks, public transit systems, open space systems, bikeway and pedestrian systems, and other physical connections and encourage a development pattern that is contiguous with existing developed areas of the City. Policy changes augment the existing language to ensure that transportation options within the City are multi-modal and connect residential areas to supporting land uses such as schools and parks. This impact is considered *less than significant*.*

Buildout of the existing General Plan would not physically divide any of Roseville's established communities. The type of linear project most likely to have this effect would be a major new road, highway, or similar infrastructure. The City's land use designations and roadway locations were planned comprehensively through the Specific Plan process to provide connected communities. While buildout of the existing General Plan does include improvements to existing roadways and similar infrastructure, these improvements would not introduce new physical divisions.

As discussed further in Section 4.3, "Transportation," the Circulation Element of the existing General Plan establishes policies designed to improve mobility and connectivity amongst existing development and new development including a focus on pedestrian, bicycle, and transit mobility. New roadway improvements are mostly in undeveloped areas, such as in the Creekview, Amoruso Ranch, and Sierra Vista Specific Plan Areas, where new infrastructure would not divide existing communities. Furthermore, existing General Plan land use policies, as shown in the Regulatory Framework above, reduce the potential for land use development to physically divide an established community by requiring new development to be linked and oriented to existing developed areas of the community.

The proposed project includes relevant updates to policies within the Land Use Element of the General Plan. The proposed policy updates are shown below in **bold, underlined** text for additions and ~~striketrough~~ text for deletions, followed by an evaluation. The following proposed General Plan Update policies related to the physical division of an established community in Roseville are proposed for revision:

- **Policy LU2.5:** Where feasible, improve existing developed~~ment~~ areas to create better pedestrian, **bicycle**, and transit accessibility.

- **Policy LU2.6:** ~~Through City land use planning and development approvals, r~~Require **proposed** that neighborhood-serving uses (e.g. neighborhood commercial uses, day care, parks, schools, and other community facilities **and services**) **to** be physically linked with adjacent residential neighborhoods **through multi-modal transportation connections.**
- **Policy LU4.1:** Require ~~that~~ new development areas and associated community-wide facilities (open space resources, parks, libraries, etc.) **to** be linked and oriented to existing developed areas of the community through road networks, public transit systems, open space systems, bikeway and pedestrian systems, and other physical connections.

The proposed policy amendments do not have the potential to create development patterns or other actions that would physically divide any established community. On the contrary, the policy changes augment the existing language to ensure that neighborhoods and districts within developing portions of the Planning Area are better connected with one another. Revised policies add to language within the existing General Plan to emphasize that a variety of transportation options will be provided for development within the Planning Area that offer multi-modal connections between residential areas and destination land uses, such as schools and parks. Therefore, proposed General Plan Update policy changes listed above would not result in any adverse environmental impacts.

Conclusion

Implementing existing General Plan Community Form – General Policy 6 and Growth Management – General Policy 3 (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Policies LU2.5, LU2.6, and LU 4.1 listed above, would require new development areas and associated community-wide facilities to be linked and oriented to existing developed areas of the community through road networks, public transit systems, open space systems, bikeway and pedestrian systems, and other physical connections and encourage a development pattern that is contiguous with existing developed areas of the City. The proposed General Plan Update does not include new investment in infrastructure or development that would physically divide existing communities. Therefore, impacts associated with division of an established community are considered **less than significant**.

Mitigation Measure

No mitigation is required.

IMPACT 4.1-2 **Conflict with Applicable Land Use Plan, Policy, or Regulation.** *The proposed General Plan Update was designed to ensure consistency with other relevant plans, programs, and regulations that were developed to reduce or avoid environmental impacts. There are no inconsistencies between the proposed General Plan Update and other plans that would result in a significant environmental impact not already addressed in this EIR. Therefore, this impact is considered **less than significant**.*

The City has analyzed the potential for inconsistencies between the proposed General Plan Update and other relevant plans, policies, or regulations that were adopted to reduce environmental effects. The proposed General Plan Update was designed specifically to reduce environmental impacts of long-term growth within Roseville and to be consistent with relevant plans, policies, and regulations. Applicable plans and policies that are relevant to

lands within the Planning Area are listed below, along with an evaluation of their consistency with the proposed General Plan Update.

SACRAMENTO AREA COUNCIL OF GOVERNMENTS 2020 MTP/SCS

The 2020 MTP/SCS is a regional transportation plan and land use strategy designed to support good growth patterns, including increased housing and transportation options; minimized direct and indirect transportation impacts on the environment; effective connections between people and jobs; improved opportunities for businesses and citizens to easily access goods, jobs, services, and housing; and real, viable choices for methods of travel.

The MTP/SCS is not designed to address full build-out conditions of each jurisdiction's planning area; it consists of a market-based forecast of growth. Therefore, although the 2020 MTP/SCS and the proposed General Plan Update both have planning horizons of 2035, the 2020 MTP/SCS land use assumptions only include the increment of growth likely to be developed by 2035, while this EIR analysis examines full buildout of the General Plan.

The 2020 MTP/SCS includes a land use strategy to improve mobility and reduce travel demand from passenger vehicles by prioritizing compact and transit-oriented development, reducing the growth in vehicle miles traveled and associated greenhouse gas emissions.

The proposed General Plan Update includes revisions and new policies to both Land Use Element Policies and Circulation Element policies, which are shown below in **bold, underlined** text for additions and ~~striketrough~~ text for deletions, which are relevant to MTP/SCS consistency:

- ▶ **Policy LU2.1:** Promote ~~land use~~ **development** patterns that support a variety of transportation modes and accommodate pedestrian mobility.
- ▶ **Policy LU2.2:** Allow ~~for land use patterns and mixed-~~ use development that integrates residential and non-residential land uses, ~~such~~ that residents may easily walk or bike to shopping, services, employment, and leisure activities.
- ▶ **Policy LU2.4:** Promote and encourage the location of employee services, such as child care, restaurants, banking facilities, convenience markets, ~~etc~~ **and other daily needs**, within major employment centers for the purpose of reducing mid-day ~~service-related~~ vehicle trips.
- ▶ **Policy LU2.5:** Where feasible, improve existing ~~developed~~ **development** areas to create better pedestrian, **bicycle**, and transit accessibility.
- ▶ **Policy LU5.1:** Roseville will strive to be a ~~balanced~~ **complete** community with a ~~reasonable~~ mix of land uses, housing types, and job opportunities **that meet the diverse needs of its existing and future residents and businesses**.
- ▶ **Policy LU8.10:** [Growth Management – Public Amenities, Policy 2]: In addition to being consistent with the other goals and policies of the General Plan, ~~S~~**specific P**lans shall comply with the following: *[Moved from referenced existing policy]*

- a. Provide a public focal point, community, and/or theme feature. These features shall be specific to each area and be designed to promote and enhance community character. A special feature may include, but is not limited to, a community plaza, central park, or some other type of gathering area; outdoor amphitheater; community garden; regional park with special facilities; sports complex; or cultural facilities.
 - b. Provide entryways at entrances to the City in accordance with the Community Design Guidelines. Where possible, the entryways shall take advantage of and incorporate existing natural resources into the entry treatment. The Specific Plans shall identify the location and treatment of the entryways, and shall consider the use of open space, oak regeneration areas, signage, and/or special landscaping to create a visual edge or buffer that provides a strong definition to entryways into the City.
 - c. The Specific Plan areas shall be planned and oriented to be an integral part of the City consistent with the policies of the Community Form component of this Element.
 - d. Develop design guidelines, specifying screening and a transition between public utilities (e.g. substations, pump stations) and other uses, in conjunction with the public utility departments and agencies. In addition, development along power line and pipeline easements shall incorporate design treatment to ensure compatibility and safety. Design guidelines and treatment may include minimum setbacks, building and landscape design standards, and possible limitations on certain types of uses and activities.
 - e. Preserve natural resource areas where they exist, and where feasible, along new roadways. Such roadways may create a public boundary between the resource area and other uses. The Specific Plans shall identify locations and standards for the preservation of natural resources along roadways, and shall identify sources of financing for such road segments.
- ▶ **Policy CIRC3.1:** ~~Pursue and support transit services within the community and region and pursue land use, design, and other mechanisms that promote the use of such services.~~ **Promote transit service that is convenient, cost- effective, and responsive to the challenges and opportunities of serving Roseville and surrounding communities, and explore opportunities for transit innovation and service improvements.**
 - ▶ **Policy CIRC3.3:** Continue to study options for introducing ~~Bus Rapid Transit~~ **high quality transit and/or extending other regional transit linkages to Roseville and developing convenient connections to Sacramento Regional Transit** light rail service ~~to Roseville.~~
 - ▶ **Policy CIRC4.1:** ~~Continue to enforce the City's TSM ordinance and monitor its effectiveness.~~ **The City will review and condition projects, as appropriate, to reduce travel demand per capita and per employee by promoting increased density near transit, improving the quality of non-vehicular transportation options, providing incentives for non-vehicular travel, encouraging the mixing of complementary land uses in proximity to one another, and using other feasible methods.**
 - ▶ **Policy CIRC4.2:** Work with appropriate agencies to develop **implementation** measures to reduce vehicular travel demand and total vehicle miles traveled and meet air quality goals.
 - ▶ **Policy CIRC4.3: Specific Plan Amendments and land use development projects not included in a Specific Plan shall be evaluated for consistency with the City's VMT Impact Standards.**

- ▶ **Policy CIRC4.4: If the evaluation required by CIRC4.3 finds a Specific Plan Amendment or land use development project not included in an adopted Specific Plan is inconsistent with thresholds established within the City's VMT Impact Standards, on-site land use, transportation, and urban design-related VMT-reducing features should be prioritized to demonstrate consistency. If feasible on-site features cannot achieve the VMT threshold, Specific Plan Amendments and land use development projects outside Specific Plan Areas may demonstrate equivalent consistency through off-site actions or fair-share fee contributions, or if consistency cannot be achieved, shall implement all feasible measures.**
- ▶ **Policy CIRC5.5: Specific Plans shall incorporate an off-street, Class I bicycle system as part of the comprehensive on-street and off-street bikeway plan.**
- ▶ **Policy CIRC6.2: Promote development patterns that encourage people to walk to destinations.**
- ▶ **Policy CIRC6.3: Enhance pedestrian-friendly street environments and design public spaces and destinations in a way that encourages walking.**
- ▶ **Policy CIRC6.4: Sidewalks shall be required in all new Specific Plan Areas with new roadway construction and with roadway expansion.**

These proposed General Plan Update policy amendments are consistent with the MTP/SCS land use strategies and goals. The proposed policy revisions augment and update the existing General Plan policies, and the new policies address the need to evaluate VMT and support multi-modal transportation options. These changes enhance the consistency of the General Plan with the MTP/SCS and do not result in any adverse environmental impacts.

Existing General Plan land use and circulation policies, as shown in the Regulatory Framework section, are also consistent with the intent of the MTP/SCS to promote efficient land use patterns, support mixed use development, and support multi-modal transportation.

SACRAMENTO AREA COUNCIL OF GOVERNMENTS REGION BLUEPRINT

In 2005, the City carried out a process to identify how Blueprint Principles should be applied locally, including the Roseville Blueprint Implementation Strategies listed below, which are embodied in the Community Form and Community Design components of the Land Use Element of the General Plan.² These strategies are consistent with and implement the intent of the Blueprint Principles.

- ▶ **Transportation Choices:** Provide a variety of transportation choices. Development should be designed to encourage people to walk, ride bicycles, ride the bus, ride transit and heavy rail, or carpool. Land use concepts are intended to encourage the use of these modes of travel and reduce congestion.
- ▶ **Mixed Land Use:** Provide a variety of services in proximity to residential uses to reduce the reliance on automobile travel and give residents transit options. A mix of land uses can be provided within the same building and/or project. There are many examples of this type of development: housing near employment centers; a building with ground-floor retail with housing such as apartments or condominiums above; etc.

² Please see *Smart Choices for Roseville's Future: Implementation Strategies to Achieve Blueprint Project Objectives* for more details.

- ▶ **Compact Development:** Take advantage of compact building design. Creating environments that are more compactly built and that use space in an efficient but aesthetic manner can encourage more walking, biking, and public transit use, and shorten auto trips.
- ▶ **Housing Choices:** Create a range of housing opportunities and choices. Providing a variety of places where people can live—apartments, condominiums, townhouses, and single-family detached homes on varying lot sizes – is important in serving all aspects of the community: families, singles, seniors, and people with special needs. This issue is of special concern for the people with very low-, low-, and moderate-incomes, often our teachers, entry-level public safety personnel, and other public employees and professionals, as well as retail employees, service workers, and others for whom finding housing close to work is challenging, especially as land values increase. By providing a mix of housing options, more people have a choice.
- ▶ **Use Existing Assets:** Use existing assets to strengthen and direct development toward existing development areas. A key component of the Growth Management Visioning Committee recommendation is ensuring a vibrant downtown. Ongoing public and private investment in the Downtown and historic core is critical to maintaining and enhancing the economic vitality of Roseville. Development of infill or vacant lands, intensification of underutilized parcels, or redevelopment can make better use of existing public infrastructure. This can include rehabilitation and reuse of buildings, introduction of mixed-use opportunities, and joint-use of existing public facilities, such as parking garages.
- ▶ **Natural Resource Conservation:** Natural resource conservation of open space and agricultural land. Encourage the incorporation of public-use open space (such as parks, town squares, trails, greenbelts, paseos, and preserves) within development projects and protect wildlife and plant habitat through open space preservation, agricultural preservation, and promotion of environment-friendly practices, such as energy efficient design, water conservation, and stormwater management. In addition to conserving resources and protecting species, natural resource conservation improves the overall quality of life by providing places for everyone to enjoy the outdoors with family outings and by creating a sense of open space throughout the community.
- ▶ **Quality Design:** Foster distinctive, attractive communities with a strong sense of place and use land efficiently. The design details of any land use development: such as the relationship to the street, setbacks, placement of garages, sidewalks, landscaping, the aesthetics of building design, and the design of the public right-of-way (sidewalks, connected streets and paths, bike lanes, and the width of streets) are all factors that can influence the attractiveness of living in a compact development. Design also facilitates the ease of walking and biking to work or neighborhood services. Good site and architectural design are important factors in creation a sense of community and a sense of place.

PLACER COUNTY LOCAL AGENCY FORMATION COMMISSION

Placer County LAFCO is responsible for determining whether an annexation is consistent with the LAFCO objectives and policies of ensuring that services would be available to new development within proposed annexation areas; avoiding premature conversion of farmland; and ensuring planned, logical, and orderly patterns of urban growth.

The City's Planning Area does not extend beyond the current Sphere of Influence and the proposed General Plan Update does not include any expansion of the City's Sphere of Influence. Therefore, the proposed General Plan

Update is consistent with LAFCO objectives and policies. Future annexation of lands within Roseville's Sphere of Influence into the City's jurisdiction would need to be approved by Placer County LAFCO. The City is required to coordinate with LAFCO during the annexation process to ensure that municipal services are provided to newly annexed areas. The existing General Plan growth management policies, as shown in the Regulatory Framework section, would further ensure consistency with Placer County LAFCO policies for any future annexations. The project does not include any changes to the relevant growth management policies contained in the existing General Plan that could have any adverse environmental effects.

SPECIFIC PLANS

As described in Section 4.1.3 above, there are 14 Specific Plan Areas in the City. Specific plans are required to be consistent with the General Plan. If there are new Specific Plans proposed in the future, or proposed amendments to existing Specific Plans, the City would review and revise these documents, where necessary, to ensure consistency with the proposed General Plan Update. According to State Government Code 65359, "any specific plan or other plan of the city or county that is applicable to the same areas or matters affected by a general plan amendment shall be reviewed and amended as necessary to make the specific or other plan consistent with the general plan."

The existing General Plan includes policies to ensure consistency between the General Plan and new specific plans, as shown in the Regulatory Framework section. The proposed General Plan Update includes minor amendments to both of these policies, which are shown below in **bold, underlined** text for additions and ~~strikethrough~~ text for deletions:

- ▶ **Policy LU9.3:** The City shall require the submittal of a specific plan for the consideration of new development areas or any areas where a significant modification to the General Plan land use allocation is proposed. The specific plan process shall, at a minimum, include the following:
 - a. General Plan Amendment
 - b. Development Agreement
 - c. Zoning Entitlements
 - d. Environmental Impact Report
 - e. Phasing, Financing, Capital Improvements Plan
 - f. Fiscal Impact Analysis
 - ~~g. Tax Share Agreement~~
 - ~~h. Municipal Services Review~~
- ▶ **Policy LU9.4:** Specific plans will be evaluated based on the following minimum criteria:
 - a. Government Code requirements for specific plans
 - b. Demonstrated consistency with General Plan goals and policies
 - c. Demonstrated consistency with the identified City-wide studies and holding capacity analyses
 - d. Justification for proposed specific plan boundaries

- e. Community benefit (e.g., affordable housing, significant open space or recreation facilities, job creation, infill development near transit service).
- f. Ability to substantially mitigate impacts
- g. Impact on the City's growth pattern

Each specific plan proposal shall include, with its initial submittal, a full analysis of how the plan complies with, and relates to the above factors. ~~The specific plans' consistency with the General Plan, and its relation to other identified criteria, will be a primary factor in determining whether the proposal will or will not be considered by the City.~~

The proposed General Plan Update policy amendments provide additional clarity and supporting language. Specific Plans do not always involve annexation, and therefore do not always require tax share agreements or a Municipal Services Review. Accordingly, those items are proposed for removal from the list of minimum requirements. The changes to Policy LU9.4 provide additional supporting language for the list of minimum evaluation criteria, and remove the duplicative final statement. The proposed General Plan Update is consistent with the City's Specific Plan process, and would not result in any adverse environmental impacts.

CITY OF ROSEVILLE ZONING ORDINANCE

The City's Zoning Ordinance describes the permitted land uses and development standards for each of the designated zoning districts in the City on a parcel-by-parcel basis. The Zoning Code must be consistent with and is subordinate to the General Plan. The proposed General Plan Update does not include any modifications that would require revision of the City of Roseville Zoning Ordinance.

CITY OF ROSEVILLE/PLACER COUNTY MEMORANDUM OF UNDERSTANDING

The City of Roseville/Placer County MOU promotes interagency communication and fosters cooperative land use planning. The MOU established a transition area (adjacent to the City's western boundary) in which any proposed development must be reviewed by both the City and County and meet certain standards to mitigate any development-related impacts.

The existing General Plan includes policies to ensure compliance with the City/County MOU, as shown in the Regulatory Framework section. The proposed General Plan Update includes minor revisions to ensure compliance with the City/County MOU, which are shown in **bold, underlined** text for additions and ~~striketrough~~ text for deletions below:

- **Policy LU9.6:** As new development is proposed in or outside the City's Sphere of Influence, project proponents shall provide a transitional area between City and County lands, through a system of **managed** interconnecting open space ~~land areas~~ or other buffers, such as separation by arterial roadways.
- **Policy LU9.8:** New development proposals to the **north and** west of **the City limits** ~~within Fiddyment Road within the County/City Memorandum of Understanding Transition Area~~ shall meet the objectives and terms of the Memorandum of Understanding between the City of Roseville and the County of Placer.

- **Policy LU9.9:** Development proposed on the western edge of the City shall provide a distinctive open space transition to create a physical and visual buffer between the City and County ~~to assure~~ **that ensures** that the identity and uniqueness of the City and County will be maintained.

The proposed revisions reword the existing policies for clarity, but do not change the intent. The proposed General Plan Update is consistent with the City of Roseville/Placer County MOU, and includes policies that implement and support the MOU and would not result in any adverse environmental impacts.

Conclusion

Implementing existing General Plan Circulation – Transit Policies 2 and 4 (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Policies LU2.1, LU2.2, LU2.4, LU2.4, LU5.1, LU8.10, LU9.3, LU9.4, LU9.6, LU9.8, LU9.9, CIRC3.1, CIRC3.3, CIRC4.1, CIRC4.2, CIRC4.3, CIRC4.4, CIRC5.5, CIRC6.2, CIRC6.2 and CIRC6.4 listed above, would enhance the consistency of the General Plan with the MTP/SCS, promote clarity in policies related to specific plans, and support the City of Roseville/Placer County MOU related to land use planning in the City’s Sphere of Influence. As illustrated above, the proposed General Plan Update was drafted to ensure consistency with other relevant plans, programs, and regulations that were developed to reduce or avoid environmental impacts. There are no inconsistencies between the proposed General Plan Update and other plans that would result in a significant environmental impact not already addressed in this EIR. Therefore, this impact is considered **less than significant**.

Mitigation Measure

No mitigation is required.

IMPACT 4.1-3 **Conflict with Existing Agricultural Operations.** *Buildout of the General Plan would locate urban land uses adjacent to existing grazing lands along the northwestern, western, and southern boundaries outside of the Planning Area. Consistent with the City’s General Plan policy to provide separation between City and County uses, development would be set back from on-going grazing activities and a physical separation would be provided by open space, road rights-of-way, fences, and walls. No long-term conflicts with grazing lands would occur as future approved urban development occurs in unincorporated Placer County. Therefore, buildout of the General Plan would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of grazing lands. This impact is considered **less than significant**.*

Buildout of the General Plan would locate urban land uses adjacent to existing grazing lands along the northwestern, western, and southern boundaries outside of the Planning Area, resulting in potential conflicts with adjacent grazing operations. The northern and western portions of Amoruso Ranch Specific Plan Area are adjacent to grazing land in unincorporated Placer County, including the Gleason cattle ranch to the west, Toad Hill Mitigation Bank to the northwest, grazing land to the east, and Reason Farms to the west within the City limits. The southern and western portions of the Sierra Vista Specific Plan Area would be adjacent to grazing lands in unincorporated Placer County. Future development within the Amoruso Ranch, West Roseville, and Sierra Vista Specific Plan Areas would result in urban development adjacent to these grazing lands.

It is expected that cattle grazing would continue to occur as the primary agricultural activity on adjacent lands, and it is not expected that heavy agricultural uses, such as growing row crops, would be conducted (City of Roseville 2010, 2016). Grazing activities can produce dust, noise, and odor at levels that can cause a nuisance when close to residential areas. At the same time, the increase in population in the area could disturb agricultural activities or result in harassment of cattle if pedestrians trespass onto adjacent lands. Conflicts between proposed urban development with adjacent grazing activities were addressed in the West Roseville Specific Plan EIR, Sierra Vista Specific Plan EIR, and the Amoruso Ranch Specific Plan EIR and the environmental impacts of locating urban development adjacent to grazing lands were analyzed in those CEQA documents (City of Roseville 2004, 2010, 2016). Future development on the City/County boundary would be separated by open space/buffers and/or road rights-of-way. Any residential uses would be set back from grazing lands and separation would be created by design features, such as fences or walls (City of Roseville 2004, 2010, 2016). Future land use plans would be subject to project-level CEQA analysis and mitigation, if necessary, to ensure urban development does not conflict with on-going grazing operations. In addition, to reduce potential conflicts between sensitive uses and agricultural uses, previously adopted mitigation measures associated with the Specific Plans require all future occupants of properties adjacent to the County to be provided with a deed disclosure or similar notice regarding the proximity and nature of neighboring potential agricultural uses (City of Roseville 2004, 2010, 2016).

Placer County has approved urban development along the northern, western, and southern boundaries of the Planning Area. The Placer Vineyard Specific Plan Area is south of the Sierra Vista Specific Plan Area, south of Baseline Road; and the Curry Creek Community Plan Area is west of the Sierra Vista Specific Plan and West Roseville Specific Plan Areas, north of Baseline Road and south of Philip Road; and the Placer Ranch Specific Plan shares a three-mile boundary with the City, from the eastern Boundary of the Amoruso Ranch Specific Plan to just east of Woodcreek Oaks Boulevard. Therefore, no long-term conflicts with grazing lands would occur as approved urban development occurs in unincorporated Placer County. In addition, Reason Farms, located in the northwestern corner of the Planning Area, is proposed as a major stormwater retention facility and future open space recreation area.

The following proposed General Plan Update goals and policies related to agricultural activities are proposed for revision:

- **Policy LU9.6:** As new development is proposed in or outside the City's Sphere of Influence, project proponents shall provide a transitional area between City and County lands, through a system of managed interconnecting ~~Open Space land areas~~ open space or other buffers, such as separation by arterial roadways.

The proposed General Plan Update policy changes listed above are for clarity only, and would not result in any adverse environmental impacts.

Conclusion

Consistent with the City's proposed General Plan Update Policy LU9.6 listed above to provide separation between City and County uses, development in the Sierra Vista Specific Plan, West Roseville Specific Plan, and Amoruso Ranch Specific Plan Areas would be set back from on-going grazing activities and a physical separation would be provided by open space, buffers, road rights-of-way, fences, and walls. In addition, future occupants of the Specific Plan Areas would be provided with a deed disclosure or similar notice regarding the proximity and nature of neighboring potential agricultural uses. Placer County has approved urban development adjacent to these Specific Plan Areas. Therefore, no long-term conflicts with grazing lands would occur as urban

development occurs in unincorporated Placer County. In addition, Reason Farms, located in the northwestern corner of the Planning Area, is proposed as a major stormwater retention facility and future open space recreation area. Therefore, buildout of the General Plan would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of grazing lands. This impact is considered **less than significant**.

Mitigation Measure

No mitigation is required.

4.2 POPULATION AND HOUSING

4.2.1 INTRODUCTION

This section describes potential impacts related to population, housing, and employment conditions in the Planning Area associated with the proposed General Plan Update. To provide context for the impact analysis, this chapter begins with an environmental setting describing the existing conditions in the Planning Area related to population, employment, and housing. Next, the regulatory framework is described, which informs the selection of the significance thresholds used in the impact analysis. The regulatory framework also includes existing General Plan policies related to the impact analysis of this chapter. The chapter concludes with the applicable significance thresholds, the impacts of the proposed changes to adopted General Plan policies, recommended mitigation measures, and the significance conclusions.

As part of the impact analysis, Notice of Preparation (NOP) comments were reviewed to help guide the analysis. No NOP comments related to population, housing, or employment were received.

4.2.2 ENVIRONMENTAL SETTING

4.2.2.1 POPULATION

The California Department of Finance (DOF) estimates that the City of Roseville's total population increased from 79,921 in 2000 to 118,788 in 2010, which is a 49-percent increase over this 10-year period (City of Roseville 2015, DOF 2012, 2019). As of January 1, 2019, DOF estimates that the population of Roseville was 139,643, which is a 15-percent increase from the 2010 population (DOF 2019). The City estimates that Roseville's population will increase to 198,000 persons with full buildout of the General Plan (City of Roseville 2017).

4.2.2.2 HOUSING

According to the DOF, the total number of housing units in the City of Roseville was 54,621 in 2019, with an average household size of 2.71 persons per household, compared to 2.57 in unincorporated Placer County (DOF 2019). Approximately 76 percent of these housing units were attached and detached single-family homes, compared to 78 percent countywide (DOF 2019).

The City estimates that Roseville's 16 subareas will have a total of 75,200 housing units with full buildout of the General Plan.¹ As of December 31, 2019, the City's residential development activity report indicates 2,723 housing units have been approved for development, and, of these housing units, 1,131 units have been constructed (City of Roseville 2019a).

SACOG estimates that Roseville will have a total of 68,950 housing units in 2035, which is the planning horizon for this proposed General Plan Update (SACOG 2019). This includes the estimated number of housing units that could be constructed as part of the Creekview, Sierra Visa, and Amoruso Ranch, and Downtown Specific Plan

¹ The city's subareas consist of 14 specific plan areas, the Infill area, and the North Industrial area. See Section 4.1, "Land Use and Agriculture," for further discussion of the city's subareas.

Areas (SACOG 2019). SACOG's estimate of housing units in 2035 is approximately 8 percent less than the City's projections for buildout of the General Plan (75,200 housing units) (SACOG 2019).

4.2.2.3 EMPLOYMENT

In 2019, the City of Roseville had approximately 88,600 jobs and a residential labor force of 57,500 workers (City of Roseville 2019b). The largest industry sector in terms of local employment is the education, health care, and social assistance sector, which accounts for approximately 24 percent of the jobs in the City, followed by the retail trade sector (12.6 percent) and then the professional, scientific, and management and administration services sector (12.3 percent) (U.S. Census Bureau 2018).

As of 2019, the City's largest employers were Adventist Health, Composite Engineering, Costco Wholesale, Golfand Sunsplash, Hewlett Packard, Kaiser Permanente, PRIDE Industries, Q I P-Roseville, Stag Howard A Pro Corp, Sutter Roseville Medical Center, and Union Pacific Railroad (California Employment Development Department [EDD] 2020a). Roseville's top 10 employers account for approximately 10,000 jobs (City of Roseville 2019b).

Related to population, housing, and employment, many of the relevant environmental effects are attributable to the relationships between jobs and housing that can promote walking, biking, or transit commutes, can allow for relatively short vehicular commutes, or that result in longer commutes and associated air quality and greenhouse gas emissions, transportation noise, and other environmental effects. The average commute time for workers commuting to employment centers both inside and outside the City was approximately 26 minutes with approximately 71 percent of those workers commuting 15 minutes or more (U.S. Census Bureau 2018). Approximately 87 percent of those workers drove or carpooled to work in a car, truck, or van and approximately 4 percent walked, bicycled, or rode public transit (U.S. Census Bureau 2018). Approximately 9 percent worked from home. Approximately 56 percent of Roseville's residents commuted to employment centers outside of the city for work in 2018 (U.S. Census Bureau 2018).

SACOG estimates that the City of Roseville had 82,370 jobs in 2016 (SACOG 2019). SACOG estimates the City of Roseville will have approximately 103,040 jobs by 2035 (SACOG 2019). This includes the estimated number of jobs that could be generated as part of the Creekview, Sierra Visa, and Amoruso Ranch, and Downtown Specific Plan Areas (SACOG 2019). SACOG projects that total number of jobs would be 140,640 at buildout of the City (SACOG 2019). SACOG projected employment growth in Roseville is approximately 14 to 31 percent less than the City's projections with buildout of the General Plan (120,000 to 150,000).

Unemployment

The estimated labor force in Roseville in 2019 was 68,300 residents, of which 66,600 were employed, which is an unemployment rate of 2.5 percent (EDD 2019b). This unemployment rate is similar to Placer County's unemployment rate and less than California's unemployment rate as a whole. Placer County's unemployment rate in 2019 was 2.7 percent, while California's unemployment rate was 3.9 percent (EDD 2020c). The unemployment rate does not include individuals 16 years or over who have stopped looking for work or who are underemployed.

Jobs/Housing Relationship

The relationship between the location and types of jobs and housing can have important environmental ramifications. A better match between the number and types of jobs and the number of households and

interests/skills of the local labor force can help to alleviate traffic congestion, shorten commute times, and reduce vehicle miles traveled (VMT) and the associated air pollutant emissions and noise associated with vehicular travel. Job growth in technology, service, and other business sectors that allow for flexibility in time and place of work (e.g., potential to work at home) can also have benefits in reducing traffic-related impacts. Balancing jobs and housing in a smaller area can provide increased opportunities to use transit, bike, or walk to work in lieu of driving.

Achieving a more favorable relationship between jobs and housing can be driven by a focus on supplying housing that is the right type and affordability level for workers in a defined geographic area. Alternatively, improving the jobs/housing balance could focus more on the adequate provision of employment in a defined area that provides jobs that match the education and employment skills of the local population. An area that has too many jobs compared to the number of housing units is likely (in the absence of offsetting factors) to experience substantial in-commuting, escalations in housing prices, and intensified pressure for additional residential development. Conversely, if an area has relatively few jobs in comparison to the number of employed residents, many of the workers are required to commute to jobs outside of their area of residence. In order to maximize the environmental benefits of a jobs/housing balance, there needs to be a nexus between the types and cost of housing proposed to be located near jobs to be provided, the education/skills required by those jobs relative to the local labor force, and the income levels associated with those jobs.

Another subtlety related to jobs-housing balance has to do with the concentration and location of basic (primary, exporting) and non-basic (population based) jobs. As discussed in SACOG's Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) (SACOG 2019):

“At the full regional scale, this principle is discussed as “jobs-housing balance,” and means a balance of jobs and households so that the region does not have to import or export either jobs or housing, beyond the normal out- and in-commuting that happens in a mobile society. For the large sub-regions, especially around the three largest employment centers, it is also desirable to attempt to replicate the regional jobs-housing balance number. At smaller scales, sometimes the best, most realistic, mix focuses more on population-serving jobs (e.g., schools, retail, etc.) and less on base, or primary, sector jobs. It is, however, still a worthy goal to try to have a strong jobs-housing mix through as many subareas of the region as possible.”

Beyond the locational relationship between jobs and housing, there is also an important relationship between jobs and workers. Housing has long been used as a proxy for workers and worker residences. In reality, the number of workers per household varies widely across the regions based on a variety of demographic factors (such as age and education/skills) and different housing types have the capacity for accommodating different numbers of workers.

One measure of jobs/housing balance is an index based on the ratio of employed residents (which is influenced by the number of homes) to jobs in the area. Other measurements compare jobs to housing units or jobs to households. An index of 1.0 indicates that the supply of jobs and housing are balanced. An index above 1.0 indicates that there are more jobs than employed resident and may suggest that many employees are commuting in from outside the community. An index below 1.0 indicates that there are more employed residents than jobs and may suggest that many residents are commuting to jobs outside the community.

The real relationship between jobs and housing is far more complex than the ratio portrays. Even with a relative numeric balance, there can still be substantial commuting activity if the types of jobs are not matched with the skills and experience of the local labor force. The number of workers per household varies, and different types of housing accommodate different numbers of workers. In addition, the ratio depends on the geographic region used for the computation. A city with all residences on one side and all employment on the other side would have an acceptable numeric jobs-housing balance but a substantial amount of commuting. In a different scenario, workers with a substantially longer commute that is still within the city are counted, whereas workers that travel short distances outside of the city are not.

Finally, no simplistic numeric formula can capture the complex human decision-making process of where to live and where to work. For those households who have choices regarding employment and housing, lifestyle factors (good schools, community amenities and culture, available housing types, etc.) can outweigh the convenience of living closer to work.

The SACOG MTP/SCS estimated a ratio of jobs to housing units in the City of Roseville of 1.6 in 2016 (SACOG 2019), which means there are 1.6 jobs for every housing unit. Full buildout of Creekview, Sierra Vista, and Amoruso Ranch as well as other currently planned infill development is anticipated to increase the City's ratio of jobs to households to approximately 1.8 by 2035 (SACOG 2019).

SACOG estimates that the City of Roseville had 82,370 jobs in 2016 (SACOG 2019). In 2016, the City had a residential labor force of 60,469 workers, of which approximately 44 percent worked at jobs within the City (26,606 workers) (U.S. Census Bureau 2016). Therefore, the City had a local jobs to labor force ratio of 1.36 in 2016.

4.2.3 REGULATORY FRAMEWORK

4.2.3.1 FEDERAL

There are no federal laws, policies, plans, or programs that apply to the proposed project.

4.2.3.2 STATE

State Housing Element Requirements

California Planning Law requires each county (and city) to adopt a housing element as part of its general plan (Government Code Sections 65580–65590). As Government Code Section 65583 explains:

The housing element shall consist of an identification and analysis of existing and projected housing needs and a statement of goals, policies, quantified objectives, financial resources, and scheduled programs for the preservation, improvement, and development of housing. The housing element shall identify adequate sites for housing, including rental housing, factory-built housing, mobile homes, and emergency shelters, and shall make adequate provision for the existing and projected needs of all economic segments of the community.

The State of California Department of Housing and Community Development (HCD) is responsible for assigning quantified regional housing shares to the various councils of government for allocation to the individual cities and

counties within their region. HCD is also responsible for reviewing and certifying the adequacy of the housing elements adopted by the cities and counties.

Regional Housing Needs

Government Code Section 65584 requires designated regional agencies or councils of government to prepare regional housing needs plans. SACOG is the agency that develops the regional housing strategy for Placer County and its incorporated cities. SACOG adopted its final RHNP and Regional Housing Needs Allocations (RHNA) on March 19, 2020 for the Housing Element compliance period of October 31, 2021 through October 31, 2029 (SACOG 2020). As of the adoption date, local jurisdictions in the SACOG region have formally begun preparation of the updates to their housing elements, which is due by June 2021. The RHNA determines potential locations for future housing stock based on projected population growth, employment trends, and development suitability. The RHNA also designates the number of housing units that should be accommodated by local governments at different affordability levels to ensure that all jurisdictions provide a fair share toward the region's affordable housing need. Unlike other elements of a general plan, the housing element must be updated on a regular schedule. The City is currently in compliance with State housing law, including planning for Roseville's fair share of regional housing needs in each income category (California Department of Housing and Community Development 2019).

California Relocation and Assistance Act [Government Code Section 7260 et seq.]

The California Relocation and Assistance Act requires state and local governments to provide relocation assistance and benefits to displaced persons as a result of projects undertaken by state and/or local agencies that do not involve federal funds. This act requires programs or projects be planned in a manner that recognizes, at an early stage in the planning 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 provides for the resolution of these problems to minimize adverse impacts on displaced persons and to expedite program or project advancement and completion. The law requires public entities to prepare a relocation plan, provide relocation payments, and identify substitute housing opportunities for any resident that would be displaced by a proposed project. Relocation assistance must provide for fair, uniform, and equitable treatment of all affected persons as a direct result of programs or projects undertaken by a public entity (California Public Resources Code Section 7260[b]). Privately funded projects would have no such requirement.

4.2.3.3 LOCAL

Existing City of Roseville General Plan Policies

The existing General Plan (City of Roseville 2017) includes the following goals and policies related to population, housing, and employment.

Community Form Goal 4: Through the designation of special study areas and revitalization efforts, the City of Roseville will promote the preservation, revitalization and enhancement of its business district and existing neighborhoods.

Community Form Goal 6: Roseville will strive to be a balanced community with a reasonable mix of land uses, housing types and job opportunities.

- ▶ **Community Form – General Policy 4:** Promote a diversity of residential living options (e.g., density ranges, housing types, affordability ranges) while ensuring community compatibility and well-designed residential development.
- ▶ **Community Form – Downtown, Neighborhoods Policy 3:** Consider accommodating a portion of the overall projected population and economic growth in areas having the potential for revitalization.
- ▶ **Community Form – Downtown, Neighborhoods Policy 4:** Support the revitalization of areas that are in decline or economically underutilized.
- ▶ **Community Form – Downtown, Neighborhoods Policy 5:** Encourage infill development and rehabilitation that:
 - upgrades the quality and enhances the character of existing areas;
 - enhances public transit use and pedestrian access;
 - efficiently utilizes and does not overburden existing services and infrastructure; and
 - results in land use patterns and densities that provide the opportunity for the construction of household types affordable to all income groups.
- ▶ **Community Form – Downtown, Neighborhoods Policy 7:** Support the maintenance and rehabilitation of existing residential units within established neighborhoods.
- ▶ **Community Form – Jobs/Housing and Economic Development Policy 1:** Strive for a land use mix and pattern of development that provides linkages between jobs and employment uses, will provide a reasonable jobs/housing balance, and will maintain the fiscal viability of the City.
- ▶ **Community Form – Jobs/Housing and Economic Development Policy 6:** Maintain land use patterns, intensities and densities that promote a positive business climate (e.g., supply of business professional, commercial and industrial lands).
- ▶ **Community Form – Jobs/Housing and Economic Development Policy 7:** Support activities that attract employment uses to the City as identified in the Economic Development Study/Plan.

Growth Management Goal 1: The City shall proactively manage and plan for growth.

Growth Management Goal 3: Growth shall mitigate its impacts through consistency with the General Plan goals and policies and shall provide a positive benefit to the community.

Growth Management Goal 6: The City shall manage and evaluate growth in a regional context, not in isolation.

Growth Management Goal 7: Potential population growth in Roseville must be based on the long-term carrying capacities and limits of the roadway system, sewer and water treatment facilities, and electrical utility service, as defined in the Circulation Element and the Public Facilities Element.

- ▶ **Growth Management – General Policy 1:** Growth must provide a strong diversified economic base and a reasonable balance between employment and affordable housing.
- ▶ **Growth Management – General Policy 4:** Growth shall be managed to ensure that adequate public facilities and services, as defined in the Public Facilities Element, are planned and provided and the public health, safety and welfare is protected.
- ▶ **Growth Management – General Policy 5:** The City shall accommodate projected population and employment growth in areas where the appropriate level of public infrastructure and services are planned or will be made available concurrent with development.
- ▶ **Growth Management – General Policy 6:** The City shall use the specific plan process to ensure a comprehensive, logical growth process for new development areas (e.g., annexations) or any areas where significant land use changes are considered.
- ▶ **Growth Management – General Policy 7:** The City shall oppose urban density residential, commercial or industrial development in unincorporated areas unless adequate public facilities and services can be provided and mechanisms to ensure their availability and provision are secured during the land use entitlement process. It is the City’s preference that urban development occur within incorporated area.

City of Roseville 2013–2021 General Plan Housing Element

The Housing Element² establishes the City’s goals and policies for housing through 2021, focusing on the following:

- ▶ providing decent, safe, adequate, and affordable housing in sufficient quantities for all economic segments of the community;
- ▶ maximizing efforts to meet affordable housing needs by requiring 10% of new housing units be affordable to extremely low-, very low-, low-, and middle-income households;
- ▶ encouraging the production of rental and owner-occupied high-density, multi-family housing units;
- ▶ maintaining adequate land within the various land use categories that allows development of housing to meet projected demand for high-density units;
- ▶ ensuring the availability of adequate housing opportunities for the elderly, the disabled, large families, female heads of households, and the homeless;
- ▶ promoting affordable housing development through the local government permit process; and
- ▶ continuing efforts to encourage energy efficiency in housing construction and maintenance.

The City implements a 10 percent Affordable Housing Goal. This is calculated based on the total residential units allocated to each Specific Plan Area. The type of units, income ranges, and parcel-by-parcel obligations are

² No changes to the Housing Element are proposed as part of this General Plan Update.

specified within each Specific Plan Area and their related development agreements. Developers of each of the designated affordable housing parcels are required to provide affordable housing pursuant to the terms of the specific plan development agreement. The 10 percent Affordable Housing Goal, as set forth in each Specific Plan Area, is not intended to be set as a maximum number of affordable units; rather, it is a minimum expectation for the production of affordable housing for households that cannot afford market-rate housing (City of Roseville 2015).

Regional Housing Needs

As stated above, SACOG prepares the RHNP for the Sacramento region to determine potential locations for future housing stock based on projected population growth, employment trends, and development suitability. The RHNP allocates to SACOG cities and counties their “fair share” of the region’s projected housing needs. As shown on Table 4.2-1, the City of Roseville’s published RHNA for the planning period (2021 through 2029) projected a need for the construction of an additional 12,066 housing units, allocated as follows: 3,855 very low-income units, 2,323 low income units, 1,746 moderate income units, and 4,142 above moderate-income units.

| Table 4.2-1. City of Roseville Regional Housing Needs Allocation for 2021–2029 | | |
|---|--------------------------------|--------------------------------|
| Income Grouping | Projected Housing Units | Percent of Housing Need |
| Very low ¹ | 3,855 | 31.9 |
| Low | 2,323 | 19.3 |
| Moderate | 1,746 | 14.5 |
| Above-moderate | 4,142 | 34.3 |
| Total | 12,066 | 100.0 |
| Notes: | | |
| 1 Required to be met by providing High Density Residential (HDR) zoning designations per the Regional Housing Need Allocation Plan. | | |
| Source: SACOG 2020 | | |

City of Roseville 2017–2022 Economic Development Strategy

On September 20, 2017, the Roseville City Council adopted the City's 2017-2022 Economic Development Strategy. The Economic Development Strategy is a five-year plan that outlines a framework for economic growth. It establishes goals for capturing and expanding business investment and focuses on partnerships, sharing resources, and building on competitive advantages (City of Roseville 2017).

Adopted Specific Plans and Mitigation Measures

Currently, the City has adopted 14 Specific Plans. A Specific Plan is a comprehensive planning and zoning document that implements the General Plan by providing development and conservation standards for a defined geographic location within the Planning Area. Each Specific Plan contains guidelines for site, architectural, landscaping, lighting, roadway networks, pedestrian/bicycle paths, open space corridors, parks, and other aspects of design. Each adopted Specific Plan involved preparation of an EIR, which evaluated potential impacts related to population and housing. Where appropriate, mitigation measures were adopted and incorporated into the specific plan. The Creekview and West Roseville Specific Plan EIRs included adopted mitigation measures related to population and housing that must be implemented in the respective Specific Plan Areas. The adopted

mitigation measures included a requirement that 10 percent of the development in the City's Urban Reserve Area must be affordable housing, as defined by the Specific Plans. Copies of the adopted Specific Plans and their associated EIRs are available upon request from the City of Roseville Development Services Department, Planning Division.

4.2.4 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

4.2.4.1 METHODOLOGY

For the purposes of this analysis, it is estimated that buildout of the General Plan could provide opportunity for 62,200 new residents from the construction of 23,200 housing units and could accommodate an additional 60 million square feet of non-residential building space and between 38,000 and 68,000 new local jobs. The presentation of broad ranges for buildout of the proposed General Plan Update is appropriate for a long-range planning document. Actual development between the present and buildout will depend on changes in the local and regional economy, demographic trends, and other factors, many of which are beyond the direct control of the City. Certain areas designated for urban use may or may not be developed during this planning horizon. Areas might be developed at the upper end or lower end of allowable density ranges, which may change actual development compared to what was assumed.

The examination of population, employment, and housing conditions in this section is based on estimates of development capacity at buildout of the General Plan, as well as a review of the following planning documents pertaining to the project site and surrounding area:

- ▶ *Existing Roseville General Plan 2035* (City of Roseville 2016),
- ▶ *Roseville General Plan 2013–2021 Housing Element* (City of Roseville 2015), and
- ▶ *2020 Metropolitan Transportation Plan/Sustainable Communities Strategy* (SACOG 2019).

Additional background information on population, housing, and employment was obtained from the City of Roseville's development activity reporting, DOF, EDD, and U.S. Census Bureau.

As noted elsewhere, the proposed General Plan Update does not include any changes to land use designations, expansion of the City's Planning Area, or other major physical changes to areas planned for development compared to the existing General Plan. Buildout of the General Plan is compared to existing physical conditions, which constitute the baseline for determining whether potential impacts are significant.

Population and employment growth associated with buildout of the General Plan are not, in and of themselves, an environmental impact under CEQA. However, CEQA treats as potentially significant the direct and indirect impacts associated with unplanned population growth, such as new housing, employment, and increased travel demand that requires additional roadways and other transportation infrastructure and the associated air pollutant emissions and traffic noise, impacts related to public facilities and utilities expansions needed to serve new growth, and other impacts, each of which is addressed in the technical sections of this EIR. These technical sections provide analysis of relevant environmental effects of implementing the proposed General Plan Update. The indirect effects associated with the General Plan's potential for inducing additional population and employment growth are also discussed in Chapter 5.0 of this EIR, "Other CEQA Considerations."

4.2.4.2 THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines, a population or housing impact is considered significant if the proposed project would:

- ▶ Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure) or
- ▶ Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.

4.2.4.3 ISSUES NOT DISCUSSED FURTHER

All issues related to population and housing are discussed in detail below.

4.2.4.4 IMPACT ANALYSIS

IMPACT 4.2-1 **Induce Substantial Unplanned Population Growth.** *The proposed General Plan Update does not change the City's Land Use Map or Sphere of Influence, and does not include any new growth. Therefore, the project will not directly induce unplanned growth. Furthermore, the majority of the vacant land adjacent to the City's boundaries are within existing adopted Specific Plans within Placer County, and are already planned for urbanization and development. Therefore, the project does not have the potential to indirectly induce substantial unplanned growth outside of the Planning Area. This impact is considered **less than significant**.*

A project's impacts caused by inducing substantial unplanned population growth are analyzed based on the following three inquiries: (1) does the project induce unplanned population growth (direct or indirect), (2) is that growth substantial, and (3) does this substantial unplanned growth result in significant adverse environmental impacts. The existing General Plan Land Use Plan identifies the location and extent of land that is designated to accommodate housing needs, commercial, office, and industrial uses, and parks, open, space, schools, and other public services through buildout of the General Plan. Buildout could accommodate a total population of approximately 198,000 people, 75,200 dwelling units, 120,000 to 150,000 local jobs, and approximately 60 million square feet of nonresidential development (Table 4.2-2). However, some areas that are designated for development and infrastructure are not expected to be developed (i.e., constructed and occupied or in use) by 2035, which is the proposed General Plan horizon year. The rate of development from the present time until General Plan buildout depends on changes in the local and regional economy, demographic trends, and other factors, many of which are beyond the direct control of the City. The proposed General Plan Update does not include any changes to the City's Land Use Plan or Sphere of Influence, and does not designate any areas for new growth. Therefore, all of the direct growth analyzed as part of the proposed General Plan Update is existing planned growth.

| Table 4.2-2. Existing and Anticipated Growth through the General Plan Horizon | | | |
|--|-----------------|------------------|--------------------|
| | Existing (2016) | New Development | Total (2035) |
| Population | 135,800 | 62,200 | 198,000 |
| Housing units | 52,900 | 22,300 | 75,200 |
| Nonresidential square footage | 33,000,000 | 27,000,000 | 60,000,000 |
| Jobs | 82,000 | 38,000 to 68,000 | 120,000 to 150,000 |
| Overall jobs-housing index | 1.55 | 1.7 to 3.0 | 1.6 to 2 |
| Source: data compiled by AECOM, 2020 | | | |

Indirect growth can result from many factors, but typical causes are the extension of roads and infrastructure or increases in infrastructure capacity; the approval of so-called leapfrog development, in which urban development is approved in a satellite area and this spurs development of the land between the satellite area and the urban edge; or the approval of significant uses or an imbalance of uses which result in a regional draw of people and/or services. The factors most relevant to the proposed General Plan Update are the extension of roads and infrastructure, and the balance of proposed land uses. These issues are evaluated below.

Buildout of the General Plan would include development of currently undeveloped areas, which would result in infrastructure being extended into areas in locations that are currently undeveloped. New and expanded infrastructure has been planned to meet demands for new development and would not create additional utility capacity in the Planning Area beyond what would be necessary to serve the adopted General Plan development. Therefore, extension of this infrastructure would not induce unplanned growth.

The proposed General Plan Update also includes policies for both infill and new development that would avoid unplanned development that could be induced through infrastructure expansions into new growth areas. For example, Policy LU3.3 states consideration should be given to accommodating growth in areas having potential for revitalization and Policies LU8.4 and LU8.5 are intended to ensure growth would be managed and planned for in areas with the appropriate level of existing or planned public infrastructure (see the listing of goals and policies proposed for revision, below). This reduces the potential for future land use decisions to result in unplanned, induced growth.

To evaluate the balance of the City's land uses, this EIR considers other market-based planning documents in the region, and specifically examines the projected local labor force to jobs balance, and the jobs-housing balance. SACOG has developed population and employment projections that inform land use and transportation planning throughout the region. SACOG expects employment in the city to total 103,040 jobs by 2035 and increase to 107,170 jobs by 2040 (SACOG 2019). The City's estimates for population, housing, and employment with full buildout of the General Plan would be substantially higher than the SACOG projections for 2035. According to SACOG projections, the City would have 68,950 housing units in 2035, which is approximately 8 percent less than the City's projections of full buildout (75,200 housing units) (SACOG 2019). SACOG projected employment in Roseville in 2035 (103,040 jobs) is approximately 14 to 31 percent less than the City's buildout estimates (120,000 to 150,000).

The methodology and purpose of the City's estimate of development capacity under the General Plan is different from the methodology and purpose of SACOG's forecast for the MTP/SCS. The SACOG projections are market-

based growth estimates that project the amount and location of likely growth in the region based on a variety of socioeconomic factors that are updated every four years, and are defined by a horizon year. In the context of its General Plan, the City is providing a long-term guide for future development and conservation, not attempting to predict the precise numbers of housing units, jobs, or population by any given point in time. The purpose of the General Plan year is to state a foreseeable planning horizon. Given the different purposes of the MTP/SCS and the General Plan, there will be differences between the growth forecasts in the MTP/SCS and the development capacity assumptions in the City's General Plan, since the former document represents market-based growth during a specific timeframe and the General Plan assumptions are based on full buildout (whenever that occurs).

Based on 2016 estimates, the City had a local labor force to local jobs ratio of 0.80, which indicates a relative balance between the number of workers in Roseville and the number of jobs potentially available to those workers. In 2019, the local labor force was 68,300 and the total residential population was 139,643. This is a labor force participation rate of 49 percent (EDD 2020c). If this labor force participation rate is applied to the estimated population of 198,000 for Roseville with buildout of the General Plan, this yields an estimated labor force of 96,843. With buildout of the General Plan, the City could have between 120,000 and 150,000 jobs; therefore, the local labor force to local jobs ratio would be approximately the same as 2019 for the low-end of the jobs estimate (0.8) and would decrease to 0.65 for the high-end of the jobs estimate. Therefore, the local labor force to local jobs ratio would remain the same or decrease slightly as a result of General Plan buildout.

It is anticipated that the number of jobs in Roseville would increase to between 120,000 and 150,000 jobs with full buildout of the General Plan, resulting in an overall jobs-housing ratio of 1.6 to 2.0. A balanced ratio is 1.0, but the target ratio is somewhat higher to provide some cushion in case of a disruption to the job market (such as the closing of a major employer). The 2020 MTP/SCS provides for a ratio of 1.13 for the region by 2040. Therefore, the City's estimated jobs-housing ratio at buildout is higher than the target ratio (a so-called "jobs rich" community). The City's estimate of total jobs reflects the anticipated addition of new industries and businesses in Roseville on sites designated for commercial, office, industrial, and civic uses. The City's intent is to increase the number and diversity of locally available jobs that could be filled from the local employment pool, including the unemployed and those commuting to jobs outside of the city. The proposed General Plan Update provides opportunities to live closer to the workplace with appropriate housing types close to jobs, which should help to reduce congestion and commute times. Balancing jobs and housing in a smaller area can increase the practicality of transit, bicycling, walking instead of automobile trips. However, it is not possible at this time for the City to predict the residential location of future employees of Roseville employers. It is possible that the large number of local jobs provided under the General Plan, if realized, could draw employees from outside of the Planning Area.

Employees from outside of the Planning Area may come from existing communities which have more housing than available jobs ("housing rich"), but a jobs-rich community can also be driver of growth in surrounding areas. However, in the cumulative context, most of the land adjacent to the City's existing boundaries are already planned to be converted to urban uses as a result of approved development in the County. The Placer Ranch Specific Plan lies along the City's northern boundary, and abuts the City's Amoruso Ranch Specific Plan; Placer Vineyards is located along the City's southern boundary; and the Curry Creek and Regional University Specific Plans are located along the City's western boundary. The nearby areas where the City's higher jobs-housing balance has the greatest potential to induce growth are already planned for growth. While employees may come from outside of the Planning Area, they are most likely to be from existing communities or adopted planned development areas which will be built in the future; therefore, the proposed General Plan Update will not indirectly induce substantial unplanned growth.

The foregoing analysis demonstrates that the proposed General Plan Update will not directly or indirectly induce substantial unplanned growth; therefore, impacts are **less than significant**.

The following goals and policies related to population, employment, and growth management in Roseville would be revised as a part of the General Plan Update:

Goal LU8.1: ~~The City shall~~ Proactively manage and plan for growth.

Goal LU8.6: ~~The City shall~~ Manage and evaluate growth in a regional context, not in isolation.

- ▶ **Policy LU3.2:** Through the designation of special study areas and revitalization efforts, the City of Roseville will ~~promote the preservation, revitalization~~ **revitalize**, and ~~enhancement of its business districts, and~~ existing neighborhoods, **and mixed-use corridors.**
- ▶ **Policy LU5.1:** Roseville will strive to be a ~~balanced~~ **complete** community with a ~~reasonable~~ mix of land uses, housing types, and job opportunities **that meet the diverse needs of its existing and future residents and businesses.**
- ▶ **Policy LU5.5:** Uphold the City's Affordable Housing Goal by requiring **an affordable housing target for projects seeking a General Plan Amendment, Specific Plan Amendment, and/or rezoning to a residential designation proposing 25 or more new dwelling units. For these projects, the target is a minimum of 10% of all new development to be affordable to housing units to cost no more than 30% of the total monthly income of very low-, low-income, and moderate-income households (the City also uses the term "middle" in certain Specific Plans to refer to moderate-income households earning no more than 100% of the Area Median Income-AMI).** The breakdown of the affordable units will be, at a minimum, 40% for rental to very low- and 40% for rental to low-income households. The remaining 20% may be reserved for ~~middle-income~~ **moderate-income** purchase **(which will be priced to be affordable to households earning 95% of the Area Median Income)** or may be distributed **equally** among the rental obligations, **as approved by** the City. Variations in affordable housing ratios may be approved through a Development Agreement where the following criteria are met:
 - A need has been identified for a specific affordable housing type (very low-, low- or moderate-income) and the project meets this need;
 - The project does not rely on or obtain City subsidies; and
 - Units proposed within this these criteria would allow for individuals to stay within their units as their future income grows.
- ▶ **Policy LU5.6:** Maintain land use patterns, intensities, and densities that ~~promote~~ **ensure an adequate supply of land for office, a positive business climate (e.g. supply of business professional, commercial, and industrial lands), industrial, and other employment-generating development.**

The proposed General Plan Update goal and policy changes improve the clarity and accuracy of the General Plan and would not result in any adverse environmental impacts.

Conclusion

The proposed General Plan Update provides a framework for the orderly and efficient long-term growth within Roseville through the year 2035. The Growth Management Component of the Land Use Element of the proposed General Plan Update focuses on the development of performance standards rather than timelines or growth rates for future development. This approach has resulted in goals and policies that emphasize performance (e.g., maintaining levels of service, providing adequate park acreage, financing needed school facilities, etc.) rather than on specified growth rates or dates by which Specific Plans should be built out. The performance standards provide the criteria for planning and managing growth by requiring the mitigation of growth impacts and the provision of both tangible and intangible benefits to the community.

Existing General Plan Community Form – General Goal 4, Community Form – Jobs/Housing and Economic Development Policy 7, Growth Management Goals 3 and 7 and Policies 1, 4, 5, 6, and 7 (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Goals LU8.1 and LU8.6, and Policies LU3.2, 5.1, and 5.6 listed above, along with existing General Plan implementation measures, will facilitate a better match over time between the number and type of local jobs and the number and type of occupations of the local labor force, ensure adequate local services, and maintain the fiscal viability of the City. Implementation of the General Plan would provide increased opportunities to use transit, bike, or walk to work in-lieu of driving and the opportunity to live close to the workplace afforded by providing housing close to jobs.

Physical impacts associated with development of residential and nonresidential land uses, such as traffic, air quality degradation, noise generation, greenhouse gas emissions, and impacts related to increased demand for public services and utilities, are evaluated throughout this EIR because these land uses are considered to be part of buildout of the General Plan.

The proposed General Plan Update does not change the City's Land Use Map or Sphere of Influence, and does not designate any new areas for growth. Therefore, the project will not directly induce unplanned growth. Furthermore, the majority of the vacant land adjacent to the City's boundaries is within existing adopted Specific Plans in Placer County, and are already planned for urbanization and development. Therefore, the project does not have the potential to indirectly induce substantial unplanned growth outside of the Planning Area. This impact is considered **less than significant**.

Mitigation Measure

None required.

IMPACT 4.2-2 **Displacement of a Substantial Number of Existing People or Housing.** *The proposed General Plan Update does not propose converting established residential areas to a nonresidential land use or redeveloping existing residential areas with new residences by removing existing dwelling units. Although the proposed General Plan Update is not expected to result in substantial displacement of people or housing necessitating construction of housing elsewhere, if there is unanticipated displacement, the existing General Plan land use plan includes capacity for the construction of 22,300 residential dwelling units, which would provide housing for any displaced residents. Therefore, this impact is considered **less than significant**.*

The proposed General Plan Update does not propose to displace substantial numbers of housing or people, necessitating the construction of replacement housing elsewhere. The proposed General Plan Update does not propose converting established residential areas to a nonresidential land use or redeveloping existing residential areas with new residences by removing existing dwelling units. The proposed General Plan Update includes policies that facilitate additional residential development opportunities and a variety of housing options on undeveloped land (i.e., density ranges, housing types, affordability ranges) and through revitalization of downtown, neighborhoods in the Infill Area, and mixed-use corridors (see Impact 4.2-1, above).

The following goals and policies related to housing opportunities in Roseville would be revised as a part of the proposed General Plan Update:

Goal LU3.2: Through the designation of special study areas and revitalization efforts, the City of Roseville will ~~promote the preservation, revitalization~~ **revitalize**, and **enhancement** of its business districts, ~~and existing neighborhoods,~~ **and mixed-use corridors.**

Goal LU5.1: Roseville will strive to be a ~~balanced~~ **complete** community with a ~~reasonable~~ mix of land uses, housing types, and job opportunities **that meet the diverse needs of its existing and future residents and businesses.**

- ▶ **Policy LU3.3:** ~~The City should~~ **Direct resources to facilitate revitalization of Downtown, neighborhoods in the Infill Area, and mixed-use corridors.** ~~Support the revitalization of areas that are in decline or economically underutilized~~
- ▶ **Policy LU3.4:** Encourage infill development and ~~rehabilitation~~ **reinvestment** that:
 - Upgrades the quality and enhances the character of existing areas;
 - **Enhances the mix of land uses in proximity to one another so that more households can access services, recreation, and jobs without the use of a car;**
 - ~~enhances~~ **Facilitates pedestrian activity and** public transit use, ~~and pedestrian access;~~
 - Efficiently utilizes and does not overburden existing services and infrastructure; and
 - Results in land use patterns and densities that provide the opportunity for the construction of **a variety of** ~~household housing~~ types **that are** affordable to all income groups.

The proposed General Plan Update revisions to goals and policy changes listed above would promote revitalization and infill development, and would result in additional clarity in the General Plan language and would not cause any adverse environmental impacts.

Conclusion

Implementation of existing General Plan Community Form Goal 4 and General Policy 4, Community Form – Downtown Neighborhoods Policies 4 and 7 (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Goals LU3.2, LU5.1, and Policies LU3.3 and LU3.4, listed above, and compliance with the 2013–2021 General

Plan Housing Element polices identified in Section 4.2.3, “Regulatory Framework” would ensure that new development pursuant to the proposed General Plan Update would not displace substantial numbers of people. These polices encourage preservation of the existing housing stock and neighborhoods, along with revitalization of downtown, neighborhoods in the Infill Area, and mixed-use corridors. As discussed in Impact 4.2-1 and shown in Table 4.2-2, buildout of the General Plan would provide the opportunity for 22,300 new residential dwelling units in the Planning Area. Although the proposed General Plan Update is not expected to result in substantial displacement of people or housing, if there is unanticipated displacement, construction of 22,300 residential dwelling units would provide housing for any displaced residents. Therefore, impacts associated with displacement of substantial numbers of housing or people are considered **less-than-significant**.

Mitigation Measure

No mitigation is required.

4.3 TRANSPORTATION

4.3.1 INTRODUCTION

This chapter describes potential impacts to the transportation system in the Planning Area associated with the proposed General Plan Update. The impact analysis examines the vehicular, transit, bicycle, pedestrian, and goods movement (by truck) components of the City's overall transportation system. To provide context for the impact analysis, this chapter begins with a discussion of the environmental setting describing the existing and physical operational conditions for the transportation system. Next, the regulatory framework is described, which provides part of the basis for impact significance thresholds used in the impact analysis. The regulatory framework includes the existing General Plan Transportation Element policies. The chapter concludes with significance criteria, impact analysis findings, an examination of proposed changes to adopted Transportation Element policies, recommended mitigation measures, and the significance conclusion.

The transportation impact analysis relies primarily on the City of Roseville Year 2035 travel demand model. The analysis also makes use of data and information collected and analyzed in the 2016 Amoruso Ranch Specific Plan EIR, which included a comprehensive citywide analysis of roadway network conditions corresponding to approximately 2014 conditions. Projections from that analysis and recent traffic volume counts from several locations throughout the City were utilized to verify reasonableness of the model projections to date and to ensure that the model continues to be appropriate for purposes of the current transportation impact analysis. Changes in baseline conditions since the initial traffic study are accounted for in the current transportation analysis process since impacts are determined based on long-term growth associated with buildout of the General Plan. Hence, impacts are based on the incremental growth from the initial analysis to 2035. Some traffic changes due to population and employment growth have occurred since the initial analysis and are part of the larger increment of growth noted above and are therefore considered in the analysis.

Appendix D presents technical details supporting the transportation analysis, including maps of study intersections, peak hour traffic volumes and lane configurations, summaries of signalized intersection operations, Synchro and SimTraffic intersection analysis reports, and average arterial daily traffic volumes for each scenario.

In response to the notice of preparation (NOP), Caltrans submitted the only transportation-related comment, noting that it anticipates the General Plan analysis will reflect a vehicle miles traveled (VMT) metric and thresholds, in accordance with Senate Bill (SB) 743. This analysis includes VMT.

4.3.2 ENVIRONMENTAL SETTING

This section provides a contextual background to the City's transportation system. The General Plan addresses the overall planning and development of the circulation system for residents and visitors in a multi-modal framework. The General Plan addresses the correlation between the quality of the transportation network and the quality of life.

The automobile is the most widely used mode of transportation in Roseville. According to the U.S. Census Bureau, 2013–2017 American Community Survey, about 87 percent of City of Roseville residents that work commute by car, truck, or van. The share of commuters that walk or bike to work in the City of Roseville is about 2 percent for each mode. Additionally, about 1 percent of commuters use public transportation to get to work.

Data from the 2013–2017 American Community Survey also shows the amount of time commuters take to get to work. Based on the data, about 62 percent of workers living in Roseville traveled to work in 29 minutes or less, 31 percent traveled to work in 30 to 59 minutes, and 7 percent traveled to work in 60 minutes or more. Average travel time to work was estimated to be 26 minutes. Commute times for Roseville workers are similar to the state as a whole, where 58 percent travel to work in 29 minutes or less and the average travel time to work is 29 minutes.

4.3.2.1 STUDY AREA ROADWAYS AND INTERSECTIONS

Roadway System

The City of Roseville uses a functional classification system to describe and plan its roadway system. General Plan Figure III-1 depicts this system. Roseville’s system of arterials, collectors, and local streets connect neighborhoods, employment centers, and other destinations. Descriptions of each roadway classification are provided below.

- ▶ **Freeways:** Provide mobility between Roseville and regional destinations. Freeways are access controlled, divided roadways with at least two lanes in each direction. Freeway access is provided by grade-separated interchanges.
- ▶ **Arterial Streets:** The primary function of arterial roadways is to move large volumes of traffic through the City to other sections and beyond. In the Specific Plan Areas, the right-of way (ROW) for arterials generally incorporates four to six travel lanes, bicycle lanes, and a landscaped median or center turn lane. Major arterials are generally six lanes and serve higher volumes of traffic. Minor arterials are generally four lanes and serve lower volumes of traffic. On-street parking on existing arterials in the Specific Plan Areas is prohibited, and access is limited to minimize cross traffic turning movements in order to improve traffic safety and allow for more efficient traffic flow. Outside of the City’s Specific Plan Areas, some roadways function as arterials due to the current high traffic volumes and their key linkages between one section of the City and another. For these roadways, current ROW widths vary, but most contain more than two traffic lanes.
- ▶ **Collector Streets:** Collector streets generally link local residential streets and the commercial and office parking areas to the arterials. In the Specific Plan Areas, the ROW for these streets generally contains two traffic lanes and bicycle lanes. Outside the Specific Plan Areas, some roadways function as collector roadways due to moderate traffic volumes and their linkage to the arterial roadway system. The ROW widths for these roadways vary, but most contain two traffic lanes.
- ▶ **Local Streets:** Local streets provide direct access to abutting land and access to the collector street system. The motoring public uses these streets for local circulation. These roadways have two travel lanes.

Exhibit 4.3-1 displays the existing number of travel lanes on arterial roadways in the city.

This page intentionally left blank

Regional Roadway System

Roseville is served by an interstate freeway 80 (I-80) and a state highway, State Route 65 (SR 65). This system of freeways handles the bulk of the long-distance trips that cross through the city of Roseville on the way to other destinations, but it also handles large volumes of commute trips between residential neighborhoods and employment centers in Placer County and the Sacramento region.

I-80 is a transcontinental freeway that links Roseville not only to Sacramento and the Bay Area but crosses the Sierra Nevada. It carries commute traffic between Placer and Sacramento counties, as well as interregional and interstate business, freight, tourist, and recreational travel. Roseville is connected to I-80 by five interchanges: Riverside Avenue, Douglas Boulevard, Eureka Road/Atlantic Street, Taylor Road, and SR 65. I-80 has eight general purpose lanes and two High Occupancy Vehicle (HOV) lanes through Roseville.

SR 65 is generally a north–south State Route that connects Roseville with the cities of Lincoln and Marysville (via SR 70). Within Roseville, it varies from to a six-lane freeway north of I-80 to a four-lane freeway north of Pleasant Grove Boulevard. Roseville is accessed by three interchanges on SR 65: Galleria Boulevard/Stanford Ranch Road, Pleasant Grove Boulevard, and Blue Oaks Boulevard.

Traffic Volumes

Existing traffic volumes from the Amoruso Ranch Specific Plan EIR were used for the basis of the existing setting. This data includes traffic counts at signalized intersections (in place as of 2014) within the Planning Area.

Exhibit 4.3-2 shows the existing average daily traffic (ADT) volumes for roadways within the City. ADT represents the total volume passing a point or segment of roadway, in both directions, on an average weekday.

Existing Intersection Levels of Service

The evaluation of traffic volumes on the roadway network provides an understanding of the general nature of travel conditions in the City of Roseville. However, traffic volumes do not indicate the quality of service provided by the street facilities or the ability of the street network to carry additional traffic. To accomplish this, the concept of “level of service” (LOS) has been developed.

LOS describes roadway-operating conditions; it is a qualitative measure of the effect of a number of factors, which include speed and travel time, traffic interruptions, freedom to maneuver, safety, driving comfort, and convenience. Levels of service are designated “A” through “F,” from best to worst, which covers the entire range of traffic operations that might occur. LOS A through E generally represents traffic volumes at less than roadway capacity, while LOS F represents over capacity and/or forced conditions.

Note that although CEQA no longer includes LOS as a metric to determine significance, the City LOS policy calls for the City to maintain a LOS C standard at a minimum of 70 percent of all signalized intersections in the City during the a.m. and p.m. peak hours. Therefore, an analysis of this policy is included in this EIR, for informational purposes only. The traffic flow and capacity of Roseville’s arterial/collector system is principally controlled by the capacity of its signalized intersections. Intersection operations were evaluated using procedures described in the Highway Capacity Manual (HCM), 6th Edition (Transportation Research Board, 2016). By applying a peak hour factor (which is a measure of peaking within the hour), operations during the busiest 15 minutes of the peak hour are reported.

Exhibit 4.3-3 shows the existing signalized study intersections in the City of Roseville as of 2014.

Table 4.3-1 presents the average delay range in seconds at signalized intersections for each LOS category based on HCM procedures along with a definition of each LOS category.

| Table 4.3-1 Level of Service Definitions – Signalized Intersections | | |
|--|--|--|
| Level of Service | Description | Average Control Delay¹ |
| A | Volume-to-capacity ratio is low and either progression is exceptionally favorable or cycle length is very short. Most vehicles arrive during the green phase and travel through the intersection without stopping. | ≤ 10 |
| B | Volume-to-capacity ratio is low and either progression is highly favorable or the cycle length is short. More vehicles stop than with LOS A. | >10 to ≤ 20 |
| C | Progression is favorable or the cycle length is moderate. Individual cycle failures (i.e., one or more queued vehicles are not able to depart as a result of insufficient capacity during the cycle) may begin to appear at this level. The number of vehicles stopping is significant, although many vehicles still pass through the intersection without stopping. | >20 to ≤ 35 |
| D | Volume-to-capacity ratio is high and either progression is ineffective or the cycle length is long. Many vehicles stop and individual cycle failures are noticeable. | >35 to ≤ 55 |
| E | Volume-to-capacity ratio is high, progression is unfavorable, and the cycle length is long. Individual cycle failures are frequent. | >55 to ≤ 80 |
| F | Volume-to-capacity ratio is very high, progression is very poor, and the cycle length is long. Most cycles fail to clear the queue. | >80 |
| Note: ¹ Average control delay presented in seconds per vehicle. Source: Highway Capacity Manual 6th Edition, Transportation Research Board, 2016 | | |

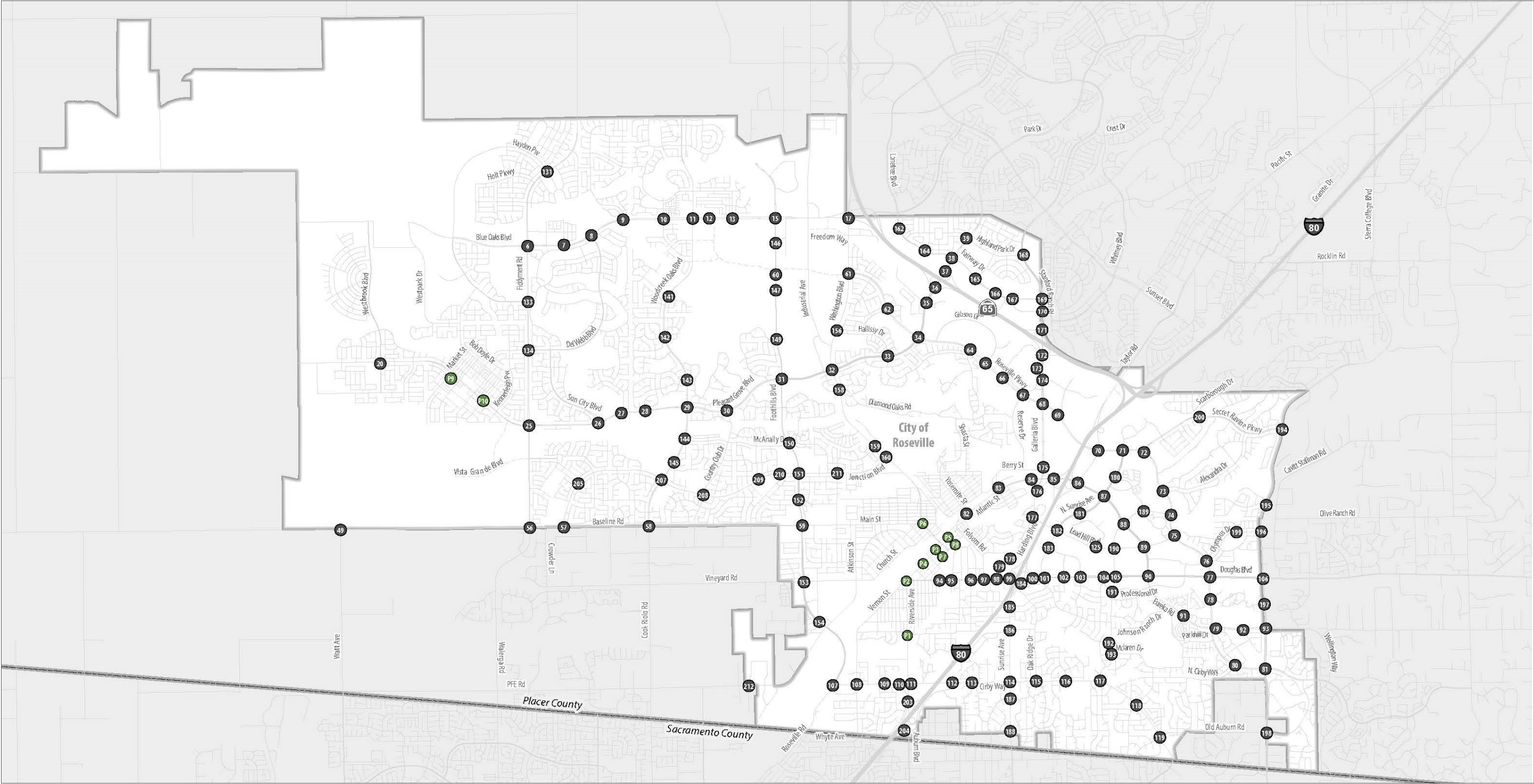
Table 4.3-2 summarizes the existing level of service results for Roseville signalized intersections, excluding 10 intersections located within the Pedestrian Overlay Districts in the Downtown, Riverside Gateway, and West Roseville Specific Plans. According to this table, 87.3 percent of intersections operate at LOS C or better during the a.m. peak hour and 77.1 percent of intersections operate at LOS C or better during the p.m. peak hour.

| Table 4.3-2 Signalized Intersection Operations Summary – Existing Conditions | | |
|--|-----------------------|-----------------------|
| Level of Service | A.M. Peak Hour | P.M. Peak Hour |
| Total Intersections | 158 | 158 |
| A-C | 138 | 122 |
| D | 19 | 28 |
| E | 1 | 7 |
| F | 0 | 1 |
| Note: Analysis conducted using 2014 counts and signals present in 2014. Source: Fehr & Peers 2020 | | |

Vehicle Miles Traveled

By definition, one vehicle mile traveled (VMT) occurs when one vehicle is driven on a roadway for one mile. Regardless of how many people are traveling in the vehicle, each vehicle traveling on a roadway generates one VMT for each mile it travels. For the purposes of this EIR, VMT is estimated and projected for a typical weekday. VMT values in this analysis represent the full length of a given trip and are not truncated at jurisdiction boundaries. Additionally, these VMT values are for trips beginning or ending in the City. Trips passing through the City without stopping are not included in these VMT estimates, as the City has little control over such trips.

This page intentionally left blank



Source: Fehr & Peers 2020

Exhibit 4.3-3

Existing Signalized Intersections

This page intentionally left blank

VMT is used to measure performance of the existing transportation network and to evaluate potential transportation impacts. VMT is often expressed on a “per resident” (also known as “per capita,” “per employee,” or “per service population”) basis to understand the relative efficiency of a project. Although the absolute amount of VMT is reported, impact analysis is typically based on VMT normalized to population as “per resident” and “per service population” rates. This metric provides a measure of travel efficiency and helps depict whether people are traveling more or less by vehicle over time, across different areas, or across different planning scenarios. A per resident or per service population decline in VMT over a baseline condition indicates that the transportation network is operating more efficiently and that people have more travel choices.

The Roseville travel forecasting model was used to estimate VMT for the City. It is noted that inherent potential limitations exist when using current travel demand models for this purpose as rapid changes in travel behavior and transportation systems occur in response to emerging trends, new technologies, and evolving user preferences. Some of these new travel options and technologies are discussed below. Additionally, information about how technology is affecting travel is accumulating over time. Some of these emergent changes that could influence future travel forecasts include:

- ▶ Substitution of internet shopping and home delivery for some shopping or meal-related travel.
- ▶ Substitution of telework for commute travel.
- ▶ New travel modes and choices. Transportation networking companies (TNCs such as Uber and Lyft), car share, bike share, scooter share, and on-demand micro transit have increased the travel options available to travelers and have contributed to changes in traditional travel demand relationships.
- ▶ Automated and connected vehicles.

Like most models, the Roseville travel demand model does not explicitly capture the above-mentioned new modes of travel and emerging trends in travel behavior. Significant uncertainties exist at the present time that prevent explicit modeling of these new modes and emerging trends for the analysis of the General Plan.

The impact of new modes on individual and household travel behavior also is not fully understood and is the subject of ongoing research. Limitations on accessing utilization data directly from TNC vendors, in particular, constrains the ability to fully understand the impact of those services. Regulatory and legislative efforts to address the limits on access are underway in California and elsewhere, but these efforts will take time. Only a few household travel surveys (HTSs), including the 2018 SACOG HTS, have surveyed TNC use in detail, and the e-assist JUMP bikes were introduced partway through the 2018 SACOG HTS. Other major research studies focused on TNC use, and TNC driver behavior, are just being launched in California, and data collection and analysis has not yet started. Until this research is completed, there is no effective way to incorporate even the known new modes into travel demand models.

Two measures of VMT are used in this analysis. Home-based production VMT includes VMT for trips produced by a home’s residents, such as to work, school, or shop, and with one end of the trip at the home. Total VMT includes home-based production VMT plus VMT from all other sources, including trips from homes outside area into the area for work, shopping, or other purposes and trips with neither end at the home (such as from work to shopping). Although the absolute amount of VMT is reported, VMT is also normalized to residents as “per capita” rates, as described above.

VTM estimates for baseline conditions are shown in Table 4.3-3. Total VMT, home-based production VMT and home-based VMT per resident are shown by Specific Plan Area. Note that calculations include full length of trips, so that trips between two different Specific Plan Areas will be counted in each area. Therefore, sum of VMT for each Specific Plan Area does not equal citywide VMT. In contrast, home-based production VMT for all Specific Plans Areas is nearly equal to the citywide total for this metric because home-to-home trips productions are rare. The length of those trips that leave the Planning Area are included in their entirety.

| Table 4.3-3 Vehicle Miles Traveled: Baseline Conditions | | | | |
|--|------------------|----------------------------------|------------------|---|
| Specific Plan Area | Total VMT | Home-Based Production VMT | Residents | Home-Based Production VMT / Resident |
| City of Roseville | 5,459,700 | 1,822,100 | 120,812 | 15.1 |
| Del Webb | 85,200 | 48,500 | 4,816 | 10.1 |
| Downtown | 109,300 | 9,400 | 741 | 12.7 |
| Highland Reserve North | 291,200 | 56,400 | 4,330 | 13.0 |
| Infill | 1,713,500 | 585,100 | 41,430 | 14.1 |
| North Central Roseville | 769,000 | 123,100 | 10,014 | 12.3 |
| North Industrial | 531,700 | 41,600 | 2,305 | 18.0 |
| North Roseville | 332,000 | 246,900 | 12,529 | 19.7 |
| Northeast Roseville | 988,700 | 27,000 | 2,330 | 11.6 |
| Northwest Roseville | 572,100 | 363,900 | 22,929 | 15.9 |
| Riverside Gateway | 25,800 | 2,400 | 181 | 13.2 |
| Southeast Roseville | 346,500 | 100,000 | 7,661 | 13.0 |
| Stoneridge | 114,500 | 77,300 | 5,425 | 14.2 |
| West Roseville | 172,900 | 140,800 | 6,122 | 23.0 |
| Note: Population and travel characteristics as of 2014. | | | | |
| Source: Fehr & Peers 2020 | | | | |

The City's base year model is comprised of 483 lane-miles within the Planning Area, excluding freeways and local streets. This value generally matches the estimate of 439 lane-miles from the Caltrans' Highway Performance Monitoring System Public Road Data from 2014.

Existing Transit Service

Transit services are provided within the Planning Area, as well as for commuters to downtown Sacramento, by Roseville Transit. The Roseville Transit routes are shown in General Plan Figure III-4. Other transit systems operating adjacent to the City with links to Roseville Transit are Sacramento Regional Transit and Placer County Transit. Other systems that complement the current transit services in Roseville include Health Express for intercity non-emergency medical trips, taxicab services, Greyhound Bus Lines, Capitol Corridor intercity passenger train, and Amtrak. These existing transit services are described below.

City of Roseville Transit Service

The City of Roseville operates Roseville Transit, which has a local fixed route service, a peak-hour commuter service, and a dial-a-ride service. General Plan Figure III-4 shows the transit routes within the City.

Roseville Transit's Commuter Service (commute service) is a fixed-route, weekday commute period service. Currently Roseville Transit operates 10 morning and 10 afternoon commuter routes between Roseville and downtown Sacramento.

Roseville Transit's Local Service (fixed-route service) has 11 scheduled routes, most of which operate Monday through Friday from 5:45 a.m. to 10:00 p.m. and on Saturdays from 8:00 a.m. to 5:00 p.m. There are four transfer points: Sierra Gardens, Galleria Mall, Civic Center, and Louis/Orlando. The Roseville Transit system connects to both Placer County Transit (at Galleria Mall and Louis/Orlando) and Sacramento Regional Transit (at Louis/Orlando).

Roseville Transit operates a dial-a-ride system that is available to the general public, while also providing complementary ADA (Americans with Disabilities Act) paratransit service. Roseville Transit dial-a-ride services operate Monday through Friday from 5:45 a.m. to 10:00 p.m. and on weekends from 8:00 a.m. to 5:00 p.m. Both services provide shared-rides for any purpose within the City limits, with an advance appointment. The general public service is curb-to-curb, while the ADA paratransit service provides origin-to-destination service for individuals with disabilities that prevent them from using the Local Service.

Placer County Transit Service

Placer County Transit operates fixed-route, commuter, and dial-a-ride services adjacent to and connecting with Roseville Transit. Placer County Transit is operated by Placer County. Placer County Transit principally serves the I-80, Highway 49, and SR 65 corridors. Placer County Transit has an Auburn to Light Rail express route that stops at the Louis/Orlando transfer point where it connects to Sacramento Regional Transit before proceeding to the Watt/I-80 light rail station. Placer County Transit also has a Lincoln to Galleria to Sierra College route. Placer County also operates a commuter service between Colfax and downtown Sacramento with stops in Rocklin and Roseville (four daily runs Monday through Friday during peak hours).

Other Transit Service

Capitol Corridor provides intercity rail links to cities between Auburn and the Bay Area. At present, one round trip train accesses Roseville daily. However, connecting bus service is provided to additional trains in Sacramento. In the City of Roseville, all Capitol Corridor services occur at the City's inter-modal facility near the intersection of Church Street and Pacific Street, in Downtown Roseville. A project that would add a third track between Roseville and Sacramento is being advanced. This project would increase the number of round-trip trains between these two cities.

Amtrak provides interstate rail service via stations in Roseville, Auburn, and Colfax. Amtrak's California Zephyr provides east-west service between Chicago and Oakland with one Roseville stop in each direction daily. Other Amtrak trains can be accessed at Sacramento, or by using the Amtrak Thruway Bus Connections to Roseville.

Health Express provides non-emergency medical transportation on an advance reservation, first-come-first-served, and shared-ride basis for residents of Placer County who are either over the age of 60 or disabled. Health Express operates Monday through Friday from 7:30 am to 4:30 p.m. Service to Sacramento medical facilities occurs only on Tuesdays and Thursdays from 10:00 am to 2:00 p.m.

Greyhound Bus Lines has a station at the inter-modal facility. Greyhound Bus Lines offers two trips to Sacramento per day. From Sacramento, passengers can continue to destinations in any direction. Taxi service is provided by several private companies.

Existing Pedestrian Facilities

The City of Roseville has an extensive network of pedestrian facilities. Most residential streets contain improved sidewalk facilities. Arterial roadways adjacent to existing residential development have wide sidewalks, often flanked by landscaping corridors. At signalized intersections, crosswalks with push-button pedestrian actuation are provided.

Existing Bicycle Facilities

The City's existing bikeways are shown in General Plan Figure III-6. Bikeways are defined as specific routes and classes that meet minimum design standards. Roseville generally follows Caltrans' design standards for the following classes of bikeways:

- ▶ Class I bikeways are located within a completely separated ROW designated for the exclusive use of bicycles and pedestrians with cross flows by motorists minimized. Class I bikeways are a minimum of 10 feet wide. A 2-foot graded area should parallel the bikeway on both sides, and the bikeway should be a minimum of 5 feet from an adjacent roadway.
- ▶ Class II bikeways are frequently referred to as on-street bike lanes. Class II bikeways consist of a restricted ROW designated for the exclusive or semi-exclusive use of bicycles with through travel by motor vehicles or pedestrians prohibited, but with cross-flows by pedestrians and motorists permitted. Class II bikeways are typically 4–6 feet wide in Roseville and separated from vehicle traffic by a solid white stripe.
- ▶ Class III bikeways consist of on-street ROW designated by signs or permanent markings that is shared with motorists.

Roseville has an additional classification for bikeways; Class IA facilities are shared pedestrian and bikeway paths within landscaped corridors along arterial and collector roadways and are separated from the roadway. They are a minimum of eight-feet wide. Caltrans does not consider sidewalk facilities to be Class IA facilities, and does not recommend that they be signed as bicycle routes. However, Class IA facilities are desirable for bicyclists of lower skill levels, such as children, as well as others who are hesitant to use on-street routes.

The City of Roseville has an adopted Bicycle Master Plan, which provides guidelines for the development of a citywide network of Class I, IA, II, and III bicycle facilities and design standards (based on Caltrans standards) for new bicycle facilities within Roseville.

Truck Routes

Truck routes within the Planning Area are shown in General Plan Figure III-2. Surface Transportation Assistance Act (STAA) and California Legal approved routes are both shown in this figure.

4.3.3 REGULATORY FRAMEWORK

4.3.3.1 FEDERAL

There are no known federal standards that would directly affect the transportation and circulation aspects of the General Plan. However, federal regulations relating to the Americans with Disabilities Act, Title VI, and Environmental Justice relate to transit service.

4.3.3.2 STATE

California Department of Transportation

The California Department of Transportation (Caltrans) is responsible for planning, designing, constructing, operating, and maintaining the State Highway System (SHS). Federal highway standards are implemented in California by Caltrans. Any improvements or modifications to the SHS would need to be approved by Caltrans.

Caltrans' Local Development – Intergovernmental Review Program Interim Guidance (Caltrans, November 9, 2016) provides guidance on the evaluation of traffic impacts to State highway facilities. The document recommends that CEQA reviewers comment on VMT, "applying local agency thresholds or absent those, thresholds recommended in adopted CEQA Guidelines or OPR's approved Technical Advisory."

Senate Bill 375

SB 375, signed in September 2008 (Chapter 728, Statutes of 2008), aligns regional transportation planning efforts, regional greenhouse gas (GHG) reduction targets, and land use and housing allocations. SB 375 requires each metropolitan planning organization (MPO) to adopt a sustainable communities strategy (SCS) or alternative planning strategy (APS) that will prescribe land use allocation in that MPO's RTP. As discussed below, the MPO for Roseville is the Sacramento Area Council of Governments (SACOG). The California Air Resources Board (ARB), in consultation with MPOs, will provide each affected region with reduction targets for GHGs emitted by passenger cars and light trucks in the region for the years 2020 and 2035. These reduction targets will be updated every 8 years, but can be updated every 4 years if advancements in emissions technologies affect the reduction strategies to achieve the targets. ARB is also charged with reviewing each MPO's SCS or APS for consistency with its assigned targets. Under Senate Bill 375 (SB 375), MPOs such as SACOG are responsible for developing land use and transportation planning scenarios to reduce GHG emissions from cars and light duty trucks (passenger vehicles).

Senate Bill 743

Senate Bill (SB) 743, passed in 2013, resulted in several statewide CEQA changes. It required the California Governor's Office of Planning and Research (OPR) to establish new metrics for determining the significance of transportation impacts of projects within transit priority areas (TPAs) and allows OPR to extend use of the metrics beyond TPAs. OPR selected VMT as the preferred transportation impact metric and applied their discretion to require its use statewide. This legislation also established that aesthetic and parking effects of a residential, mixed-use residential, or employment center projects on an infill site within a TPA are not significant impacts on the environment. The revised CEQA Guidelines that implement this legislation became effective on December 28, 2018, and state that vehicle LOS and similar measures related to delay shall not be used as the sole basis for determining the significance of transportation impacts for land use projects, and that as of July 1, 2020, this

requirement shall apply statewide, but that until that date, lead agencies may elect to rely on VMT rather than LOS to analyze transportation impacts.

The OPR *Technical Advisory on Evaluating Transportation Impacts in CEQA* (December 2018) includes specifications for VMT methodology and recommendations for significance thresholds and mitigation. The *Technical Advisory* recommends that a per capita or per employee VMT that is 15 percent below that of existing development may be a reasonable threshold in order to meet the State's long-term climate goals (page 10).

California Air Resources Board

ARB has specific guidance for VMT thresholds in the ARB *2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals* (January 2019). This document provides recommendations for VMT reduction thresholds that would be necessary to achieve the state's GHG reduction goals and acknowledges that the SCS targets alone are not sufficient to meet climate goals. ARB concluded that a 14.3-percent reduction in total VMT per capita and a 16.8 percent reduction in light-duty VMT per capita (over current conditions; 2015–2018) was needed to meet these goals.

Complete Streets

In 2008, the State of California enacted Assembly Bill 1358, the Complete Streets Act of 2008. This law requires cities and counties, when updating their general plans, to ensure that local streets and roads meet the needs of all users, including bicyclists, pedestrians, transit riders, children, seniors, persons with disabilities and motorists. The law took effect in January 2011, when the OPR issued new general plan update guidelines that reflect Complete Streets planning principles. As described by OPR, complete streets should be designed and constructed to serve all users of streets, roads, and highways, regardless of their age or ability, or whether they are driving, walking, bicycling, or taking transit.

4.3.3.3 REGIONAL AND LOCAL

Sacramento Council of Governments 2020 Metropolitan Transportation Plan/Sustainable Communities Strategy

SACOG is responsible for preparing the Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) every four years in coordination with the 22 cities and six counties in the greater Sacramento region. The MTP/SCS pro-actively links land use, air quality, and transportation needs. The current adopted 2020 MTP/SCS is for the years 2020 to 2040. Goals of the MTP/SCS are:

- ▶ Build vibrant places for today's and tomorrow's residents.
- ▶ Foster the next generation of mobility solutions.
- ▶ Modernize the way we pay for transportation infrastructure.
- ▶ Build and maintain a safe, reliable, and multimodal transportation system.

Federal law requires the MTP to conform to air quality goals for the region, satisfy financial constraints such that all proposed projects can be reasonably funded, and undergo extensive public review. State law further requires the MTP process include careful environmental analysis and review.

Under SB 375, the California Air Resources Board (ARB) is responsible for issuing greenhouse gas targets to MPOs that reduce vehicle emissions, consistent with state climate goals, by a future planning horizon compared to an established baseline. For the 2020 MTP/SCS, ARB assigned SACOG a target of 19 percent per-capita GHG emissions reduction, but this will be updated with each update to the MTP/SCS. The MTP/SCS indicates that VMT per capita in the SACOG region, which dipped significantly during the Great Recession, has increased starting in 2011. The MTP/SCS projects a 10-percent reduction in VMT per capita by 2040 for the SACOG region. However, this will not be sufficient to meet the statewide goals of a 14.3-percent reduction in total VMT per capita and a 16.8-percent reduction in light-duty VMT per capita from the ARB 2017 *Scoping Plan* described above.

Existing City of Roseville General Plan Policies

The existing General Plan (City of Roseville 2016c) includes the following goals and policies related to transportation and circulation.

Growth Management Goal 1: The City shall proactively manage and plan for growth.

Growth Management Goal 7: Potential population growth in Roseville must be based on the long-term carrying capacities and limits of the roadway system, sewer and water treatment facilities, and electrical utility service, as defined in the Circulation Element and the Public Facilities Element.

Functional Classification Goal 1: Provide guidance to the long-range planning of the City's roadway system including design standards, right-of-way requirements and coordination with surrounding jurisdictions.

- ▶ **Policy 1:** Establish a functional classification system to guide the planning and design of the City's roadway system.
- ▶ **Policy 2:** Coordinate with surrounding jurisdictions to achieve compatible functional classifications for roadways that cross the City's boundaries.
- ▶ **Policy 3:** Establish a comprehensive set of design standards for the City's roadway system by functional class.
- ▶ **Policy 4:** Maintain a system of truck routes to provide for the safe and efficient movement of goods and to avoid impacting residential neighborhoods.

Level of Service Goal 1: Maintain an adequate level of transportation service for all of Roseville's residents and employees through a balanced transportation system, which considers automobiles, transit, bicyclists, and pedestrians.

- ▶ **Policy 1:** Maintain a level of service (LOS) "C" standard at a minimum of 70 percent of all signalized intersections and roadway segments in the City during the a.m. and p.m. peak hours. Exceptions to the LOS "C" standard may be considered for intersections where the City finds that the required improvements are unacceptable based on established criteria identified in the implementation measures. In addition, Pedestrian Districts may be exempted from the LOS standard.

- ▶ **Policy 2:** Strive to meet the level of service standards through a balanced transportation system that reduces the auto emissions that contribute to climate change by providing alternatives to the automobile and avoiding excessive vehicle congestion through roadway improvements, Intelligent Transportation Systems, and transit improvements.
- ▶ **Policy 3:** Work with neighboring jurisdictions to provide acceptable and compatible levels of service on the roadways that cross the City's boundaries.
- ▶ **Policy 4:** Secure adequate funding for all components of the City's transportation system to ensure level of service policy is maintained.
- ▶ **Policy 5:** Enable the City to designate a Pedestrian District over a geographic area for the purpose of implementing measures that promote pedestrian walkability and reduce total vehicle miles traveled and resultant air pollution emissions that contribute to climate change. In these districts, the City recognizes that pedestrian travel takes a higher priority than automobile travel, which could reduce the vehicular level of service.

Transit Goal 1: Promote a safe, convenient and efficient mass transit system, utilizing both bus and rail modes, to reduce congestion, reduce auto emissions, including emissions that contribute to climate change, improve the environment, and provide viable non-automotive means of transportation in and through Roseville.

- ▶ **Policy 1:** Pursue and support transit services within the community and region and pursue land use, design and other mechanisms that promote the use of such services.
- ▶ **Policy 2:** Pursue all available sources of funding for sustainable transit services.
- ▶ **Policy 3:** Continue to study options for introducing Bus Rapid Transit or extending light rail service to Roseville.
- ▶ **Policy 4:** Support and remain actively involved in planning for the expansion of Capitol Corridor rail service, as well as other regional linkages.
- ▶ **Policy 5:** Consider the transit needs of seniors, minorities, low-income persons, persons with disabilities, and other persons who may be transit-dependent when making decisions regarding transit service.

Transportation Systems Management Goal 1: Reduce travel demand on the City's roadway system.

Transportation Systems Management Goal 2: Reduce total vehicle emissions in the City of Roseville and the South Placer County region.

- ▶ **Policy 1:** Continue to enforce the City's TSM ordinance and monitor its effectiveness.
- ▶ **Policy 2:** Work with appropriate agencies to develop measures to reduce vehicular travel demand and total vehicle miles traveled and meet air quality goals.

Bikeways/Trails Goal 1: Increase the percentage of all trips made by bicycles in Roseville.

Bikeways/Trails Goal 2: Establish and maintain a safe, comprehensive and integrated bikeway and trail system that encourages the use of bikes and walking for commuting, recreational and other trips.

Bikeways/Trails Goal 3: Establish education, encouragement and enforcement programs that increase bicyclist and motorist awareness of the rights and responsibilities of bicyclists in order to foster a climate of acceptance for bike riding.

Bikeways/Trails Goal 4: Obtain the Bicycle Friendly Community Designation from the League of American Bicyclists.

- ▶ **Policy 1:** Develop a comprehensive and safe system of recreational and commuter bicycle routes and trails that provides connections between the City’s major employment and housing areas and between its existing and planned bikeways.
- ▶ **Policy 2:** Coordinate Roseville’s bikeway and trail system with those of neighboring jurisdictions to provide both local and regional connections.
- ▶ **Policy 3:** Pursue available sources of funding for bikeways and trails.
- ▶ **Policy 4:** Enhance bicycle education, encouragement and enforcement programs targeted to adult and child bicyclists and motorists.

Placer County Regional Transportation Plan

Placer County Transportation Planning Agency (PCTPA) prepared the 2040 Regional Transportation Plan (RTP), which is a long-range transportation funding document to help local agencies gain access to federal and state transportation funds. Its purpose is to address existing congestion and improve future mobility given the growth anticipated over the next 20 years. The plan was adopted by the PCTPA Board at their December 4, 2019 meeting. The RTP contains individual chapters pertaining to the regional roadway network, public transit, passenger rail, aviation, goods movement, bicycle, pedestrian and low-speed vehicles, and recreational travel. It also contains chapters related to air quality, climate change, as well as policy and financial elements.

Long Range Transit Master Plan

The City has worked with the PCTPA and surrounding jurisdictions to develop the Transit Master Plan for South Placer County, which is a long-range transit plan, intended to guide the growth of transit services within the city of Roseville and the surrounding jurisdictions in Placer County through the planning horizon of 2030–2040. The PCTPA Board adopted the plan for services outlined as Scenario 2, which highlighted increased services and a new BRT program in response to anticipated development (PCTPA 2007).

Short Range Transit Plan

The Short-Range Transit Plan (SRTP) is a state and federally mandated planning document that describes the plans, programs, and goals of the transit operator. The SRTP was last adopted in 2018 and it has a 7-year planning horizon. The SRTP focuses on the characteristics of the existing system and addresses operational, capital and financial needs for future transit services during the 7-year planning horizon (PCTPA 2018).

Bicycle Master Plan

The General Plan calls for the development of a comprehensive bikeway system that would provide connections between the City's major employment and housing areas and between existing and planned bikeways. The Bicycle Master Plan was updated in 2008. It provides guidelines for the development of a citywide network of bicycle facilities and design standards for new bicycle facilities in Roseville.

Pedestrian Master Plan

The City of Roseville Pedestrian Master Plan (2011) was adopted by the City Council to establish policies, projects, and programs that improve the pedestrian system in Roseville and increase walking for transportation, recreation, and health. The Pedestrian Master Plan includes goals, policies, and implementation measures for pedestrian improvements and programs; a recommended pedestrian network; and a CIP that establishes a 20-year framework for improvements to the pedestrian environment.

City of Roseville Design and Construction Standards

The City's *Design and Construction Standards* (City of Roseville 2020) provide for coordinated and standardized development of City facilities, including roadways. The Design and Construction Standards apply to, regulate, and guide preparation of traffic impact studies, the design and preparation of plans, and the construction of streets, highways, alleys, drainage, traffic signals, site access, and related public improvements. All public roadway infrastructure improvements must be designed and constructed in accordance with the City's Design and Construction Standards, Caltrans' *Standard Specifications* (Caltrans 2018), and the latest edition of the City's *Americans with Disabilities Act (ADA) Transitions Plan* (City of Roseville 2009).

The requirement for traffic impact studies for individual projects is determined by the City. Traffic impact studies must be prepared by a City-authorized traffic consultant and must adequately assess the impacts of a development proposal on the existing and/or planned street system. Section 4 of the Design Standards provides specific guidance on the types of traffic studies, methodologies, contents, and requirements for submittal and review by the City.

The Design Standards also set forth the requirements for project site access and driveway locations (Section 5); traffic signals, signs, and striping (Section 6); street design, including street classes and widths, rights-of-way, pavement engineering, curb and gutters, sidewalks, pedestrian walks and bike paths, intersections, sight distances, and driveway standards (Section 7); traffic noise barriers (Section 12); and bikeway design standards (Section 13).

The Construction Standards regulate construction-area traffic control (Section 12); set forth the developer's and contractor's responsibilities (Section 21); specify the details for construction of street improvements including barricades, bikeways, bridges, bollards, curb, curb and gutter, driveways, pavement, curb ramps, sidewalk, survey monuments and tunnels (Section 71); application of traffic stripes and pavement markings (Section 84); installation of pavement markers (Section 85); and installation of traffic signals (Section 86).

Adopted Specific Plans and Mitigation Measures

The City has adopted 14 Specific Plans. A Specific Plan is a comprehensive planning and zoning document that implements the General Plan by providing development and conservation standards for a defined geographic

location within the Planning Area. Each Specific Plan has developed guidelines for site, architectural, landscaping, lighting, roadway networks, pedestrian/bicycle paths, open space corridors, parks, and other aspects of design. Each adopted Specific Plan included an EIR, which evaluated potential impacts related to the transportation and circulation system. Where appropriate, mitigation measures were adopted, and these measures are required to be implemented in the respective Specific Plan Areas. Adopted mitigation measures included the payment of fair share fees toward roadway system improvements. Copies of the adopted Specific Plans and their associated EIRs are available upon request from the City of Roseville Development Services Department, Planning Division.

4.3.4 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

4.3.4.1 METHODOLOGY

This proposed General Plan Update does not include any changes to land use designations, expansion of the City's Planning Area, or other major physical changes to areas planned for development compared to the existing General Plan, but does include changes to goals, policies, and implementation measures, which are analyzed as a part of this EIR. This proposed General Plan Update is compared to existing conditions, which constitute the baseline physical conditions for determining whether potential impacts are significant.

The transportation impact analysis methodology includes a combination of quantitative and qualitative evaluations of the roadway, bicycle, pedestrian, and transit components of the transportation system. All analysis presumes that future background travel options and behaviors remain similar to current conditions and do not explicitly account for potential changes associated with disruptive trends, which have included increased use of TNCs, which include Uber and Lyft; internet shopping; and other internet related activities, and which in the future may include automated vehicles (AVs) and micro-transit services. Because the timing, specific types of disruptors, degree of adoption, and resulting effects of such trends are unknown at this time, any analyses of their effects on the City's transportation system would be speculative.

The planning horizon of the proposed General Plan Update is the year 2035.

Analysis Scenarios

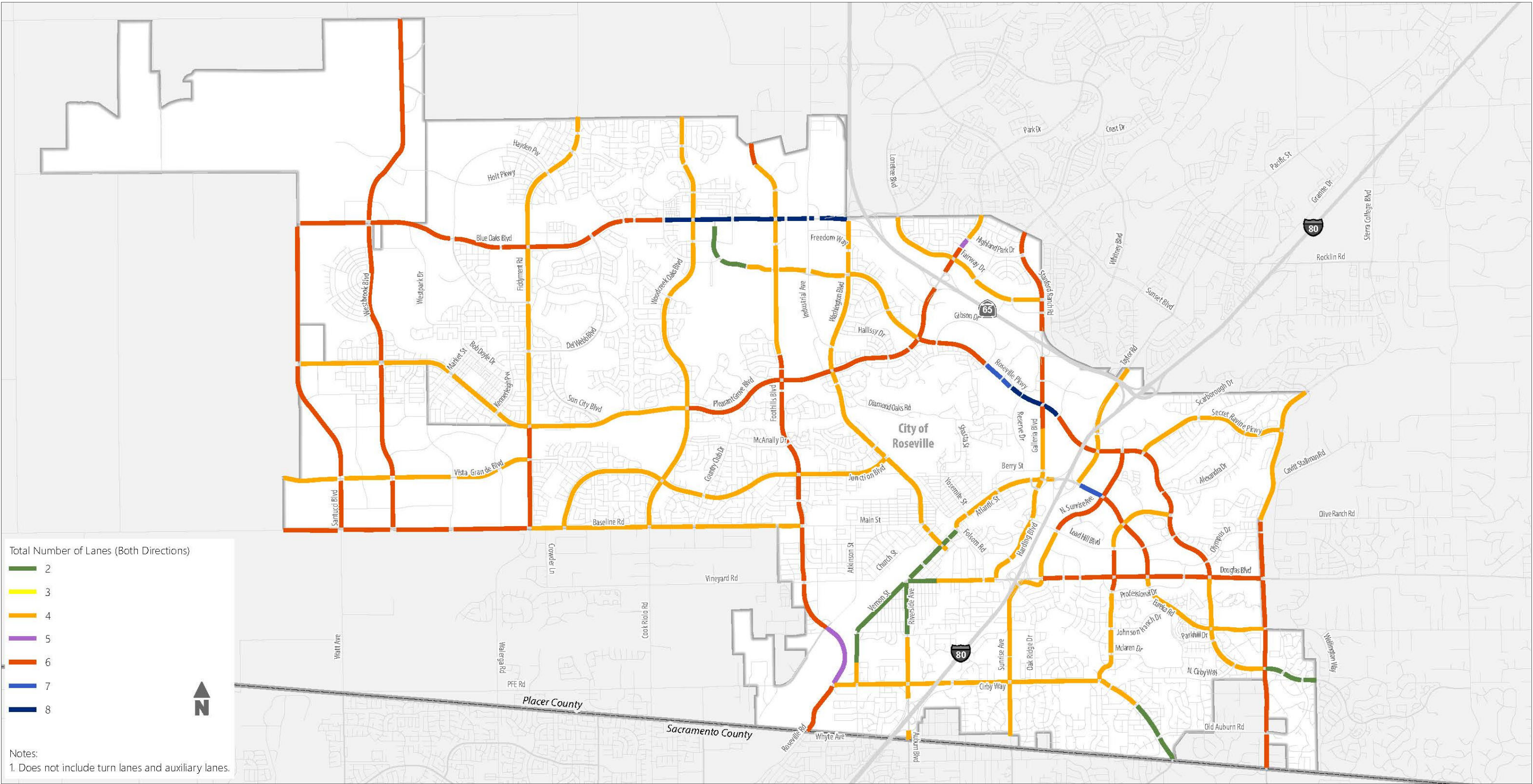
The following scenarios were analyzed using the Roseville travel demand model: existing baseline conditions, cumulative plus project conditions (financially constrained), and cumulative plus project conditions (financially unconstrained). The project does not include any changes to the City's cumulative baseline (no land use plan changes are proposed); therefore, a cumulative no project scenario was not prepared, because the cumulative no project and the cumulative plus project are the same. More detailed descriptions of each scenario are included below.

- **Existing Baseline Conditions:** The transportation impact analysis is based on data and information collected for the Amoruso Ranch Specific Plan EIR finalized in 2016. The Amoruso Ranch Specific Plan baseline represents baseline conditions for purposes of the General Plan transportation impact analysis. Changes in baseline conditions since that time are accounted for in the transportation analysis process since impacts are determined based on long-term growth associated with buildout of the General Plan, as described in the Introduction.

- ▶ **Proposed General Plan Update Buildout, Financially Constrained Network:** Represents the circulation plan from the proposed General Plan Update and buildout of development anticipated under the General Plan, but only includes those regional roadway facilities which are included in the SACOG 2020 MTP/SCS project financially constrained projects list. These are projects with identified funding sources which can reasonably be expected to be implemented by 2035. Exhibit 4.3-4 shows lanes and Exhibit 4.3-5 shows lane additions for this scenario compared to baseline conditions for roadways under the City's jurisdiction. Under this scenario, the City's roadway system (excluding freeways and local streets) is expanded from 483 lane-miles (baseline) to 639 lane-miles, a 32-percent increase.
- ▶ **Proposed General Plan Update Buildout, Financially Unconstrained Network:** Represents circulation plan from the proposed General Plan Update and buildout of development anticipated under the General Plan, but includes additional regional roadway projects based on the SACOG 2020 MTP/SCS project financially unconstrained projects list. These additional projects include:
 - Widening of Baseline Road from four to six lanes from Santucci Boulevard to the Sutter County line
 - Managed lanes on I-80 from SR 65 east to SR 49 in Auburn
 - Extension of Placer Parkway from Santucci Boulevard west to connect to SR 70/99
 - Addition of one general purpose lane on southbound SR 65 from Lincoln Boulevard to Blue Oaks Boulevard and one general purpose lane on northbound SR 65 from north of Galleria Boulevard to Lincoln Boulevard
- ▶ **Infill Housing Alternative:** Based upon the constrained roadway network scenario, this Alternative includes all development anticipated to occur with buildout of the General Plan, plus an additional 1,382 multi-family housing units allocated to infill locations that can accommodate additional development capacity, and where multi-family development could be feasible. Please see Chapter 6.0 of this EIR for more information about the EIR Alternatives.

Land Use Assumptions

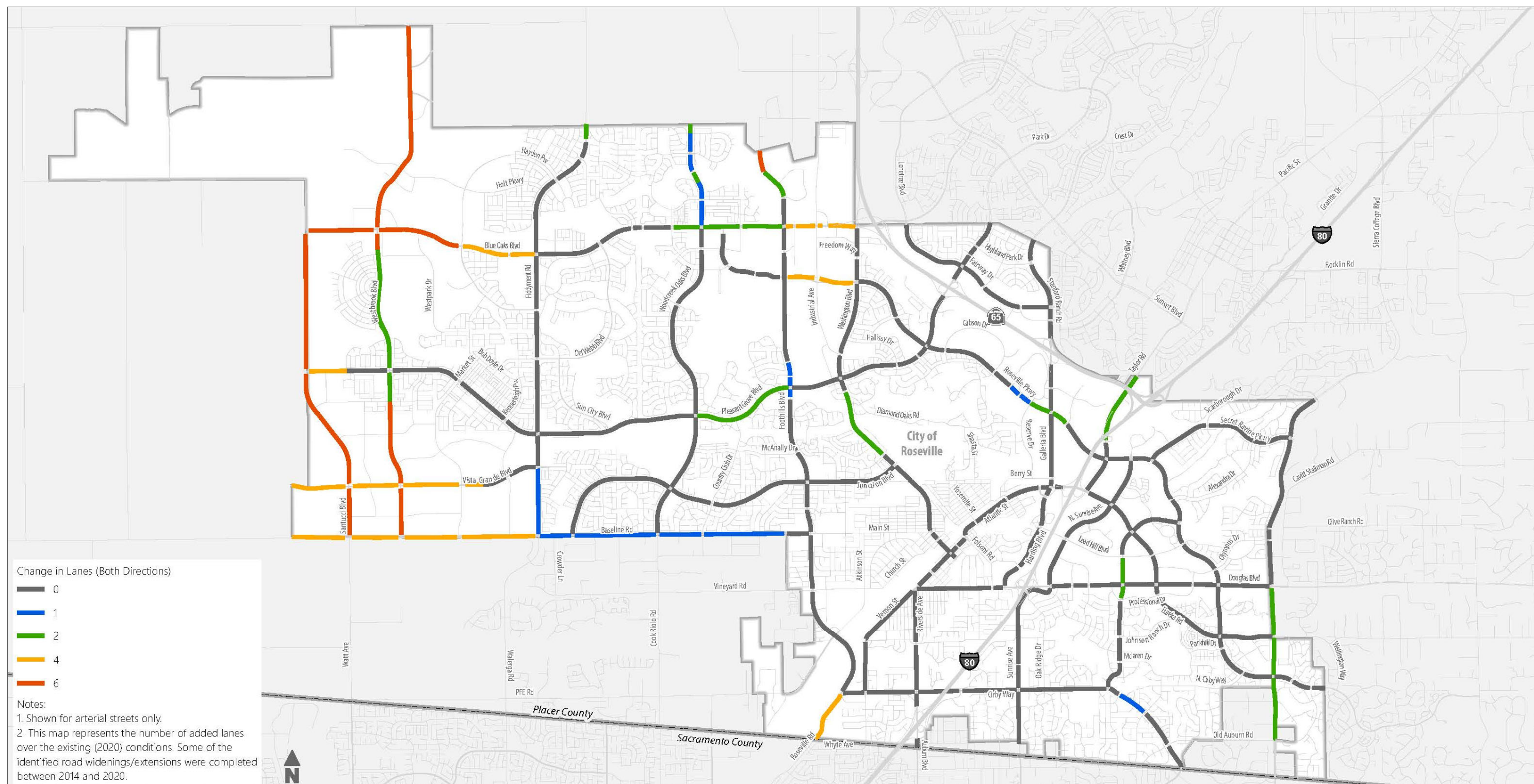
Table 4.3-4 summarizes the changes in major land uses between the existing conditions baseline and General Plan scenarios. This table indicates that residential growth would increase by 56 percent, with the majority of new units being single-family. Greater levels of non-residential growth are expected with the amount of retail, industrial, and high tech industrial square footage assumed to approximately double. An 81-percent increase in office space is predicted.



Source: Fehr & Peers 2020

Exhibit 4.3-4 **General Plan Number of Travel Lanes**

This page intentionally left blank



Source: Fehr & Peers 2020

Exhibit 4.3-5

General Plan Lane Increases

This page intentionally left blank

| Table 4.3-4 Land Use Change Under Buildout of the General Plan | | | | |
|---|--------------------------|--------------------------|---|-----------------|
| Land Use | Units¹ | Existing Baseline | General Plan Buildout ² | Increase |
| Single Family | Dwelling Units | 33,450 | 50,403 | 16,953 |
| Multi-Family | Dwelling Units | 11,306 | 20,538 | 9,232 |
| Age-Restricted | Dwelling Units | 3,358 | 4,245 | 887 |
| Retail | KSF | 9,233 | 18,666 | 9,433 |
| Mall | KSF | 1,183 | 1,755 | 572 |
| Office | KSF | 7,250 | 13,152 | 5,902 |
| Industrial | KSF | 6,356 | 13,208 | 6,852 |
| High-Tech Industrial | KSF | 2,376 | 5,025 | 2,649 |
| Medical Office | KSF | 848 | 1,007 | 159 |
| Hospital | KSF | 1,708 | 1,803 | 95 |
| Hotel ³ | Rooms | 1,474 | 1,862 | 388 |
| School | Students | 22,622 | 32,422 | 9,800 |
| Notes: ¹ KSF = thousand square feet ² Unconstrained and constrained scenarios are identical from a land use perspective. The Infill Housing Alternative has 1,382 additional multi-family dwelling units. See Chapter 6.0 of this EIR for more detail regarding the alternatives. ³ Additional hotels may be developed on parcels assumed as generic retail space. Source: Fehr & Peers 2020 | | | | |

Reasonably foreseeable development surrounding the Planning Area was assumed for cumulative scenarios modeled as part of this effort. Namely, projects in unincorporated Placer County, such as the Placer Vineyards, Regional University, and Bickford Ranch Specific Plans were assumed. Continued development within the cities of Rocklin and Lincoln, per their zoning maps/land use designations, was also assumed.

Notably, the cumulative scenarios modeled as part of this effort also assumed development of the Placer Ranch Specific Plan, adopted by the Placer County Board of Supervisors in December 2019, and is situated directly north of the City limits. This plan includes approximately 5,800 dwelling units and 6.3 million square feet of non-residential (retail, office, industrial, innovation center, and R&D), and a 32,000-student university. Placer Ranch also includes new roadway connections to existing Roseville streets, including Foothills Boulevard, Woodcreek Oaks Boulevard, and Fiddymont Road.

The anticipated effect of the unconstrained scenario on City streets is a reduction in traffic volumes due to less regionally-oriented traffic using City streets to avoid freeway congestion. The development that is assumed outside the City's Planning Area would directly and indirectly affect the performance of the transportation system within Roseville. Direct effects are seen in vehicle LOS results, since some traffic generated by these developments would use City streets. Indirect effects are seen in VMT, as City residents and businesses may alter their travel destinations in response to convenient and complementary land uses (despite such land uses being located outside the Planning Area).

Intersection Analysis

The traffic flow and capacity of Roseville's arterial/collector system is principally controlled by the capacity of its signalized intersections. Intersection operations were evaluated using procedures described in the Highway Capacity Manual (HCM), 6th Edition (Transportation Research Board 2016). By applying a peak hour factor (which is a measure of peaking within the hour), operations during the busiest 15 minutes of the peak hour are reported.

Vehicle Miles Traveled Analysis

The Roseville travel forecasting model was used to estimate VMT for the City. As previously stated, two measures of VMT are used in this analysis: per capita (home-based trips) and per service population (all trips). Home-based production VMT includes VMT for trips produced by a home's residents, such as to work, school, or shop, and with one end of the trip at the home. Per service population VMT includes home-based production VMT plus VMT from all other sources, including trips from homes outside area into the area for work, shopping, or other purposes and trips with neither end at the home (such as from work to shopping).

4.3.4.2 THRESHOLDS OF SIGNIFICANCE

For the purposes of this EIR, adoption and/or implementation of the proposed General Plan Update would result in significant impacts under CEQA, if any of the following would occur.

Roadway System Vehicle Miles Traveled

Based on Appendix G of the CEQA Guidelines, the General Plan would result in a significant transportation impact if it would conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)(1), which states that, for land use projects "[v]ehicle miles traveled exceeding an applicable threshold of significance may indicate a significant impact." There are three potentially applicable thresholds: the OPR *Technical Advisory on Evaluating Transportation Impacts in CEQA* (a 15 percent reduction below existing baseline), the ARB *2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals* (a 14.3 percent reduction in total VMT or a 16.8 percent reduction in passenger vehicle VMT), and the target ARB has assigned to SACOG as part of SB 375 implementation (19 percent reduction below 2016 baseline). The City has selected a threshold of 15 percent reduction below baseline, which is established in the OPR *Technical Advisory on Evaluating Transportation Impacts in CEQA*, to evaluate significance, for reasons discussed more fully below.

The General Plan would have a significant impact on the roadway system if it would substantially interfere with achievement of VMT reductions consistent with the OPR *Technical Advisory on Evaluating Transportation Impacts in CEQA*. Therefore, a threshold of 15 percent below baseline VMT per capita, which for the City is 12.8 VMT per capita, was used for this analysis. This threshold is more stringent than the 14.3 percent reduction identified in the ARB *2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals*, and, because data from SACOG indicates that *existing* household VMT per capita in Roseville is five to 10 percent less than the SACOG regional average (SACOG 2020), is actually more stringent than the SACOG target. That is, because the City's VMT is already five to 10 percent less than the SACOG regional average, the City would only need to demonstrate an additional 9 to 14 percent reduction in order to demonstrate the City's VMT is 19 percent below the regional baseline.

Using VMT output from the traffic impact study, both per capita and per service population VMT targets have been developed, as shown in Table 4.3-5. The per-capita methodology is based on home-based production VMT, which includes VMT for trips produced by a home's residents, such as to work, school, or shop, and with one end of the trip at the home. The per service population methodology includes home-based production VMT and VMT from all other sources, including trips from homes outside area into the area for work, shopping, or other purposes and trips with neither end at the home (such as from work to shopping).

| Table 4.3-5 City of Roseville VMT Thresholds Analysis | | |
|---|---------------------------------------|-------------------------------|
| | Service Population Methodology | Per Capita Methodology |
| VMT Produced | 5,459,700 | 1,822,100 |
| # of Residents | 120,812 | 120,812 |
| # of Employees | 69,026 | -- |
| Service Population | 189,838 | -- |
| Baseline VMT Metric | 28.8 VMT/service population | 15.1 VMT/capita |
| Target VMT Metric | 24.5 VMT/service population | 12.8 VMT/capita |
| Note: The City's threshold is 12.8 VMT/capita. The per service population threshold is included for informational purposes. | | |

The service population analysis is provided for informational purposes, to provide a coarse assessment of non-home-based trips affect reported VMT efficiency. Precise methodologies for calculating this metric in traffic impact studies are still being developed, and are therefore relatively less reliable. The per service population metric includes all home-based trips (which are compared with the per capita metric), but also includes all trips into or out of the City, even if these do not originate from a home in the City. The per-capita metric provides a measure of travel efficiency and helps depict whether people are traveling by vehicle more or less over time, and can also be used to compare the efficiency of different areas.

The City is adopting a threshold of 12.8 VMT/capita for this EIR. The per-capita metric is selected because the underlying data is reliable, and because this aligns with SB 375, the MTP/SCS, and the ARB Scoping Plan (which all rely on a per-capita metric).

Future projects consistent with the General Plan will not require further VMT analysis, pursuant to the tiering provisions of CEQA. However, the threshold of 12.8 VMT/capita could be used for analysis of future land use amendments or other projects not within the scope of this EIR analysis. CEQA Guidelines Section 15064.3(b) allows lead agencies discretion to determine, in the context of a particular project, whether to rely on a qualitative analysis or performance-based standards. CEQA Guidelines Section 15064.7(b) allows lead agencies the discretion to select their own thresholds and allow for differences in thresholds based on context. Lead agencies also may need to balance multiple goals, such as accommodation of housing needs, that may also contribute to VMT increases. Adding more impact mitigation costs to housing projects may be counter to land use diversity and adequate/affordable housing goals.

Quantitative analysis would not be required if it can be demonstrated that a project would generate VMT which is equivalent to or less than what was assumed in this General Plan EIR. Examples of such projects include local-serving retail and other local-serving development, which generally reduces existing trip distances by providing services in closer proximity to residential areas, and therefore reduce VMT. Multi-family residences generally have fewer trips per household than single-family residences, and therefore also produce less VMT per unit. Infill projects in developed areas generally have shorter trips, reduced vehicle trips, and therefore less VMT (infill areas are typically low VMT areas, as described in the analysis below). Pedestrian, bicycle, transit, and electric vehicle transportation projects are presumed to be consistent with the VMT analysis, while new vehicular transportation projects not included in the proposed General Plan Update that could induce additional VMT would be presumed to have a conflict and would require quantitative analysis.¹ Residential projects in low per-capita household VMT

¹ As noted in the OPR VMT Technical Advisory, induced travel occurs where roadway capacity is expanded in an area of present or projected future congestion. The effect typically manifests over several years. Lower travel times make the modified facility more

areas and office projects in low per-worker VMT areas (85 percent or less than the regional average) as shown on maps maintained by SACOG would also be presumed not to have a significant effect.²

Roadway System Level of Service

The existing General Plan includes a policy within the Transportation Element which requires maintenance of a level of service (LOS) “C” standard at a minimum of 70 percent of all signalized intersections and roadway segments in the City during the a.m. and p.m. peak hours. Though LOS is no longer a CEQA significance metric, an analysis of LOS has been provided in order to demonstrate consistency with General Plan policy. This analysis is presented in the EIR for informational purposes.

Hazards

Appendix G of the CEQA Guidelines indicates that impacts may be significant if a project would substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment). The proposed General Plan Update would have a significant impact on the transportation system if it would increase hazards due to a design feature, incompatible uses, or inadequate emergency access.

Transit, Bicycles, and Pedestrians

Appendix G of the CEQA Guidelines indicates that impacts may be significant if a project conflicts with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities. The proposed General Plan Update would have a significant impact on transit, bicycles, or pedestrians if it would conflict with adopted policies, plans, or programs regarding these systems, or create or exacerbate disruptions to the performance or safety of these systems.

4.3.4.3 IMPACT ANALYSIS

IMPACT 4.3-1 VMT Per Capita Exceeds the Threshold of 12.8 VMT Per Capita. *The VMT generated by buildout of the existing General Plan is 15.4 VMT per capita under financially constrained network conditions and 14.9 VMT per capita under financially unconstrained network conditions. This exceeds the significance threshold. This impact is considered **significant**.*

attractive to travelers, resulting in the following trip-making changes: (1) Longer trips. The ability to travel a long distance in a shorter time increases the attractiveness of destinations that are farther away, increasing trip length and vehicle travel. (2) 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 vehicle travel. (3) Route changes. Faster travel times on a route attract more drivers to that route from other routes, which can increase or decrease vehicle travel depending on whether it shortens or lengthens trips. (4) Newly generated trips. Increasing travel speeds can induce additional trips, which increases vehicle travel. For example, an individual who previously telecommuted or purchased goods on the internet might choose to accomplish those tasks via automobile trips as a result of increased speeds. (5) Land Use Changes. Faster travel times along a corridor lead to land development farther along that corridor; that new development generates and attracts longer trips, which increases vehicle travel. Over several years, this induced growth component of induced vehicle travel can be substantial, making it critical to include in analyses.

² For more detail, please see: <http://sb743-sacog.opendata.arcgis.com/>.

Table 4.3-5 presents the total VMT and total VMT per service population for the City of Roseville for trips beginning or ending in the City. As shown, total VMT is expected to increase by about 88 percent over baseline conditions across all scenarios. This generally matches the growth assumptions of 56 percent more residential, 81 percent more office, and twice as much retail, industrial, and high-tech industrial development.

| Table 4.3-5 Total Vehicle Miles Traveled by City of Roseville Land Uses: Service Population Analysis | | | |
|---|-----------------|--|--|
| Measure | Baseline | General Plan Buildout (Constrained) | General Plan Buildout (Unconstrained) |
| Total VMT | 5,459,700 | 10,289,700 | 10,125,800 |
| Residents | 120,812 | 188,968 | 188,968 |
| Employees | 69,026 | 123,050 | 123,050 |
| Service Population | 189,838 | 312,018 | 312,018 |
| Total VMT/ Service Population | 28.8 | 33.0 | 32.5 |
| Note: Includes full length of all trips with either an origin or destination with the City of Roseville limits. | | | |
| Source: Fehr & Peers 2020 | | | |

This table indicates that VMT per service population increases under all 2035 scenarios when compared to baseline conditions. This is caused by two factors. First, as is demonstrated in more detail later, the majority of the residential growth is predicted to occur on the edges of the Planning Area, further away from goods and services than most existing residences. Hence, trip lengths increase for these residents. Second, the percentage of the service population consisting of employees increases from 36 percent under baseline conditions to 39 percent under 2035 conditions. This is important because the incremental addition (using the service population methodology) of one added resident adds about 3.2 daily trips; in contrast, one added office employee adds about 4.4 trips and one added retail employee generates about 12 trips (added trips include trips by the resident/employee, as well as customers and others utilizing the development).³ When daily trips are then converted into VMT by multiplying by the trip length, the same trend occurs.

Table 4.3-6 presents the home-based production VMT and home-based production VMT per resident for the City of Roseville for trips beginning or ending in the City, also known as a per capita VMT analysis. This table indicates that the two constrained scenarios would exhibit per capita VMT that is two percent above baseline conditions. The unconstrained proposed project scenario would have per capita VMT that is 1.3 percent below baseline conditions. In all likelihood, the constrained scenario is enabling motorists to travel more directly to their destinations (versus seeking less direct, but quicker routes) due to less traffic intrusion from freeways. Although the project results in slightly less VMT per capita than existing conditions, it remains above the significance threshold of 12.8 VMT per capita.

³ Calculated as follows:

- Residential: 8.6 daily trips per unit / 2.7 persons per unit = 3.2 trips per person (based on blended average of single-family and multi-family residential trip rates and average HH size)
- Office: 17 daily trips per ksf / 4 employees per ksf = 4.4 trips per employee (City of Roseville model trip rate)
- Retail: 35 daily trips per ksf / 3 employees per ksf = 12 trips per employee (City of Roseville model trip rate).

| Table 4.3-6 Home-Based Production Vehicle Miles Traveled: Per Capita Analysis | | | |
|--|-----------------|--|--|
| Measure | Baseline | General Plan Buildout (Constrained) | General Plan Buildout (Unconstrained) |
| Home-Based Production VMT | 1,822,100 | 2,911,300 | 2,810,400 |
| Residents | 120,812 | 188,968 | 188,968 |
| Home-Based Production VMT/ Resident | 15.1 | 15.4 | 14.9 |
| Source: Fehr & Peers 2020 | | | |

A comparison of VMT in Specific Plan Areas is shown in Table 4.3-7. Most residential development will happen in the Amoruso Ranch, Creekview, Sierra Vista, and West Roseville Specific Plan Areas under buildout of the General Plan. These areas, farther away from the core of the city, all have home-based production VMT per resident that is greater than the citywide value. Low-VMT areas—locations which generate VMT at or below the significance threshold—are shaded on the table. Future projects in these areas would generally be assumed to have less than significant VMT impacts.

| Table 4.3-7 Vehicle Miles Traveled: Proposed General Plan Constrained Scenario: Per Capita Analysis | | | | |
|--|------------------|----------------------------------|------------------|---|
| Specific Plan Area | Total VMT | Home-Based Production VMT | Residents | Home-Based Production VMT / Resident |
| City of Roseville | 10,289,735 | 2,911,262 | 188,968 | 15.4 |
| Amoruso Ranch | 283,015 | 163,065 | 7,756 | 21.0 |
| Creekview | 154,398 | 100,956 | 5,193 | 19.4 |
| Del Webb | 107,243 | 43,160 | 4,824 | 8.9 |
| Downtown | 259,312 | 27,230 | 2,386 | 11.4 |
| Highland Reserve North | 434,424 | 57,590 | 4,333 | 13.3 |
| Infill | 2,237,816 | 592,717 | 42,652 | 13.9 |
| North Central Roseville | 1,666,463 | 131,171 | 11,400 | 11.5 |
| North Industrial | 1,381,982 | 76,957 | 5,086 | 15.1 |
| North Roseville | 428,015 | 230,117 | 13,844 | 16.6 |
| Northeast Roseville | 1,428,255 | 43,928 | 3,804 | 11.5 |
| Northwest Roseville | 628,895 | 345,484 | 23,414 | 14.8 |
| Riverside Gateway | 66,383 | 3,478 | 290 | 12.0 |
| Sierra Vista | 932,236 | 412,300 | 22,345 | 18.5 |
| Southeast Roseville | 466,701 | 101,830 | 7,709 | 13.2 |
| Stoneridge | 235,630 | 101,556 | 7,104 | 14.3 |
| West Roseville | 811,396 | 479,721 | 26,828 | 17.9 |
| Note: The summation of VMT for all specific plan areas is greater than for the city as a whole because VMT associated with a trip from one specific plan to another is counted separately for each specific plan, but only once for the city as a whole. | | | | |
| Source: Fehr & Peers 2020 | | | | |

The following goal and policies related to VMT in Roseville would be revised as a part of the proposed General Plan Update, with additions shown in **bold, underlined text** and deletions shown in ~~striketrough~~ text:

- ▶ Goal CIRC4: Reduce ~~travel demand~~ and vehicle miles traveled on the City's and regional roadway systems, while expanding mobility options for residents, employees, and visitors.
- ▶ **Transportation Systems Management Goal 2:** Reduce total vehicle emissions in the City of Roseville and the South Placer County region.
- ▶ **Policy CIRC4.1:** ~~Continue to enforce the City's TSM ordinance and monitor its effectiveness.~~ The City will review and condition projects, as appropriate, to reduce travel demand per capita and per employee by promoting increased density near transit, improving the quality of non-vehicular transportation options, providing incentives for non-vehicular travel, encouraging the mixing of complementary land uses in proximity to one another, and using other feasible methods.
- ▶ **Policy CIRC4.2:** Work with appropriate agencies to develop implementation measures to reduce vehicular travel demand and total vehicle miles traveled and meet air quality goals.
- ▶ **Policy CIRC4.3:** Specific Plan Amendments and land use development projects not included in a Specific Plan shall be evaluated for consistency with the City's VMT Impact Standards.
- ▶ **Policy CIRC4.4:** If the evaluation required by CIRC4.3 finds a Specific Plan Amendment or land use development project not included in an adopted Specific Plan is inconsistent with thresholds established within the City's VMT Impact Standards, on-site land use, transportation, and urban design-related VMT-reducing features should be prioritized to demonstrate consistency. If feasible on-site features cannot achieve the VMT threshold, Specific Plan Amendments and land use development projects outside Specific Plan Areas may demonstrate equivalent consistency through off-site actions or fair-share fee contributions, or if consistency cannot be achieved, shall implement all feasible measures.
- ▶ **Policy CIRC4.5:** Policy CIRC4.3 does not apply to projects that propose residential or office uses in Transit Priority Areas or low-VMT areas. Low-VMT areas are those shown by the General Plan travel demand model or the SCS travel demand model to have per-capita, per-employee, or per-service-population VMT rates that are at least 15 percent less than the baseline citywide or regional rate.
- ▶ **Policy CIRC4.6:** Promote and incentivize Infill development, particularly affordable housing development, through assistance in obtaining outside grant funding and reductions or deferrals in impact fees.
- ▶ **Policy CIRC4.7:** Continue to educate the public and business community about alternative modes of travel through Safe Routes to School, Transportation Systems Management, and other local and regional programs and events.

The proposed modification to Policy CIRC4.1 describes the City's TSM program and its intent more fully, instead of merely stating that the City will continue to monitor and enforce the program. This additional clarity provides better direction within the General Plan, but does not change the application of the policy. The proposed change to Policy CIRC4.2 is a minor wording change with no policy implications. Proposed new policies CIRC4.6 and CIRC4.7 incentivize infill development and promote mobility options, respectively, which would not result in any adverse environmental impacts. Proposed Policies CIRC4.3 and 4.4 describe the City's proposed new VMT policies.

Senate Bill 743 and CEQA Guidelines Section 15064.3 have established VMT as a metric for assessing transportation and travel demand management. The existing General Plan does not contain any policy language or guidance related specifically to VMT, in absence of which each project would need to establish and justify a VMT significance threshold—as has been done in this EIR. In establishing Policies CIRC4.3 and 4.4, the City is providing a significance threshold and mitigation guidance for future projects. Because the regulatory and modeling environment related to VMT is continuing to evolve, the City has elected to avoid a policy which states a static threshold specifying an amount per capita to be achieved out of concern it would not remain relevant. Instead, the policy refers back to new VMT Impact Standards. The General Plan Implementation Measures direct preparation of the VMT Impact Standards, describe the threshold (15 percent below baseline) and threshold justification contained within this EIR, and indicates that the threshold will be updated periodically.

The proposed General Plan Update policy changes and the new policies listed above would reduce VMT and associated environmental impacts (air pollutant emissions, greenhouse gas emissions, transportation noise, etc.), promote mobility options, and incentivize infill development, and would not result in any adverse environmental impacts.

Conclusion

The VMT generated by buildout of the existing General Plan is 15.4 VMT per capita under financially constrained network conditions, and 14.9 VMT per capita under financially unconstrained network conditions. This exceeds the significance threshold of 12.8 VMT per capita (i.e., 85 percent of the 15.1 VMT per capita baseline value). The land use plans in the remaining undeveloped areas of the City are approved and Development Agreements in place, and therefore mitigation in the form of fundamental land use changes that will reduce VMT to meet state goals is unachievable.

Some parts of the Planning Area perform better than others and achieve the citywide threshold. Based on Table 4.3-7, these include the Del Webb, Downtown, North Central Roseville, Northeast Roseville, and Riverside Gateway Specific Plan Areas. These Specific Plan Areas are most central to existing development or, in the case of Del Webb, which is age-restricted to residents 55 or older, have lower trip generation.

Implementing proposed General Plan Update Goal CIRC4 and Policies CIRC4.1, CIRC4.2, CIRC4.3, CIRC4.4, CIRC4.5, CIRC4.6, and CIRC4.7, listed above, will help to reduce VMT, but the City cannot demonstrate definitively at this time that implementation of these policies would achieve VMT reductions to meet the threshold of 12.8 VMT per capita. This impact is **significant**.

Mitigation Measures

Mitigation Measure 4.3-1 – *The proposed General Plan Update should be amended as follows:*

Implementation Measure

Proposed development projects that could have a potentially significant VMT impact shall consider reasonable and feasible project modifications and other measures during the project design and environmental review stage of project development that would reduce VMT effects in a manner consistent with state guidance on VMT reduction. The below list of potential measures is not intended to be exhaustive, and not all measures may be feasible, reasonable, or applicable to all projects. The purpose

of this list is to identify options for future development proposals, not to constrain projects to this list, or to require that a project examine or include all measures from this list. Potential measures include:

- improve or increase access to transit;
- increase access to common goods and services, such as groceries, schools, and daycare;
- incorporate affordable housing into the project;
- incorporate neighborhood electric vehicle network;
- orient the project toward transit, bicycle and pedestrian facilities;
- improve pedestrian or bicycle networks, or transit service;
- provide traffic calming;
- provide bicycle parking;
- unbundle parking costs;
- provide parking cash-out programs;
- implement roadway pricing;
- implement or provide access to a commute reduction program;
- provide car-sharing, bike sharing, and ride-sharing programs;
- provide transit passes;
- shifting single occupancy vehicle trips to carpooling or vanpooling, for example providing ride-matching services;
- providing telework options;
- providing incentives or subsidies that increase the use of modes other than single-occupancy vehicle;
- providing on-site amenities at places of work, such as priority parking for carpools and vanpools, secure bike parking, and showers and locker rooms;
- providing employee transportation coordinators at employment sites;
- providing a guaranteed ride home service to users of non-auto modes;
- locate the project near transit;
- increase project density;

- increase the mix of uses within the project or within the project's surroundings;
- increase connectivity and/or intersection density on the project site; and/or
- deploy management strategies (e.g., pricing, vehicle occupancy requirements) on roadways or roadway lanes.

The City shall evaluate the feasibility of a local or regional VMT impact bank or exchange. Such an offset program, if determined feasible, would be administered by the City or a City-approved agency, and would offer demonstrated VMT reduction strategies through transportation demand management programs, impact fee programs, mitigation banks or exchange programs, in-lieu fee programs, or other land use project conditions that reduce VMT in a manner consistent with state guidance on VMT reduction. If, through on-site changes, a subject project cannot demonstrate consistency with state guidance on VMT reduction, the project can contribute on a pro-rata basis to a local or regional VMT reduction bank or exchange, as necessary, to reduce net VMT impacts.

Significance after Mitigation

Although implementing Mitigation Measure 4.3-1 will achieve meaningful reductions in VMT generated by land uses within the City, the City at this time cannot demonstrate that VMT will be reduced to the degree that it would meet the City's adopted significance threshold for this EIR. Many Specific Plans in Roseville have development agreements, and the City cannot unilaterally change land use and transportation frameworks of Specific Plans to focus on reducing vehicular travel demand. VMT reduction also depends on factors, such as demographic change, household preferences for housing types and locations, the cost of fuel, and the competitiveness of regional transit relative to driving, which relates to congestion along vehicular commute routes that are not under the City's jurisdiction, as well as transit provided by agencies other than the City.⁴ The feasibility and effectiveness of a local or regional VMT impact bank or exchange is unknown at this time. Therefore, this impact is considered **significant and unavoidable**.

IMPACT⁵ 4.3-2 Roadway System Level of Service (Informational Analysis). *Transportation network changes under the proposed General Plan Update and land use change under buildout of the General Plan would not conflict with the City's policy of at least 70 percent of signalized intersections achieving LOS C or better during the a.m. and p.m. peak hours.*

LOS was analyzed for signalized intersections to determine if the proposed General Plan Update would conflict with the City's policy of at least 70 percent of signalized intersections operating at LOS C or better during the a.m. and p.m. peak hours (tier one analysis). Table 4.3-8 presents these results. As shown, at least 70 percent of intersections would perform at LOS C or better in all scenarios.

⁴ "Travel behavior is influenced by a number of factors including personal income, the costs of owning and operating a vehicle, mobility options, the time cost of travel, urbanization, and highway capacity... Therefore, new mobility pricing policies are necessary to encourage more efficient driving behavior, including legislation to remove barriers for MPOs and locals to implement pricing." For more information, please see California Air Resources Board (ARB) 2018 (February). SB 375 Target Update Staff Report. Available: https://ww3.arb.ca.gov/cc/sb375/sb375_target_update_final_staff_report_feb2018.pdf.

⁵ The term "IMPACT" is used here for consistency in formatting. Traffic congestion is not an environmental impact under CEQA and this is presented for informational purposes only.

| Table 4.3-8 Signalized Intersections Operating at LOS C or Better (Excluding Pedestrian Overlay Districts) | | |
|--|-----------------------|-----------------------|
| Level of Service | A.M. Peak Hour | P.M. Peak Hour |
| Baseline | 87.3 percent | 77.2 percent |
| Proposed General Plan Constrained | 83.9 percent | 71.9 percent |
| Proposed General Plan Unconstrained | 83.9 percent | 72.8 percent |
| Note: In Pedestrian Overlay Districts, the City prioritizes other modes of transportation, and the LOS C standard does not apply. Source: Fehr & Peers 2020 | | |

The number of intersections operating at LOS D or worse during the PM peak hour would increase from 23 percent under baseline conditions to 28 percent under the proposed General Plan Constrained scenario (see Appendix D). Most intersections operating worse than LOS C are located in existing developed portions of the Planning Area, not new growth areas. To demonstrate the growth in traffic on these streets, a summary of the ADT on 91 distinct existing arterial segments was made. Under baseline conditions, these 91 segments carried a combined 2.25 million vehicles per day. Under the proposed General Plan Constrained scenario, these 91 segments carried 3.45 million vehicles per day, a 53-percent increase. Although the number of lane-miles in the City under this scenario would increase from 483 to 639, much of those improvements are planned in the new growth areas of the City, thereby not necessarily providing congestion relief in the established parts of the City. Typical capacity enhancements at established intersections are “spot improvements,” such as adding turn lanes. This helps explain why the number of intersections projected to operate at worse than LOS C is greater under the proposed General Plan Update than existing conditions.

Conclusions regarding the proposed General Plan Update’s effects on adjacent jurisdictions are difficult to quantify, because comparisons of traffic volume changes at the City’s borders with other communities are directly affected by the assumed level of development in other communities. Most notably, the proposed General Plan Update analysis assumes more background land development to the north and west of the City due to the need to include reasonably foreseeable land uses, such as the Placer Ranch Specific Plan.

Importantly, the City has a demonstrated record of taking a leadership role to pursue and implement fee programs that help fund regional roadway improvements. Examples include the Highway 65 Joint Powers Authority (which helped fund interchanges along SR 65 at Galleria Boulevard, Pleasant Grove Boulevard, Blue Oaks Boulevard, and Sunset Boulevard), the South Placer Regional Transportation Agency (SPRTA) Tier I and Tier II Fees (which are helping to fund portions of Placer Parkway, SR 65 widening, and I-80/SR 65 interchange improvements), and the Placer County/Roseville joint fee (which is helping to fund the widening of Baseline Road). Additionally, the City is partnering with other jurisdictions in the South Placer region to pursue funding for additional regional roadway improvements via a one-half cent sales tax that would be considered for the November 2020 ballot. Thus, the City has and continues to use regional funding programs (levied upon new development for facilities that would benefit those projects and sales tax initiatives to address existing deficiencies) to help fund needed roadway improvements that would benefit both the City, adjacent jurisdictions, and the State.

The following proposed General Plan Update goals and policies related to the roadway congestion in Roseville are proposed for revision, with additions shown in **bold, underlined text** and deletions shown in ~~striketrough~~ text:

- ▶ **Policy CIRC1.1:** ~~Establish a~~ **The** functional classification system to ~~shall~~ guide the planning and design of the City's roadway system.
- ▶ **Policy CIRC1.3:** ~~Establish~~ **Maintain** a comprehensive set of design standards for the City's roadway system by functional class.

Goal CIRC2: Maintain an ~~adequate~~ **appropriate** level of transportation service for all of Roseville's residents and employees through a balanced transportation system ~~which~~ **that** considers automobiles, transit, bicyclists, and pedestrians.

- ▶ **Policy CIRC2.1:** Maintain a level of service (LOS) "C" standard at a minimum of 70 percent of all signalized intersections and roadway segments in the City during the a.m. and p.m. peak hours. Exceptions to the LOS "C" standard may be considered ~~for intersections where the City finds that the required improvements are unacceptable based on established criteria identified in the implementation measures~~ **required to achieve the standard would adversely affect pedestrian, bicycle, or transit access, or where feasible LOS improvements and travel-demand-reducing strategies have been exhausted.** [In addition, Pedestrian Districts may be exempted from the LOS standard. *Moved to CIRC2.5*]

Goal CIRC4: Reduce ~~travel demand~~ **vehicle miles traveled** on the City's **and regional roadway** systems, **while expanding mobility options for residents, employees, and visitors.**

- ▶ **Policy CIRC4.1:** ~~Continue to enforce the City's TSM ordinance and monitor its effectiveness.~~ **The City will review and condition projects, as appropriate, to reduce travel demand per capita and per employee by promoting increased density near transit, improving the quality of non-vehicular transportation options, providing incentives for non-vehicular travel, encouraging the mixing of complementary land uses in proximity to one another, and using other feasible methods.**
- ▶ **Policy CIRC4.6:** **Promote and incentivize Infill development, particularly affordable housing development, through assistance in obtaining outside grant funding and reductions or deferrals in impact fees.**
- ▶ **Policy CIRC4.7:** **Continue to educate the public and business community about alternative modes of travel through Safe Routes to School, Transportation Systems Management, and other local and regional programs and events.**

The proposed change to the City's LOS policy includes language to better describe the reasons an improvement could be deemed unacceptable, but does not change how the policy is implemented. The proposed General Plan Update goal and policy changes and the new policies listed above would help to reduce congestion and accommodate existing and new travel demand.

Conclusion

Existing General Plan Growth Management Goal 7, Functional Classification Goal 1, Level of Service Policies 2, 3, 4, and Bikeways/Trails Goal 2 (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Goal LU8.1, Policies CIRC1.1 and CIRC1.3, Goal CIRC2 and Policy CIRC2.1, and Goal CIRC4 and Policies CIRC4.1,

CIRC4.6, and CIRC4.7, listed above, are designed to reduce congestion and accommodate existing and new travel demand by appropriately planning for new growth, establishing appropriate design standards for City roadways, providing adequate facilities and services to maintain LOS, and promoting infill development and walking, bicycling, and transit use. Transportation network changes under the proposed General Plan Update and land use change under buildout of the General Plan would not conflict with the City's policy of at least 70 percent of signalized intersections achieving LOS C or better during the a.m. and p.m. peak hours. Implementation of the proposed project would not conflict with adopted policies, plans, or programs regarding congestion.

IMPACT 4.3-3 Increase Hazards Due to a Design Feature, Incompatible Uses, or Inadequate Emergency Access.

*The proposed General Plan Update would not increase hazards due to a design feature, incompatible uses, or inadequate emergency access. All new facilities and facility improvements contained in the Circulation Diagram would be constructed according to the City's Design and Construction Standards, which have been created to ensure a safe and reliable multi-modal network. This impact is **less than significant**.*

The land uses and transportation networks have been comprehensively planned through the Specific Plan process to conform to the City's Design and Construction Standards (City of Roseville 2020). The City's Design and Construction Standards establish appropriate and safe designs, including minimum signal and driveway spacing, sidewalk and pedestrian crossing designs, bicycle lane designs, and other features which ensure a safe and reliable network. The City also maintains standards requiring minimum roadways widths, turnaround areas, and turning radii to ensure that emergency vehicles maintain access. Finally, the City's Construction Standards (Section 12) also provide for and regulate the use of temporary traffic controls at construction sites including signage and flaggers, and may also require preparation and implementation of a traffic control plan (at the discretion of the City), for larger projects that require traffic controls over a longer period of time.

The following proposed General Plan Update goals and policies related to design features, compatible roadway uses, and emergency access in Roseville are proposed for revision, with additions shown in **bold, underlined text** and deletions shown in ~~striketrough~~ text:

- ▶ **Policy CIRC1.1:** ~~Establish a~~ **The** functional classification system ~~to~~ **shall** guide the planning and design of the City's roadway system.
- ▶ **Policy CIRC1.3:** ~~Establish~~ **Maintain** a comprehensive set of design standards for the City's roadway system by functional class.
- ▶ **Policy CIRC1.5: Design intersections and public rights-of-ways in accordance with state and federal accessibility requirements.**

Goal CIRC.3: ~~Promote~~ **Provide** a safe, convenient, and efficient transit system, ~~utilizing both bus and rail modes, to~~ **enhance mobility**; reduce congestion; reduce auto emissions, including emissions that contribute to climate change; improve the environment; and provide viable non-automotive means of transportation in and through Roseville.

- ▶ **Policy CIRC5.1:** Develop a comprehensive and safe system of recreational and commuter bicycle routes and trails that provides connections between the City's major employment **destinations (including employment)** and housing areas and between its existing and planned bikeways.

- ▶ **Policy CIRC6.1: Establish and maintain a safe and continuous pedestrian network that provides connections between residential areas and commercial retail and services, employment, public services, parks, and public transit.**
- ▶ **Policy CIRC6.4: Sidewalks shall be required in all new Specific Plan Areas with new roadway construction and with roadway expansion.**

The proposed General Plan Update goal and policy changes and the new policies listed above would help to promote appropriate design features, promote safety through compatible roadway/bicycle/and pedestrian uses, and would provide for emergency access; these policy changes would not result in any adverse environmental impacts.

Conclusion

Existing General Plan Functional Classification Goal 1 and Policies 2 and 4, and Bikeways/Trails Goal 2 and Policy 4 (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Policies CIRC1.1, CIRC1.3, CIRC1.5, Goal CIRC3, and Policy CIRC5.1, listed above, in addition to required compliance with the City's Design and Construction Standards, would ensure that roadway, pedestrian, and bicycle facilities are appropriately designed and constructed, that all roadway/pedestrian/bicycle uses are compatible, and provide for emergency access during construction and operation. The proposed project would not increase hazards due to a design feature or incompatible uses. All new facilities and facility improvements shown on the Circulation Diagram would be constructed to applicable design standards that have been created to minimize the potential for conflicts or collisions. This impact is **less than significant**.

Mitigation Measures

No mitigation is required.

IMPACT 4.3-4 Conflict with Adopted Policies, Plans, or Programs Regarding Public Transit, Bicycle, or Pedestrian Facilities, or Create or Exacerbate Disruptions to the Performance or Safety of these Systems. *Land use and transportation network changes could result in conflicts with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities. This impact is **less than significant**.*

The proposed General Plan Update does not conflict with adopted policies, plans, or programs for transit, bicycle, or pedestrian facilities nor would it adversely affect performance or safety of such facilities. The General Plan contains provisions that will enhance these modes to encourage greater use of transit and more walking and bicycling in the future. All new facilities and facility improvements contained in the circulation diagram would be constructed to applicable design standards, including the City's Design and Construction Standards (City of Roseville 2020), which have been created to minimize the potential for conflicts or collisions.

The following proposed General Plan Update goals and policies related to public transit, bicycle, and pedestrian facilities in Roseville are proposed for revision, with additions shown in **bold, underlined text** and deletions shown in ~~striketrough~~ text:

Goal CIRC2: Maintain an ~~adequate~~ appropriate level of transportation service for all of Roseville's residents, ~~and employees, and consumers~~ through a balanced transportation system ~~which~~ that considers automobiles, ~~and transit users~~, bicyclists, and pedestrians.

- ▶ **Policy CIRC2.1:** Maintain a level of service (LOS) "C" standard at a minimum of 70 percent of all signalized intersections and roadway segments in the City during the a.m. and p.m. peak hours. Exceptions to the LOS "C" standard may be considered ~~for intersections where the City finds that the required improvements are unacceptable based on established criteria identified in the implementation measures~~ required to achieve the standard would adversely affect pedestrian, bicycle, or transit access, or where feasible LOS improvements and travel-demand-reducing strategies have been exhausted. [In addition, Pedestrian Districts may be exempted from the LOS standard. *Moved to CIRC2.5*]
- ▶ **Policy CIRC2.5:** ~~Enable the City to designate a Pedestrian District over a geographic area for the purpose of implementing measures that promote pedestrian walkability and reduce total vehicle miles traveled and resultant air pollution emissions that contribute to climate change. In these districts, the City recognizes that pedestrian and bicycle travel takes and transit access have a higher priority than automobile travel, which could reduce the vehicular level of service. in the City's Pedestrian Districts, and development projects in these areas are exempt from the City's LOS standard.~~
- ▶ **Policy CIRC2.6:** Prioritize investments in pedestrian, bicycle, and transit access in Pedestrian Districts.

Goal CIRC3: ~~Promote~~ Provide a safe, convenient, and efficient transit system, ~~utilizing both bus and rail modes, to enhance mobility;~~ reduce congestion; reduce auto emissions, including emissions that contribute to climate change; improve the environment; and provide viable non-automotive means of transportation in and through Roseville.

- ▶ **Policy CIRC3.1:** ~~Pursue and support transit services within the community and region and pursue land use, design, and other mechanisms that promote the use of such services.~~ Promote transit service that is convenient, cost- effective, and responsive to the challenges and opportunities of serving Roseville and surrounding communities, and explore opportunities for transit innovation and service improvements.
- ▶ **Policy CIRC3.3:** Continue to study options for introducing ~~Bus Rapid Transit~~ high quality transit and/or extending other regional transit linkages to Roseville and developing convenient connections to Sacramento Regional Transit light rail service ~~to Roseville.~~
- ▶ **Policy CIRC3.5:** Consider ~~the transit~~ access to health care, community services and employment, and the needs of seniors, minorities, low income persons, persons with disabilities, and other persons who may be transit-dependent when making decisions regarding transit service.
- ▶ **Policy CIRC3.6:** Identify opportunities to increase the number and/or capacity of park-and-ride lots as needed, to increase transit and carpool/vanpool use.

Bikeways/Trails Goal 3: ~~Establish education, encouragement and enforcement programs that increase bicyclist and motorist awareness of the rights and responsibilities of bicyclists in order to foster a climate of acceptance for bike riding.~~

Goal CIRC5.4: ~~Obtain~~ Maintain the Bicycle Friendly Community Designation from the League of American Bicyclists.

- ▶ **Policy CIRC5.1:** Develop a comprehensive and safe system of recreational and commuter bicycle routes and trails that provides connections between the City's major ~~employment~~ destinations (including employment) and housing areas and between its existing and planned bikeways.
- ▶ **Policy CIRC5.5: Specific Plans shall incorporate an off-street, Class I bicycle system as part of the comprehensive on-street and off-street bikeway plan.**
- ▶ **Policy CIRC5.6: Establish Educate Education, encourage encouragement, and enforcement programs** that increase bicyclist and motorist awareness of the rights and responsibilities of bicyclists in order to foster a climate of acceptance for bike riding. *[Moved from the referenced existing policy]*
- ▶ ~~**Level of Service Policy 5:** Enable the City to designate a Pedestrian District over a geographic area for the purpose of implementing measures that promote pedestrian walkability and reduce total vehicle miles traveled and resultant air pollution emissions that contribute to climate change. In these districts, the City recognizes that pedestrian travel takes a higher priority than automobile travel, which could reduce the vehicular level of service.~~

Goal CIRC6.1: Increase the percentage of pedestrian trips in Roseville.

- ▶ **Policy CIRC6.1: Establish and maintain a safe and continuous pedestrian network that provides connections between residential areas and commercial retail and services, employment, public services, parks, and public transit.**
- ▶ **Policy CIRC6.2: Promote development patterns that encourage people to walk to destinations.**
- ▶ **Policy CIRC6.3: Enhance pedestrian-friendly street environments and design public spaces and destinations in a way that encourages walking.**
- ▶ **Policy CIRC6.4: Sidewalks shall be required in all new Specific Plan Areas with new roadway construction and with roadway expansion.**

Existing General Plan Level of Service Policy 5 is proposed for deletion because a new “Pedestrian Access” subsection of the Circulation Element (which incorporates the former LOS Policy 5) is proposed for creation. Existing General Plan Bicycle/Trails Goals 3 is proposed for deletion because it would be converted to a policy (see proposed Policy CIRC5.6). The proposed General Plan Update goal and policy changes and new policies listed above would improve the City’s public transit, bicycle, and pedestrian facilities, promote user awareness, and provide for public safety. These policy changes would not result in any adverse environmental impacts

Conclusion

Existing General Plan Level of Service Policy 2, Transit Policies 2 and 4, and Bikeways/Trails Goal 2 and Policies 2, 3, and 4 (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Goal CIRC2 and Policies CIRC2.1, CIRC2.5, and CIRC2.6; Goal CIRC3 and Policies CIRC3.1, CIRC3.3, CIRC3.5, and CIRC3.6; Goal

CIRC5.4, and Policies CIRC5.1, CIRC5.5, and CIRC5.6; and Goal CIRC6.1 and Policies CIRC6.1, CIRC6.2, CIRC6.3, and CIRC6.4, listed above, would encourage greater use of transit and more walking and bicycling in the future. All new facilities and facility improvements shown on the Circulation Diagram are required to be designed and constructed in compliance with the City's Design and Construction Standards (City of Roseville 2020), which have been created to minimize the potential for conflicts or collisions. Implementation of the proposed project would not disrupt any existing, or interfere with any planned, transit, bicycle, or pedestrian facilities or services. This impact is **less than significant**.

Mitigation Measures

No mitigation is required.

This page intentionally left blank

4.4 AIR QUALITY

4.4.1 INTRODUCTION

This section describes the potential impacts to air quality associated with the proposed General Plan Update. The impact analysis examines air pollutant emissions associated with both construction and operational activities within the Planning Area. To provide context for the impact analysis, this chapter begins with a discussion of the environmental setting, describing the existing local and regional air quality conditions. Next, the regulatory framework is described, which provides part of the basis for significance thresholds used in the impact analysis and identifies existing rules and regulations with which the implementation of the proposed General Plan Update would be consistent. The regulatory framework includes the existing General Plan Air Quality and Climate Change Element policies, as well as relevant policies from the General Plan Land Use and Circulation Elements. The section concludes with impact analysis methodology and significance criteria, an analysis of changes to air quality, an examination of the impact of proposed policy changes, impact analysis findings, recommended mitigation measures, and a conclusion of significance after the application of mitigation measures.

Information related to air quality conditions was obtained from various sources, including Placer County Air Pollution Control District (PCAPCD), California Air Resources Board (ARB), and other specific studies evaluating air pollutant emission sources within the Planning Area and Sacramento Valley Air Basin. The analysis also makes use of traffic analysis to estimate mobile emissions attributable to activities in the Planning Area (please see Section 4.3 for more details about transportation).

The City has reviewed, and incorporated recommendations, as appropriate, based on a letter from the PCAPCD provided in response to the EIR Notice of Preparation (NOP), including those related to impact analysis methodology, significance thresholds, and mitigation measures.¹

4.4.2 ENVIRONMENTAL SETTING

Air quality is defined by the concentration of pollutants in relation to their impact on human health. California's air basins have been created to group together regions that have similar natural factors that affect air quality. Ambient concentrations of air pollutants are determined by the level of emissions released by pollutant sources and the atmosphere's ability to transport and dilute such emissions. Natural factors that affect transport, dilution, and generation of air pollutants include terrain, wind, atmospheric stability, and the presence of sunlight. These natural and environmental factors, air pollutants of concern and pollutant sources are each discussed separately below.

¹¹ The comment letter provided recommendations regarding appropriate methods of evaluation and thresholds of significance. PCAPCD recommended using the CalEEMod emission modeling software to estimate project-related emissions from construction and operational phases and recommended comparing emissions estimates to the PCAPCD-adopted thresholds of significance as a metric for the level of significance of potential impacts of such emissions. PCAPCD also noted that discussion of the Sacramento Valley Air Basin (SVAB) area designations for federal and state standards should be included within the air quality analysis, and that, because the SVAB does not currently meet federal and state standards for ambient air concentrations of particulate matter (PM), wood burning devices should be prohibited with any new construction and allowable appliances should be clearly delineated on the floor plans submitted in conjunction with building permit applications for future development. To evaluate potential impacts from local carbon monoxide emissions at roadway intersections, PCAPCD provided recommended scenarios to serve as screening criteria.

4.4.2.1 CLIMATE, TOPOGRAPHY, AND METEOROLOGY

Placer County spans multiple air basins. Roseville is in the southwestern portion of Placer County, which is within the Sacramento Valley Air Basin (SVAB). The SVAB is comprised of Sacramento, Shasta, Tehama, Butte, Glenn, Colusa, Sutter, Yuba, Yolo, the northeastern portion of Solano, and western portion of Placer counties. The region has a Mediterranean climate, characterized by hot, dry summers and cool, rainy winters. The inland location and surrounding mountains typically prevent the area from experiencing much of the ocean breeze that moderates the temperatures in coastal regions. Precipitation during the winter rainy season typically results when air masses move in from the Pacific Ocean and travel across California from west to east. The prevailing winds are moderate in speed and vary from moisture-laden breezes from the south to dry-land flows from the north. The predominant wind direction and speed is from the south at approximately 8 miles per hour, as measured at the Sacramento International Airport (WRCC 2019a, b).

In general, the SVAB is relatively flat and bounded by mountain ranges to the west and east. Air flows into the SVAB through the Carquinez Strait, the only breach in the western mountain barrier, and moves across the Sacramento–San Joaquin Delta from the San Francisco Bay Area. The mountains surrounding the Sacramento Valley create a barrier to air flow, which can trap in air pollutants, particularly in the autumn and early winter when large pressure cells lie over the Sacramento Valley and temperatures are lower. The lack of surface wind during these periods and reduced vertical flow caused by less surface heating, reduces the influx of outside air and allows air pollutants generated within the SVAB to become concentrated in a stable volume of air. Ground concentrations are the highest when these conditions are combined with smoke from agricultural burning or forest fires or temperature inversions that trap cool air, fog, and pollutants near the ground. Alternatively, winds and unstable atmospheric conditions associated with the passage of winter storms result in periods of low air pollution and excellent visibility. Characteristic of the winter months in the SVAB are periods of dense and persistent low-level fog, which are most prevalent between storms. This precipitation and fog also tend to reduce or limit some pollutant concentrations. However, between winter storms, high pressure and light winds contribute to low-level temperature inversions and stable atmospheric conditions, resulting in the concentration of air pollutants.

May through October is ozone season in the SVAB and is characterized by poor air movement in the mornings and the arrival of the Delta sea breeze from the southwest in the afternoons and evenings. Typically, the Delta breeze transports air pollutants northward out of the SVAB. However, during approximately half of the time from July to September, a phenomenon known as the Schultz Eddy prevents this from occurring. The Schultz Eddy phenomenon causes winds on the west side of the SVAB to shift to a northerly wind, blowing air pollutants southward back into the SVAB. This phenomenon exacerbates the concentration of air pollutant emissions in the air basin and can contribute to violations of ambient air quality standards.

4.4.2.2 CRITERIA AIR POLLUTANTS

California Air Resources Board (ARB) and the U.S. Environmental Protection Agency (EPA) have identified six air pollutants as being indicators of ambient air quality: ozone, carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), particulate matter (PM) (often analyzed separately as PM with aerodynamic diameter less than 10 microns [PM₁₀] and PM with aerodynamic diameter less than 2.5 microns [PM_{2.5}]), and lead. Because the ambient air quality standards for these air pollutants are regulated using human health and environmentally based criteria, they are commonly referred to as “criteria air pollutants.” The following provides a brief description of

these criteria air pollutants, including their source types and health effects, along with the most current attainment designations for the Planning Area.

Ozone

Ozone is a colorless gas that is odorless at ambient levels. It exists primarily as a beneficial component of the ozone layer in the upper atmosphere (stratosphere), shielding the earth from harmful ultraviolet radiation emitted by the sun, and as a pollutant in the lower atmosphere (troposphere).

Ozone is the primary component of urban smog; it is not emitted directly into the air but is formed through a series of reactions involving reactive organic gases (ROG) and nitrogen oxides (NO_x) in the presence of sunlight. ROG emissions result primarily from incomplete combustion and the evaporation of chemical solvents and fuels. NO_x includes various combinations of nitrogen and oxygen, including nitric oxide, NO₂, and others, typically resulting from the combustion of fuels.

Emissions of both ROG and NO_x are considered critical to ozone formation; therefore, either ROG or NO_x can limit the rate of ozone production. When the production rate of NO_x is lower, indicating that NO_x is scarce, the rate of ozone production is NO_x-limited. Under these circumstances, ozone levels could be most effectively reduced by lowering current and future NO_x emissions (from fuel combustion), rather than by lowering ROG emissions. Rural areas tend to be NO_x-limited, while areas with dense urban populations tend to be ROG-limited. Both ROG and NO_x reductions provide ozone benefits in the region, but the Sacramento Federal Nonattainment Area, which includes Placer County, exhibits a NO_x-limited regime; therefore, NO_x reductions (such as those available through reducing mobile source emissions) are more effective than ROG reductions on a tonnage basis (SMAQMD et al. 2017).

Ozone concentrations reflect an interplay of emissions of ozone precursors, transport, meteorology, and atmospheric chemistry. Meteorology and terrain play a major role in ozone formation. Generally, low wind speeds or stagnant air, coupled with warm temperatures and clear skies provide the optimum conditions for formation. As a result, summer is generally the peak ozone season. Because of the reaction time involved, peak ozone concentrations often occur far downwind of the precursor emissions. Therefore, ozone is a regional pollutant that often affects large areas.

Individuals exercising outdoors, children, and people with lung disease, such as asthma and chronic pulmonary lung disease, are considered to be the most susceptible subgroups for ozone effects. Short-term ozone exposure (lasting for a few hours) can result in changes in breathing patterns, reductions in breathing capacity, increased susceptibility to infections, inflammation of lung tissue, and some immunological changes. In recent years, a correlation has also been reported between elevated ambient ozone levels and increases in daily hospital admission rates and mortality (EPA 2017a). An increased risk of asthma has been found in children who participate in multiple sports and live in communities with high ozone levels.

Emissions of the ozone precursors ROG and NO_x have decreased in the past several years. According to the most recently published edition of ARB's *California Almanac of Emissions and Air Quality*, NO_x and ROG emissions levels in the Sacramento metropolitan area (inclusive of the southern portion of the SVAB, as well as the western portions of El Dorado and Placer counties, within which the Planning Area is located) are projected to continue to decrease through 2035, largely because of more stringent motor vehicle standards and cleaner burning fuels, as well as rules for controlling ROG emissions from industrial coating and solvent operations (ARB 2013).

Carbon Monoxide

CO is a colorless and odorless gas that, in the urban environment, is produced primarily by the incomplete burning of carbon in fuels, primarily from mobile (transportation) sources. As of the 2014 EPA National Emissions Inventory, more than 50 percent of the nationwide CO emissions were from mobile sources (EPA 2018a). The remaining emissions are primarily from fires (both wildfires and prescribed fires), releases from vegetation and soil, wood-burning stoves, incinerators, and industrial sources. Relatively high concentrations are typically found near crowded intersections and along high-volume roadways carrying slow-moving traffic. Even under the most severe meteorological and traffic conditions, high concentrations of CO are limited to locations within a relatively short distance (300–600 feet) of high-volume roadways. Vehicular traffic emissions can cause localized CO impacts, and severe vehicle congestion at major signalized intersections can generate elevated CO levels, called “hot spots,” which can be hazardous to human receptors adjacent to the intersections. Overall, CO emissions are decreasing, in part because the Federal Motor Vehicle Control Program has mandated increasingly lower emission levels for vehicles manufactured since 1973.

CO enters the bloodstream through the lungs by combining with hemoglobin, which normally supplies oxygen to the cells. However, CO combines with hemoglobin much more readily than oxygen does, drastically reducing the amount of oxygen available to the cells. Adverse health effects from exposure to high CO concentrations, which typically can occur only indoors or within similarly enclosed spaces, include dizziness, headaches, and fatigue. CO exposure is especially harmful to individuals who suffer from cardiovascular and respiratory diseases (EPA 2017b).

Nitrogen Dioxide

NO₂ is one of a group of highly reactive gases known as oxides of nitrogen, or NO_x. NO₂ is formed when ozone reacts with nitric oxide (i.e., NO) in the atmosphere and is listed as a criteria pollutant because NO₂ is more toxic than nitric oxide. The major human-made sources of NO₂ are combustion devices, such as boilers, gas turbines, and mobile and stationary reciprocating internal combustion engines. The combined emissions of nitric oxide and NO₂ are referred to as NO_x and reported as equivalent NO₂. Because NO₂ is formed and depleted by reactions associated with ozone, the NO₂ concentration in a geographical area may not be representative of local NO_x emission sources. NO_x also reacts with water, oxygen, and other chemicals to form nitric acids, contributing to the formation of acid rain.

Inhalation is the most common route of exposure to NO₂. Breathing air with a high concentration of NO₂ can lead to respiratory illness. Short-term exposure can aggravate respiratory diseases, particularly asthma, resulting in respiratory symptoms (such as coughing, wheezing, or difficulty breathing), hospital admissions, and visits to emergency rooms. Longer exposures to elevated concentrations of NO₂ may contribute to the development of asthma and potentially increase susceptibility to respiratory infections. Larger decreases in lung functions are observed in individuals with asthma or chronic obstructive pulmonary disease (e.g., chronic bronchitis, emphysema) than in healthy individuals, indicating a greater susceptibility of these subgroups (EPA 2017c).

Sulfur Dioxide

SO₂ is one component of the larger group of gaseous oxides of sulfur (SO_x). SO₂ is used as the indicator for the larger group of SO_x, as it is the component of greatest concern and found in the atmosphere at much higher concentrations than other gaseous SO_x. SO₂ is typically produced by such stationary sources as coal and oil

combustion facilities, steel mills, refineries, and pulp and paper mills. The major adverse health effects associated with SO₂ exposure pertain to the upper respiratory tract. On contact with the moist mucous membranes, SO₂ produces sulfurous acid, a direct irritant. Concentration rather than duration of exposure is an important determinant of respiratory effects. Children, the elderly, and those who suffer from asthma are particularly sensitive to effects of SO₂ (EPA 2017d).

SO₂ also reacts with water, oxygen, and other chemicals to form sulfuric acids, contributing to the formation of acid rain. SO₂ emissions that lead to high concentrations of SO₂ in the air generally also lead to the formation of other SO_x, which can react with other compounds in the atmosphere to form small particles, contributing to particulate matter pollution, which can have health effects of its own.

Particulate Matter

PM is a complex mixture of extremely small particles and liquid droplets made up of several components, including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. Natural sources of particulates include windblown dust and ocean spray. The major areawide sources of PM_{2.5} and PM₁₀ are fugitive dust, especially from roadways, agricultural operations, and construction and demolition. Other sources of PM₁₀ include crushing or grinding operations. PM_{2.5} sources also include all types of combustion, including motor vehicles, power plants, residential wood burning, forest fires, agricultural burning, and some industrial processes. Exhaust emissions from mobile sources contribute only a very small portion of directly emitted PM_{2.5} and PM₁₀ emissions; however, they are a major source of ROG and NO_x, which undergo reactions in the atmosphere to form PM, known as secondary particles. These secondary particles make up the majority of PM pollution.

The size of PM is directly linked to its potential for causing health problems. EPA is concerned about particles that are 10 micrometers in diameter or smaller, because these particles generally pass through the throat and nose and enter the lungs. Once inhaled, these particles can affect the heart and lungs and cause serious health effects, even death. The adverse health effects of PM₁₀ depend on the specific composition of the particulate matter. For example, health effects may be associated with metals, polycyclic aromatic hydrocarbons, and other toxic substances adsorbed onto fine PM (referred to as the “piggybacking effect”), or with fine dust particles of silica or asbestos. Effects from short- and long-term exposure to elevated concentrations of PM₁₀ include respiratory symptoms, aggravation of respiratory and cardiovascular diseases, a weakened immune system, and cancer (WHO 2016). PM_{2.5} poses an increased health risk because these very small particles can be inhaled deep in the lungs and may contain substances that are particularly harmful to human health.

Direct emissions of PM_{2.5} in the Sacramento metropolitan area decreased between 2000 and 2010, but are projected to increase very slightly through 2035. Similarly, emissions of diesel PM (DPM) decreased from 2000 through 2010 because of reduced exhaust emissions from diesel mobile sources; these emissions are anticipated to continue to decline through 2035 (ARB 2013).

Lead

Lead is a highly toxic metal that may cause a range of human health effects. Lead is found naturally in the environment and is used in manufactured products. Previously, the lead used in gasoline anti-knock additives represented a major source of lead emissions to the atmosphere. Soon after its inception, EPA began working to reduce lead emissions, issuing the first reduction standards in 1973. Lead emissions have decreased substantially

as a result of the near-elimination of leaded gasoline use. Metal processing is currently the primary source of lead emissions. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers. Although the ambient lead standards are no longer violated, lead emissions from stationary sources still pose “hot spot” problems in some areas. As a result, ARB has identified lead as a toxic air contaminant (TAC).

Fetuses, infants, and children are more sensitive than others to the adverse effects of lead exposure. Exposure to low levels of lead can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotients. In adults, increased lead levels are associated with increased blood pressure. Lead poisoning can cause anemia, lethargy, seizures, and death, although it appears that lead does not directly affect the respiratory system.

Ambient Air Quality Standards and Attainment Area Designations

Health-based air quality standards have been established for criteria air pollutants by EPA at the national level and ARB at the state level. These standards, which include a margin of safety, were established to protect the public from adverse health impacts resulting from exposure to air pollution. California also has established standards for sulfates, visibility-reducing particles, hydrogen sulfide, and vinyl chloride. Table 4.4-1 presents the California ambient air quality standards (CAAQS) and national ambient air quality standards (NAAQS). These health-based pollutant standards are reviewed with a legally prescribed frequency and are revised, as warranted by new data on health and welfare effects. Each standard is based on a specific averaging time over which the concentration is measured. Different averaging times are based on protection from short-term, high-dosage effects or longer term, low-dosage effects. Although EPA regulations may not be superseded, both state and local regulations may be more stringent. In general, the State of California’s standards, particularly those for ozone PM₁₀ and PM_{2.5}, are more stringent than the federal standards. Differences in the standards are generally explained through interpretation of the health-effects studies considered during the standard-setting process.

Several ambient air quality monitoring stations in the SVAB measure concentrations of air pollutants to monitor progress toward attainment and maintenance of NAAQS and CAAQS. Both EPA and ARB use this type of monitoring data to designate areas according to attainment status for NAAQS and CAAQS. The purpose of these designations is to identify areas with air quality problems and thereby initiate planning efforts for improvement. The four designations are defined as:

- ▶ Nonattainment – Assigned to areas where monitored pollutant concentrations violate the standard in question.
- ▶ Maintenance – Assigned to areas where monitored pollutant concentrations exceeded the standard in question in the past but are no longer in violation of that standard.
- ▶ Attainment – Assigned to areas where pollutant concentrations meet the standard in question over a designated period of time.
- ▶ Unclassified – Assigned to areas where data are insufficient to determine whether a pollutant is violating the standard in question.

| Table 4.4-1 National and California Ambient Air Quality Standards | | | | |
|---|-------------------------|------------------------------------|--|------------------------------------|
| Pollutant | Averaging Time | California Standards ^a | National Standards ^b | |
| | | Concentration ^c | Primary ^{c,d} | Secondary ^{c,e} |
| Ozone ^f | 1 hour | 0.09 ppm (180 µg/m ³) | — | Same as primary standard |
| | 8 hours | 0.070 ppm (137 µg/m ³) | 0.070 ppm (147 µg/m ³) | |
| Respirable particulate matter—10 micrometers or less ^g | 24 hours | 50 µg/m ³ | 150 µg/m ³ | Same as primary standard |
| | Annual arithmetic mean | 20 µg/m ³ | — | |
| Fine particulate matter—2.5 micrometers or less ^g | 24 hours | — | 35 µg/m ³ | Same as primary standard |
| | Annual arithmetic mean | 12 µg/m ³ | 12 µg/m ³ | |
| Carbon monoxide | 8 hours | 9.0 ppm (10 mg/m ³) | 9 ppm (10 mg/m ³) | None |
| | 1 hour | 20 ppm (23 mg/m ³) | 35 ppm (40 mg/m ³) | |
| | 8 hours (Lake Tahoe) | 6 ppm (7 mg/m ³) | — | |
| Nitrogen dioxide ^h | Annual arithmetic mean | 0.030 ppm (57 µg/m ³) | 0.053 ppm (100 µg/m ³) | Same as primary standard |
| | 1 hour | 0.18 ppm (339 µg/m ³) | 100 ppb (188 µg/m ³) | None |
| Sulfur dioxide ⁱ | Annual arithmetic Mean | — | 0.030 ppm (for certain areas) ⁱ | — |
| | 24 hours | 0.04 ppm (105 µg/m ³) | 0.14 ppm (for certain areas) ⁱ | — |
| | 3 hours | — | — | 0.5 ppm (1,300 µg/m ³) |
| | 1 hour | 0.25 ppm (655 µg/m ³) | 75 ppb (196 µg/m ³) | — |
| Lead ^{j,k} | 30-day average | 1.5 µg/m ³ | — | — |
| | Calendar quarter | — | 1.5 µg/m ³ (for certain areas) ^j | Same as primary standard |
| | Rolling 3-month average | — | 0.15 µg/m ³ | |
| Visibility-reducing particles ^l | 8 hours | See footnote 1 | No national standards | |
| Sulfates | 24 hours | 25 µg/m ³ | | |
| Hydrogen sulfide | 1 hour | 0.03 ppm (42 µg/m ³) | | |
| Vinyl chloride ^j | 24 hours | 0.01 ppm (26 µg/m ³) | | |

Notes: µg/m³ = micrograms per cubic meter; mg/m³ = milligrams per cubic meter; ppb = parts per billion; ppm = parts per million

^a California standards for ozone, carbon monoxide (except 8-hour Lake Tahoe), sulfur dioxide (1- and 24-hour), nitrogen dioxide, and particulate matter (PM₁₀, PM_{2.5}, and visibility-reducing particles), are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

^b National standards (other than ozone, particulate matter, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration measured at each site in a year, averaged over 3 years, is equal to or less than the standard. For PM₁₀, the 24-hour is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than 1. For PM_{2.5}, the 24-hour standard is attained when 98% of the daily concentrations, averaged over 3 years, are equal to or less than the standards.

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

^d *National Primary Standards:* The levels of air quality necessary, with an adequate margin of safety, to protect the public health.

^e *National Secondary Standards:* Levels of air quality necessary to protect public welfare from any known or anticipated adverse effects of a pollutant.

^f On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.

^g On December 14, 2012, the national annual PM_{2.5} primary standard was lowered from 15 µg/m³ to 12.0 µg/m³. The existing national 24-hour PM_{2.5} standards (primary and secondary) were retained at 35 µg/m³, as was the annual secondary standard of 15 µg/m³. The existing 24-hour PM₁₀ standards (primary and secondary) of 150 µg/m³ also were retained. The form of the annual primary and secondary standards is the annual mean, averaged over 3 years.

^h To attain the 1-hour national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 ppb. California standards are in units of ppm. To directly compare the national 1-hour standard to the California standards, the units can be converted from 100 ppb to 0.100 ppm.

ⁱ On June 2, 2010, a new 1-hour SO₂ standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO₂ national standards (24-hour and annual) remain in effect until 1 year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved. To directly compare the 1-hour national standard to the California standard, the units can be converted to ppm. In this case, the national standard of 75 ppb is identical of 0.075 ppm.

^j ARB has identified lead and vinyl chloride as toxic air contaminants with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

^k The national standard for lead was revised on October 15, 2008, to a rolling 3-month average. The 1978 lead standard (1.5 µg/m³ as a quarterly average) remains in effect until 1 year after an area is designated for the 2008 standard, except that in areas designated nonattainment for the 1978 standard, the 1978 standard remains in effect until implementation plans to attain or maintain the 2008 standards are approved.

^l In 1989, ARB 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 the "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

Source: ARB 2019

Table 4.4-2 summarizes the attainment status of the SVAB for NAAQS and CAAQS. As shown in Table 4.4-2, the portion of Placer County within the SVAB, where the Planning Area is located, meets the NAAQS for all criteria air pollutants except ozone and the 24-hour average PM_{2.5} standard, and meets the CAAQS for all criteria air pollutants except ozone, PM₁₀, and PM_{2.5}.

| Table 4.4-2 Attainment Designations for the Placer County Portion of the Sacramento Valley Air Basin | | |
|--|--------------------------------------|-------------------------------------|
| Pollutant | Federal Standard | California Standard |
| Ozone ^a | Nonattainment (1-hour) ^a | Nonattainment (1-hour) ^b |
| | Nonattainment (8-hour) ^c | Nonattainment (8-hour) |
| Particulate Matter— 10 Micrometers or Less | Attainment (24-hour) | Nonattainment (24-hour) |
| | | Nonattainment (annual) |
| Particulate Matter— 2.5 Micrometers or Less | Nonattainment (24-hour) | Nonattainment (annual) |
| | Attainment (annual) | |
| Carbon Monoxide | Attainment (1-hour) | Attainment (1-hour) |
| | Attainment (8-hour) | Attainment (8-hour) |
| Nitrogen Dioxide | Unclassified (1-hour) | Attainment (1-hour) |
| | Attainment (annual) | Attainment (annual) |
| Sulfur Dioxide | Attainment/Unclassifiable (1-hour) | Attainment (1-hour) |
| | Attainment/Unclassifiable (24-hour) | Attainment (24-hour) |
| | Attainment/Unclassifiable (annual) | — |
| Lead | Attainment (3-month rolling average) | Attainment (30-day average) |
| Hydrogen Sulfide | No Federal Standard | Unclassified (1-hour) |
| Sulfates | | Attainment (24-hour) |
| Visibility-Reducing Particles | | Unclassified (8-hour) |
| Notes: | | |
| ^a Air quality meets the federal 1-hour ozone standard (77 <i>Federal Register</i> 64036, October 18, 2012). The U.S. Environmental Protection Agency (EPA) revoked this standard, but some associated requirements still apply. The Sacramento Federal Nonattainment Area attained the standard in 2009, and has SMAQMD, on behalf of the counties within the Sacramento Federal Nonattainment Area, requested that EPA recognize attainment to fulfill the requirements. | | |
| ^b Per Health and Safety Code Section 40921.5(c), the classification is based on 1989–1991 data, and therefore does not change. | | |
| ^c 2008 standard. | | |
| Source: ARB 2018 | | |

In 2017, ARB approved and submitted to EPA the Sacramento Federal Ozone Nonattainment Area Redesignation Substitution Request for the 1-Hour Ozone Standard, which applies to all of Sacramento and Yolo counties, and portions of Placer (including the Planning Area), El Dorado, Solano, and Sutter counties (PCAPCD 2019). EPA approval is still outstanding.

4.4.2.3 TOXIC AIR CONTAMINANTS

In addition to criteria air pollutants, the U.S. EPA and the California Air Resources Board also regulate hazardous air pollutants, also known as TACs. The term TAC collectively refers to a diverse group of air pollutants that may cause or contribute to an increase in chronic (i.e., long-duration) and acute (i.e., severe but short-term) adverse effects on human health. There are hundreds of different types of toxic air contaminants with varying degrees of toxicity. The health risks of individual toxic air contaminants vary greatly; at a given level of exposure, one toxic air contaminant may pose a hazard that is many times greater than another. TACs are identified and their toxicity is studied by the California Office of Environmental Health Hazard Assessment (OEHHA).

TACs are usually present in minute quantities in the ambient air; however, their toxicity or health risk may pose a threat to public health even at low concentrations. TACs can be separated into carcinogens and noncarcinogens, based on the nature of the effects associated with exposure to the pollutant. For regulatory purposes, carcinogens are assumed to have no safe threshold below which health impacts would not occur. Noncarcinogens 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.

TACs may be emitted by stationary, area, or mobile sources. Common stationary sources of TAC emissions include gasoline stations, dry cleaners, and diesel backup generators, which are subject to the requirements of local air districts' permits. The other, often more substantial, sources of TAC emissions are motor vehicles on freeways, on high-volume roadways, or in other areas with high numbers of diesel vehicles, such as distribution centers. Off-road mobile sources are also major contributors of toxic air contaminant emissions and include construction equipment, ships, and trains. According to the *California Almanac of Emissions and Air Quality* (ARB 2009), most of the estimated health risk from TACs can be attributed to relatively few compounds, the most important being particulate matter from diesel-fueled engines (i.e., DPM). Other TACs for which data are available that pose the greatest existing ambient risk in California are benzene, 1,3-butadiene, acetaldehyde, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, and perchloroethylene.

DPM differs from other TACs because it is not a single substance, but a complex mixture of hundreds of substances. Although DPM is emitted by diesel-fueled internal combustion engines, the composition of the emissions varies depending on engine type, operating conditions, fuel composition, type of lubricating oil, and presence or absence of an emission control system. Unlike the other TACs, no ambient monitoring data are available for DPM because no routine measurement method currently exists. However, emissions of DPM are forecasted to decline; it is estimated that emissions of DPM in 2035 will be less than half those in 2010, further reducing statewide cancer risk and non-cancer health effects (ARB 2020).

Asbestos is also an air toxic of concern, particularly in projects in areas identified as likely to contain naturally occurring asbestos and projects that involve demolition of older buildings or other structures in which asbestos may have been used during original construction. Asbestos is the name given to several naturally occurring fibrous silicate minerals. Asbestos has been mined for applications requiring thermal insulation, chemical and thermal stability, and high tensile strength. Asbestos is also found in its natural state in rock or soil (known as naturally occurring asbestos [NOA]). Mapping published by the United States Geological Survey and California Geological Survey indicates that the Planning Area is not located within an area known to contain NOA (USGS 2011). However, asbestos may have been used during construction of the existing structures that may be demolished during implementation of the General Plan.

4.4.2.4 SENSITIVE RECEPTORS

Some land uses are considered more sensitive to air pollution than others, because of the types of population groups or activities involved. Children, pregnant women, the elderly, those with existing health conditions, and athletes or others who engage in frequent exercise are especially vulnerable to the effects of air pollution. Accordingly, land uses that are typically considered sensitive receptors include schools, daycare centers, parks and playgrounds, and medical facilities.

Residential areas are considered sensitive to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to the pollutants present. Recreational land uses are considered moderately sensitive to air pollution. Exercise places a high demand on respiratory functions, which can be impaired by air pollution, even though exposure periods during exercise are generally short. In addition, noticeable air pollution can detract from the enjoyment of recreation. Industrial and commercial areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent, as most of the workers tend to stay indoors most of the time.

The proximity of sensitive receptors to proposed construction and operational activities with buildout of the General Plan would vary depending on the specific location of development projects and public facilities and infrastructure developed under the General Plan relative to existing uses. However, in general, sensitive receptors are located throughout the Planning Area.

4.4.2.5 ODORS

Odors are generally regarded as an annoyance rather than a health hazard. However, odor-generating compounds can affect human health in several ways. First, odorant compounds can irritate the eye, nose, and throat, which can reduce respiratory volume. Second, the substances that cause odors can stimulate sensory nerves to cause neurochemical changes that might influence health, for instance, by compromising the immune system. Finally, unpleasant odors can trigger memories or attitudes linked to unpleasant odors, causing cognitive and emotional effects, such as stress.

The ability to detect odors varies considerably among the population and is subjective. Some individuals can smell minute quantities of specific substances, while others may not have the same sensitivity but may be sensitive to odors of other substances. In addition, people may have different reactions to the same odor; an odor that is offensive to one person (e.g., from a fast-food restaurant or bakery) may be perfectly acceptable to another. Unfamiliar odors may be more easily detected and likely to cause complaints than familiar ones.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as flowery or sweet then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word strong to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

Several examples of common land use types that generate substantial odors are wastewater treatment plants, landfills, composting/green waste facilities, recycling facilities, petroleum refineries, chemical manufacturing plants, painting/coating operations, rendering plants, and food packaging plants. In addition, odors can be caused by agricultural activities, such as dairy operations; horse, cattle, or sheep (livestock) grazing; fertilizer use; and aerial crop spraying.

Potential industrial sources of odor in and around the Planning Area include but are not limited to the Western Regional Sanitary Landfill (approximately 1 mile north of the city), City of Roseville Pleasant Grove Wastewater Treatment Plant (located in the western portion of the city), the Rio Bravo biomass plant (located just over a mile

north of the city), Mallard Creek composting facility (located adjacent to the northern border of the city), Dry Creek Wastewater Treatment Plant (located in the southwestern corner of the city), and dairy and chicken farms (dispersed throughout the region surrounding the western and northern boundaries of the Planning Area).

In addition, to these municipal facilities, the Planning Area also includes industrial uses (e.g., food production facilities, manufacturing facilities, biomass storage for biomass power generation) that could constitute potential odor sources. The Planning Area is also surrounded by agricultural uses in each direction that can generate odors from a variety of processes, such as agricultural burning, livestock pens, fertilization, and composting, among others. The City of Roseville and PCAPCD work in cooperation with industrial facilities and agricultural producers to limit the odor emissions associated with manufacturing processes and agricultural burning.

Other smaller and dispersed odor sources include residential and commercial dumpsters, which can be in proximity of sensitive receptors. However, with proper disposal containers and regular trash collection services, odors from residential and commercial dumpsters are typically minimized.

4.4.3 REGULATORY FRAMEWORK

Air quality within the Planning Area is regulated at the federal level by the EPA and at the state level by ARB. At the local level, PCAPCD develops rules, regulations, policies, and/or goals to comply with applicable federal and state legislation. Although EPA regulations may not be superseded, in general, both state and local regulations may be more stringent. The regulatory frameworks for criteria air pollutants, TACs, and odor emissions are described separately below.

4.4.3.1 FEDERAL PLANS, POLICIES, REGULATIONS AND LAWS

Clean Air Act and Ambient Air Quality Standards

The primary legislation that governs federal air quality regulations is the Clean Air Act, enacted in 1970 and amended by Congress most recently in 1990. The CAA delegates primary responsibility for clean air to EPA. EPA develops rules and regulations to preserve and improve air quality and delegates specific responsibilities to state and local agencies. The CAA directs USEPA to establish federal air quality standards, known as NAAQS for six criteria air pollutants: ozone, CO, PM (both PM₁₀ and PM_{2.5}), SO₂, NO₂ and lead. NAAQS include both primary and secondary standards; the former are set to protect public health with an adequate margin of safety, the latter to prevent degradation to the environment (e.g., impairment of visibility, damage to vegetation). Table 4.4-1 above summarizes NAAQS currently in effect for each criteria air pollutant.

The CAA places most of the responsibility on states to achieve compliance with NAAQS. Each state is required to submit and implement an air quality control plan, referred to as a SIP for local areas not meeting NAAQS. The SIP must include pollution control measures that demonstrate how the standards will be met by the dates specified in the CAA. The SIP is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. EPA is responsible for reviewing all SIPs to determine whether they conform to the mandates of the CAA and its amendments and to determine whether implementing them will achieve ambient air quality standards. If EPA determines a SIP to be inadequate, a federal implementation plan that imposes additional control measures may be prepared for the nonattainment area. Failure to submit an approvable SIP or to implement the plan within the mandated time frame may result in sanctions to transportation funding and stationary air pollution sources in the air basin.

In California, USEPA has delegated authority to prepare SIPs to ARB, which, in turn, has delegated that authority to individual air districts. ARB traditionally has established state air quality standards, maintaining oversight authority in air quality planning, developing programs for reducing emissions from motor vehicles, developing air emissions inventories, collecting air quality and meteorological data, and approving SIPs.

Corporate Average Fuel Economy (CAFE) Standards and the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule

USEPA and the National Highway Traffic Safety Administration set CAFE standards for passenger cars and for light trucks (collectively, light-duty vehicles), and separately sets fuel efficiency standards for passenger cars and light trucks (collectively, light-duty vehicles) for model years 2012 through 2025.

The Safer Affordable Fuel Efficient (SAFE) Vehicles Rule, proposed by the United States Department of Transportation and EPA in 2018, would amend the existing CAFE standards and establish new standards for model years 2021 through 2026. The proposed rule would retain the model year 2020 standards through model year 2026. In response to the proposed SAFE Vehicles Rule, on July 25, 2019, automobile manufactures Ford, Volkswagen, Honda, and BMW entered into a voluntary framework agreement with ARB to set fuel economy and carbon dioxide limits at levels between the existing federal standards and the standards proposed by the SAFE Vehicles Rule. Under this framework, the auto companies' party to the voluntary agreement would only sell cars in the United States that meet these levels.

On September 27, 2019, the EPA and the National Highway Traffic Safety Administration published the "SAFE Vehicles Rule Part One: One National Program" (84 Fed. Reg. 51310). The Part One Rule revokes California's authority to set its own GHG emissions standards and set zero-emission vehicle mandates in California. Part 2 of the regulations, which, if implemented, would address fuel efficiency standards for light-duty vehicles model years 2021 through 2026, have not been drafted as of the writing of this document.

Locomotive Emissions Standards

In March 2008, USEPA adopted a three-part emissions standard program to reduce emissions from diesel locomotives over time. The regulation tightens emission standards for existing, remanufactured locomotives, and sets exhaust emission standards for newly build locomotives of model years 2011-2014 (Tier 3) and 2015 and beyond (Tier 4). The regulation is expected to reduce PM emissions from locomotive engines by as much as 90 percent and oxides of nitrogen (NO_x) emissions by as much as 80 percent when fully implemented.

4.4.3.2 STATE PLANS, POLICIES, REGULATIONS AND LAWS

California Clean Air Act

In 1988, the state legislature adopted the California CAA, which established a statewide air pollution control program. The California CAA required ARB to establish CAAQS (as identified in Table 4.4-1). The California CAA requires that all air districts in the state endeavor to achieve and maintain the CAAQS by the earliest practicable date. The California CAA establishes increasingly stringent requirements for areas that will require more time to achieve the standards. The act specifies that local air districts should focus attention on reducing the emissions from transportation and areawide emission sources and provides districts with the authority to regulate indirect sources.

The CCAA requires that all local air districts in the state endeavor to achieve and maintain the CAAQS by the earliest practical date. The CCAA requires that air quality plans be prepared for areas of the state that have not met state air quality standards for O₃, CO, NO₂, and SO₂. Among other requirements of the CCAA, the plans must include a wide range of implementable control measures, which often include transportation control measures and performance standards. In order to implement the transportation-related provisions of the CCAA, local air pollution control districts have been granted explicit authority to adopt and implement transportation control measures.

California Air Resources Board

ARB is the agency responsible for coordination and oversight of State and local air pollution control programs in California and for implementing the California CAA. ARB also has primary responsibility in California to develop and implement air pollution control plans designed to achieve and maintain the NAAQS established by the EPA. Collectively, all regional air pollution control plans or air quality management plans to achieve the NAAQS throughout the state constitute the SIP. As California's air quality management agency, ARB regulates mobile emission sources and oversees the activities of county air pollution control districts and regional air quality management districts. ARB regulates local air quality indirectly by using state standards and vehicle emission standards, conducting research activities, and carrying out planning and coordinating activities. ARB also provides land use guidance, as it relates to air quality, including criteria for siting schools and other sensitive land uses.

While not law or adopted policy, ARB published the *Air Quality and Land Use Handbook: A Community Health Perspective* (Handbook), providing guidance on land use compatibility with sources of TACs (ARB 2005). The handbook offers advisory recommendations for the siting of sensitive receptors near uses associated with TACs, such as freeways and high-traffic roads, commercial distribution centers, rail yards, ports, refineries, dry cleaners, gasoline stations, and industrial facilities. Since the 2005 publication of the Handbook, ARB also published a Technical Advisory as a supplement to the Handbook to provide information on scientifically based strategies to reduce exposure to emissions near high-volume roadways in order to protect public health (ARB 2017). This Technical Advisory demonstrates that reduced exposure to traffic-related pollution can be achieved while pursuing infill development that independently provides public health benefits. The Technical Advisory identifies strategies to reduce air pollution exposure near roadways, including those that reduce vehicular emissions, such as incorporation of roundabouts for speed reduction, traffic signal management, and speed limit reductions on high-speed roadways (those greater than 55 miles per hour); strategies that reduce the concentrations of traffic pollution, such as urban design that promotes air flow, solid barriers to pollution, and vegetation to reduce pollutant concentrations; and strategies that remove pollution from indoor air such as through high efficiency filtration. This Technical Advisory does not negate the ARB Handbook but offers multiple variables for consideration for land use, transportation, and environmental planning and development.

ARB implements several statewide diesel-related programs and strategies designed to reduce diesel PM emissions and subsequent exposure. The following programs reduce and regulate criteria pollutant emissions, as well as diesel PM and TAC emissions, from exhaust:

- ▶ **In-Use Mobile Agricultural Equipment Regulation.** Used as a regulation for mobile agricultural equipment that moves California towards meeting ambient air quality standards for the San Joaquin Valley by using the cleanest available technologies. The regulation provides the administrative mechanism for emission

reductions resulting from mobile agricultural equipment program projects to be eligible for State Implementation Plan credit.

- ▶ **In-Use Off-Road Equipment.** Used as a regulation to reduce diesel particulate matter and oxides of nitrogen emissions from in-use (existing) off-road heavy-duty diesel vehicles in California. Such vehicles are used in construction, mining, and industrial operations.
- ▶ **New Off-Road Engines and Equipment.** This category consists of regulations applicable to Off-Road Compression-Ignition Engines (a.k.a. diesel engines), and is primarily for the interest and needs of manufacturers and others that are required to obtain certification from ARB. These engines are found in a wide variety of off-road applications, such as farming, construction, and industrial. Some familiar examples include tractors, excavators, dozers, scrapers, and portable generators.
- ▶ **Heavy-Duty In-Use Vehicle Regulation.** This regulation requires diesel trucks and buses that operate in California to be upgraded to reduce emissions. Newer heavier trucks and buses must meet PM filter requirements beginning January 1, 2012. Lighter and older heavier trucks must be replaced starting January 1, 2015. By January 1, 2023, nearly all trucks and buses will need to have 2010 model year engines or equivalent. The regulation applies to nearly all privately and federally owned diesel fueled trucks and buses and to privately and publicly owned school buses with a gross vehicle weight rating (GVWR) greater than 14,000 pounds.
- ▶ **Heavy-Duty Vehicle Inspection Program.** Enforcement program developed to control excessive smoke emissions and tampering from heavy-duty diesel trucks and buses. The Heavy-Duty Vehicle Inspection Program requires heavy-duty trucks and buses to be inspected for excessive smoke and tampering, and engine certification label compliance. Any heavy-duty vehicle traveling in California, including vehicles registered in other states and foreign countries may be tested.
- ▶ **Heavy-Duty Diesel Emission Control Label Inspection Program.** Enforcement program developed as a way to reduce emissions of air contaminants through the fair, consistent and comprehensive enforcement of air pollution laws, and by providing training and compliance assistance. Each vehicle operating in California - including those in transit from Mexico, Canada, or any other state - must be equipped with engines that meet California and/or USEPA or equivalent emission standards as provided on specified Emission Control Labels (ECLs). The ECL must be legible, maintained at the location originally installed by the engine manufacturer and correspond to the engine serial number stamped on the engine.
- ▶ **In-Use Public and Utility Fleets (Heavy-Duty).** Regulation mandating Public Agency and utility vehicle owners reduce diesel PM emissions from their affected vehicles through the application of Best Available Control Technology on these vehicles by specified implementation dates. Implementation is phased-in by engine model year groups with the goal to reduce both criteria pollutant emissions and exposure to toxic air contaminants.
- ▶ **In-Use Solid Waste Collection Vehicles (SWCV).** Regulation targeting the reduction of cancer-causing particulate matter and smog-forming nitrogen oxide emissions from diesel-fueled waste collection trucks to reduce the harmful health impacts of exhaust. The regulation requires owners to use ARB-verified control technology that best reduces emissions, following a phased-in schedule from 2004 through 2010.

- ▶ **PCAPCD Rule 501 (General Permit Requirements).** The requirements are intended to provide an orderly procedure for the review of new stationary sources of air pollution and modification and operation of existing sources through the issuance of permits. Stationary Sources that would emit more than 2 pounds of any pollutant in any 24-hour period would be subject to PCAPCD's permit requirements.

CARB has also, and continues to, work to reduce emissions from locomotives. Emission reductions from the rail sector are critical to meet the criteria pollutant standards across the state, particularly as rail activity increases and is promoted as an alternative to personal automobile transportation. CARB and South Coast AQMD have developed draft concepts to reduce criteria pollutants, toxic air contaminants, and greenhouse gas emissions for locomotives in-use, idling, and maintenance activities, as well as emissions from other equipment at railyards. CARB has submitted the Locomotive Petition to the EPA, requesting EPA to update its emissions standards locomotives and create a new, cleaner Tier 5 emissions standard for locomotives that would take effect for remanufactured locomotives in 2023 and for newly built locomotives in 2025.

California Code of Regulations

Title 13 regulates motor vehicles.

Chapters 3.5 and 3.6 require that all heavy-duty vehicles powered by a diesel engine and operating on California highways, submit to a smoke emissions test. Vehicles with 1991 or newer model-year diesel engines may not exceed an opacity level of more than 40 percent. Vehicles with 1990 or older model-year diesel engines may not exceed an opacity level of 55 percent.

Chapter 9 regulates off-road vehicles and engine pollution control devices. Article 4.8 regulates diesel fleet emissions. The contractor shall use CARB ultra-low-sulfur diesel fuel for all diesel-powered equipment. In addition, low sulfur fuel shall be utilized for all stationary equipment. Targets for each year between 2011 and 2020 are mandated for particulate matter emissions. A large or medium fleet must meet a DPM index that is less than or equal to the calculated target rates. Small fleets will be required to comply with DPM averages starting in 2020. Article 5, the California Portable Equipment Registration Program, regulates portable equipment and requires that such equipment be registered with the air district. Registered portable engines shall not exceed the following emission limits:

- ▶ 550 pounds per day per engine of CO
- ▶ 150 pounds per day per engine of particulate matter less than 10 microns
- ▶ For registered portable engines operating onshore, 10 tons for each pollutant per district per year per engine for NO_x, SO_x, volatile organic carbon (VOC), PM₁₀ and CO in non-attainment areas.

Chapter 10 regulates mobile source operations and includes provisions to address airborne toxics from diesel-fueled off- and on-road vehicles. Sections 2449 and 2485 limit idling time to a maximum of 5 minutes for off-road diesel-fueled construction vehicles heavy-duty commercial diesel vehicles (defined as diesel vehicles heavier than 10,000 pounds gross vehicle rated weight) and, respectively.

Title 17, Section 93105, codifies the Asbestos Airborne Toxic Control Measure (ATCM) for Construction, Grading, Quarrying, and Surface Mining Operations. Each air pollution control and air quality management

district are required to implement and enforce the requirements of Section 93105 to minimize asbestos-containing dust.

Title 20 requires manufacturers of appliances to meet State and federal standards for energy and water efficiency. Performance of appliances must be certified through the California Energy Commission to demonstrate compliance with standards.

Title 24 serves to enhance and regulate California's building standards.

Part 6, establishes building energy efficiency standards that save energy, increase electricity supply reliability, increase indoor comfort, and help preserve the environment.

Part 11, the California Green Building Standards Code, commonly referred to as CALGreen, set minimum mandatory standards as well as voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and interior air quality.

Assembly Bill (AB) 1807 and AB 2588

State requirements specifically address air toxics issues through Assembly Bill (AB) 1807, which established the state air toxics program and AB 2588, the Air Toxics Hot Spots Information and Assessment Act. The Air Toxics Hot Spots Information and Assessment Act seeks to identify and evaluate risks from air toxics sources; however, AB 2588 does not regulate air toxics emissions. Stationary sources of emissions are required to report the types and quantities of certain substances that their facilities routinely release through the air. TAC emissions from individual facilities are quantified and prioritized. "High-priority" facilities must perform a health risk assessment and, if specific thresholds are violated, must communicate the results to the public in the form of notices and public meetings. The Air Toxics Hot Spots and Information Act requires OEHHA to develop risk assessment guidelines for the Hot Spots program, which OEHHA accomplishes through publication of the *Air Toxics Hot Spots Program Guidance Manual for the Preparation of Health Risk Assessments* (OEHHA Guidance Manual), most recently updated in 2015. The OEHHA Guidance Manual contains a description of the algorithms, recommended exposure variates, and cancer and noncancer health values, and modeling protocols needed to perform a Hot Spots risk assessment under AB 2588. The use of consistent risk assessment procedures allows comparisons among individual facilities. The regulation of TACs generally occurs through statutes and rules that require the use of the maximum or best available control technology to limit TAC emissions.

4.4.3.3 LOCAL PLANS, POLICIES, REGULATIONS, AND LAWS

At the local level, air quality is managed through land use, development and transportation planning practices.

Placer County Air Pollution Control District

PCAPCD attains and maintains air quality conditions in Placer County through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. PCAPCD inspects stationary sources of air pollution, responds to citizen complaints, monitors ambient air quality and meteorological conditions, and implements programs and regulations required by the CAA, CAAA, and CCAA. The clean-air strategy of PCAPCD includes preparing plans and programs for the attainment of ambient air quality standards, adopting and enforcing rules and regulations concerning sources of air pollution, and issuing

permits for stationary sources of air pollution. The rules and regulations include procedures and requirements to control the emission of pollutants and to prevent adverse impacts.

All projects within PCAPCD's jurisdictional area are subject to PCAPCD rules and regulations in effect at the time of construction. Specific PCAPCD rules that could be applicable to projects implemented under the 2035 General Plan Update may include but are not limited to the following:

- ▶ **Rule 202:** Visible Emissions. A person shall not discharge into the atmosphere from any single source of emissions whatsoever any air contaminant for a period or periods aggregating more than three minutes in any one hour which is as dark or darker in shade as that designated as number 1 on the Ringelmann Chart, as published by the U.S. Bureau of Mines.
- ▶ **Rule 205:** Nuisance. A developer and proposed project cannot emit any quantities of air contaminants or other materials that would cause injury, detriment, nuisance, or annoyance to any considerable number of persons or the public; or that would endanger the comfort, repose, health, or safety of any persons or the public; or that would cause or have natural tendency to cause injury or damage to business or property.
- ▶ **Rule 217:** Cutback and Emulsified Asphalt Paving Materials. The developer or contractor is required to use asphalt paving materials that comply with the VOC content limits specified in the rule.
- ▶ **Rule 218:** Architectural Coatings. The developer or contractor is required to use coatings that comply with the content limits for VOCs specified in the rule.
- ▶ **Rule 225:** Wood Burning Appliances. No person shall sell or supply new wood burning appliances unless it is an EPA phase II Certified wood burning appliance, pellet-fueled wood burning heater, masonry heater, or determined to meet the EPA standard for PM emissions standards.
- ▶ **Rule 228:** Fugitive Dust. The developer or contractor is required to control dust emissions from earthmoving activities or any other construction activity to prevent airborne dust from leaving the project site.
- ▶ **Rule 246:** Natural Gas-Fired Water Heaters. A person shall not distribute, offer for sale, sell, or install, any natural gas-fired water heater within the District, unless it is a natural gas-fired water heater that emits less than or equal to 40 nanograms of nitrogen oxides [calculated as NO₂] per joule (93 pounds per billion British thermal unit [BTU]) of heat output; and is certified in accordance with Section 402 of Rule 246 or it is a mobile home natural gas-fired water heater that emits less than or equal to 50 nanograms of nitrogen oxides [calculated as NO₂] per joule (116 pounds per billion BTU) of heat output; and is certified in accordance with Section 402 of Rule 246.
- ▶ **Rule 247:** Natural Gas-fired Water Heaters, Small Boilers, and Process Heaters. If a proposed project would install natural gas-fired units (i.e., boilers, steam generators, and process heaters) with a rated heat input capacity greater than or equal to 75,000 BTU [British thermal units] and less than 5 million Btu per hour, the unit is required to comply with the NO_x and CO emissions standards.
- ▶ **Rule 305:** Residential Allowable Burning. Except as provided in Regulation 3, no person shall use an open outdoor fire (including the use of a burn barrel) for the purposes of disposal or burning of any disallowed combustibles. Only allowable combustibles, originating at a residence, and free of disallowed combustibles,

and reasonably free from dirt, soil, and visible surface moisture, may be burned in an open outdoor burn pile. Burning in a burn barrel is prohibited.

- ▶ **Rule 501:** General Permit Requirements. To provide an orderly procedure for the review of new sources of air pollution and modification and operation of existing sources through the issuance of permits. Any project that includes the use of equipment capable of releasing emissions to the atmosphere may be required to obtain permit(s) from PCAPCD before equipment operation.
- ▶ **Rule 507:** Federal Operating Permit Program. Stationary sources subject to Rule 507 include major stationary sources, acid rain units subject to Title IV of the CAA, solid waste incinerators subject to Section 111 or 129 of the CAA, and any other stationary sources specifically designated by rule of the EPA.

PCAPCD has also produced a guidebook called the CEQA Air Quality Handbook (PCAPCD Handbook), which contains guidance for analyzing construction and operational emissions. The PCAPCD Handbook also includes a list of analysis expectations and methodologies for CEQA analyses. On October 13, 2016, the PCAPCD Board of Directors adopted the Review of Land Use Projects under CEQA Policy, which includes recommendations for thresholds of significance for criteria air pollutant emissions. In developing the thresholds, PCAPCD took into account health-based air quality standards and the strategies to attain air quality standards, historical CEQA project review data in Placer County, and the geographic and land use features of Placer County. PCAPCD's emissions thresholds of significance are discussed further below in Section 4.4.4.2, "Thresholds of Significance."

Because portions of Placer County do not attain the federal ozone and PM air quality standards, PCAPCD is responsible for working with the other air districts within the Sacramento Region to develop applicable air quality plans, as described below.

As part of the Sacramento Federal Nonattainment Area for ozone, and in accordance with requirements under the Clean Air Act (CAA), PCAPCD worked with the other local air districts within the Sacramento area to develop a regional air quality management plan to describe and demonstrate how Placer County, as well as the Sacramento nonattainment area, is meeting requirements under the federal CAA in demonstrating reasonable further progress and attainment of the NAAQS for ozone (PCAPCD 2017a). PCAPCD held a public hearing to consider, and ultimately adopted, the 2017 Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan (Ozone Attainment and Progress Plan). The Ozone Attainment and Progress Plan documents how the region. Some elements of the Ozone Attainment and Progress Plan were updated in 2018 and included in the 2018 Updates to the California State Implementation Plan, which updated SIP elements for nonattainment areas throughout the State, as needed. These updates were adopted by ARB in October 2018. The Ozone Attainment and Progress Plan is the currently adopted and applicable air quality plan for the region and, therefore, PCAPCD is required to comply with and implement this plan.

Similarly, PCAPCD also adopted the 2013 PM_{2.5} Implementation and Maintenance Plan and Redesignation Request for Sacramento PM_{2.5} Nonattainment Area (PM_{2.5} Maintenance Plan and Redesignation Request) to address how the region attained and would continue to attain the 24-hour PM_{2.5} NAAQS. In 2017, EPA found that the area attained the 2006 24-hour PM_{2.5} NAAQS by the attainment date of December 31, 2015. The PM_{2.5} Maintenance Plan and Redesignation Request will be updated and submitted in the future based on the clean data finding made by the EPA.

In compliance with the requirements set forth in the CCAA, which specifically addressed the non-attainment status for ozone, CA, PM_{2.5} and PM₁₀, PCAPCD coordinated with the air quality management districts and air pollution control districts of El Dorado, Sacramento, Solano, Sutter, and Yolo counties to prepare and submit the 1991 Air Quality Attainment Plan (AQAP). The CCAA also requires a triennial assessment of the extent of air quality improvements and emission reductions achieved through the use of control measures. In accordance with this requirement, PCAPCD has prepared several triennial progress reports that build upon the AQAP. The most recently adopted report is the 2018 Triennial Progress Report for the 2015-2017 period.

Sacramento Area Council of Governments

The Sacramento Area Council of Governments (SACOG). SACOG serves as the Metropolitan Planning Organization for the Sacramento region, maintaining the regional Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) in coordination with each of the local 28 member cities and counties, including Placer County. SACOG plays a central role in transportation infrastructure planning for the region, while also serving as a forum for the study, planning and resolution of other planning issues facing the local member governments. The most recent MTP/SCS for the SACOG region was adopted in November 2019. The 2020 MTP/SCS lays out a plan that links land use, air quality, and transportation needs.

Existing City of Roseville General Plan Policies

The existing City of Roseville General Plan (City of Roseville 2016) includes the following goals and policies related to air quality.

Air Quality Goal 1: Improve Roseville's air quality by: a) achieving and maintaining ambient air quality standards established by EPA and the CARB; and b) minimizing public exposure to toxic or hazardous air pollutants and any pollutants that create a public nuisance through irritation to the senses (such as unpleasant odors).

Air Quality Goal 2: Integrate air quality planning with the land use and transportation planning process.

Air Quality Goal 3: Encourage the coordination and integration of all forms of public transport while reducing motor vehicle emissions through a decrease in the average daily trips and vehicle miles traveled and by increasing the commute vehicle occupancy rate by 50 percent to 1.5 or more persons per vehicle.

Air Quality Goal 4: Increase the capacity of the transportation system, including the roadway system and alternate modes of transportation.

Air Quality Goal 5: Provide adequate pedestrian and bikeway facilities for present and future transportation needs.

Air Quality Goal 6: Promote a well-designed and efficient light rail and transit system.

Air Quality Goal 7: While recognizing that the automobile is the primary form of transportation, the City of Roseville should make a commitment to shift from the automobile to other modes of transportation.

- **Air Quality – General Policy 1:** Cooperate with other agencies to develop a consistent and effective approach to air pollution planning.

- ▶ **Air Quality – General Policy 2:** Work with PCAPCD to monitor all air pollutants of concern on a continuous basis.
- ▶ **Air Quality – General Policy 3:** Develop consistent and accurate procedures for evaluating the air quality impacts of new projects.
- ▶ **Air Quality – General Policy 4:** As part of the development review process, develop mitigation measures to minimize stationary and area source emissions.
- ▶ **Air Quality – Transportation and Circulation Related Policy 5:** Develop transportation systems that minimize vehicle delay and air pollution.
- ▶ **Air Quality – Transportation and Circulation Related Policy 6:** Develop consistent and accurate procedures for mitigating transportation emissions from new and existing projects.
- ▶ **Air Quality – Transportation and Circulation Related Policy 7:** Encourage alternative modes of transportation including pedestrian, bicycle, and transit usage.
- ▶ **Air Quality – Land-Use Related Policy 8:** Separate air pollution-sensitive land uses from sources of air pollution.
- ▶ **Air Quality – Land-Use Related Policy 9:** Encourage land use policies that maintain and improve air quality.
- ▶ **Air Quality – Energy Conservation Related Policy 10:** Conserve energy and reduce air emissions by encouraging energy efficient building designs and transportation systems.
- ▶ **Air Quality – Hazardous Materials Related Policy 11:** Protect City residents from the risks involved in the transport, distribution, storage, use, and disposal of hazardous materials.
- ▶ **Circulation – Level of Service Policy 1:** Maintain a level of service (LOS) “C” standard at a minimum of 70 percent of all signalized intersections and roadway segments in the City during the a.m. and p.m. peak hours. Exceptions to the LOS “C” standard may be considered for intersections where the City finds that the required improvements are unacceptable based on established criteria identified in the implementation measures. In addition, Pedestrian Districts may be exempted from the LOS standard.
- ▶ **Circulation – Level of Service Policy 2:** Strive to meet the level of service standard through a balanced transportation system that reduces the auto emissions that contribute to climate change, by providing alternatives to the automobile and avoiding excessive vehicle congestion through roadway improvements, Intelligent Transportation Systems, and transit improvements.
- ▶ **Circulation – Level of Service Policy 3:** Work with neighboring jurisdictions to provide acceptable and compatible levels of service on the roadways that cross the City's boundaries.
- ▶ **Circulation – Level of Service Policy 4:** Secure adequate funding for all components of the City's transportation system to ensure level of service policy is maintained.

- ▶ **Circulation – Level of Service Policy 5:** Enable the City to designate a Pedestrian District over a geographic area for the purpose of implementing measures that promote pedestrian walkability and reduce total vehicle miles traveled and resultant air pollution emissions that contribute to climate change. In these districts, the City recognizes that pedestrian travel takes a higher priority than automobile travel, which could reduce the vehicular level of service.

Circulation – Transit Goal 1: Promote a safe, convenient and efficient mass transit system, utilizing both bus and rail modes, to reduce congestion, reduce auto emissions, including emissions that contribute to climate change, improve the environment, and provide viable non-automotive means of transportation in and through Roseville.

- ▶ **Circulation – Transit Policy 1:** Pursue and support transit services within the community and region and pursue land use, design, and other mechanisms that promote the use of such services.

Circulation – Transportation Systems Management Goal 2: Reduce total vehicle emissions in the City of Roseville and the South Placer County region.

- ▶ **Circulation – Transportation Systems Management Policy 1:** Continue to enforce the City’s TSM ordinance and monitor its effectiveness.
- ▶ **Circulation – Transportation Systems Management Policy 2:** Work with appropriate agencies to develop measures to reduce vehicular travel demand and total vehicle miles traveled and meet air quality goals.

Circulation – Bikeways/Trails Goal 1: Increase the percentage of all trips made by bicycles in Roseville.

Circulation – Bikeways/Trails Goal 2: Establish and maintain a safe, comprehensive and integrated bikeway and trail system that encourages the use of bikes and walking for commuting, recreational and other trips.

- ▶ **Circulation – Bikeways/Trails Policy 1:** Develop a comprehensive and safe system of recreational and commuter bicycle routes and trails that provides connections between the City's major employment and housing areas and between its existing and planned bikeways.
- ▶ **Circulation – Bikeways/Trails Policy 2:** Coordinate Roseville’s bikeway and trail system with those of neighboring jurisdictions to provide both local and regional connections.
- ▶ **Land Use – Community Form – Relationship to Transit, Pedestrian, Air Quality (RTPAQ) Policy 1:** Promote land use patterns that support a variety of transportation modes and accommodate pedestrian mobility.
- ▶ **Land Use – Community Form – Relationship to Transit, Pedestrian, Air Quality (RTPAQ) Policy 2:** Allow for land use patterns and mixed-use development that integrate residential and non-residential land uses, such that residents may easily walk or bike to shopping, services, employment, and leisure activities.
- ▶ **Land Use – Community Form – Relationship to Transit, Pedestrian, Air Quality (RTPAQ) Policy 3:** Concentrate higher-intensity uses and appropriate support uses within close proximity of transit and bikeway corridors, as identified in the Bicycle Master Plan. In addition, some component of public use, such as parks,

plazas, public buildings, community centers, and/or libraries should be located within Pedestrian Districts and transit and bikeway corridors.

- ▶ **Land Use – Community Form – Relationship to Transit, Pedestrian, Air Quality (RTPAQ) Policy 4:**
Promote and encourage the location of employee services, such as child care, restaurants, banking facilities, convenience markets, etc., within major employment centers for the purpose of reducing mid-day service-related vehicle trips.
- ▶ **Land Use – Community Form – Relationship to Transit, Pedestrian, Air Quality (RTPAQ) Policy 5:**
Where feasible, improve existing development areas to create better pedestrian, bicycle, and transit accessibility.
- ▶ **Land Use – Community Form – Relationship to Transit, Pedestrian, Air Quality (RTPAQ) Policy 6:**
Through City land use planning and development approvals, require that neighborhood-serving uses (e.g. neighborhood commercial uses, day care, parks, schools, and other community facilities) be physically linked with adjacent residential neighborhoods.
- ▶ **Land Use – Community Form – Relationship to Transit, Pedestrian, Air Quality (RTPAQ) Policy 7:**
Encourage alternative modes of transportation including pedestrian, bicycle, and transit usage.
- ▶ **Land Use – Community Form – Relationship to Transit, Pedestrian, Air Quality (RTPAQ) Policy 10:**
Conserve energy and reduce air emissions by encouraging energy efficient building designs and transportation systems.
- ▶ **Land Use – Community Form – Downtown Neighborhoods Policy 1:** Require that new development areas and associated community-wide facilities (open space resources, parks, libraries, etc.) be linked and oriented to existing developed areas of the community through road networks, public transit systems, open space systems, bike way and pedestrian systems, and other physical connections.
- ▶ **Land Use – Community Form – Community Design Policy 2:** Continue to develop and apply design standards that result in efficient site and building designs, pedestrian friendly projects that stimulate the use of alternative modes of transportation, and the establishment of a functional relationship between adjacent developments.

Adopted Specific Plans and Mitigation Measures

Currently, the City has adopted 14 Specific Plans. The Specific Plans provide comprehensive planning, zoning, design guidelines, and development and conservation standards to implement the General Plan for defined geographic locations within the Planning Area. Each Specific Plan has guidelines for site, architectural, landscaping, lighting, roadway networks, pedestrian/bicycle paths, open space corridors, parks, and other aspects of design. Each adopted Specific Plan included an EIR, which evaluated potential human health and environmental risks related to air quality. Where appropriate, mitigation measures were adopted to reduce the level of risk from air pollutant emissions, and these measures are required to be implemented in each Specific Plan Area. Adopted mitigation measures include requirements to provide dust and emissions controls during construction activities, and measures requiring design measures, such as exterior outlets for electric lawnmowers, to offset operational emissions. Adopted mitigation measures for air quality would reduce or off-set short-term

construction and long-term operational emissions, and provide siting and design guidance to reduce potential health risks associated with TAC emission sources. Copies of the adopted Specific Plans and their associated EIRs are available upon request from the City of Roseville Development Services Department, Planning Division.

4.4.4 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

4.4.4.1 METHODOLOGY

The discussion below presents the methods used for the air quality analysis and how the significance of air quality impacts was determined. Buildout of the General Plan would generate air pollutant emissions as a result of short-term construction and long-term operational activities. Potential air quality impacts associated with short-term construction and long-term operations were evaluated according to guidance and methods from ARB and PCAPCD. A summary of the data inputs, emissions factors, and calculation methodologies used are provided below for both construction and operational elements of the project. Detailed project inputs, assumptions and calculations are provided in Appendix B, *Quantification of Criteria Air Pollutant and Greenhouse Gas Emissions, and Energy Use*.

Construction

Construction-related emissions would be generated throughout the buildout of the General Plan and would vary based on market conditions. A General Plan is a long-term planning document, and exact buildout schedules cannot be determined. Therefore, for the purposes of this EIR, a maximum annual construction level was estimated. The maximum annual housing production experienced within the City since 2001 was 2,019 housing units (SACOG 2019). This is equivalent to eight percent of the remaining unbuilt Planning Area being developed per year. Conservatively, this figure was rounded up and it was assumed that up to 10 percent of the Planning Area could be developed annually.

Construction activities would generate emissions of criteria pollutants, precursors, and TACs (i.e., DPM) from a variety of sources, including off-road construction equipment, on-road vehicles, earthmoving activities, off-gas from paving activities and application of architectural coatings.

Construction-related air emissions were modeled using the California Emissions Estimator Model (CalEEMod), Version 2016.3.2, which is the most current version of the PCAPCD-recommended model for estimating construction and operational emissions from land use development projects. CalEEMod includes default assumptions for construction parameters, such as construction equipment, haul trucks, and worker trips, which were used to model the General Plan's construction-related emissions. Likewise, CalEEMod also allows the user to input project-specific parameters. In this case, project-specific construction inputs included site acreage for proposed land uses and a construction schedule, among others. Where project-specific information was not available, default parameters provided by the model were used. Default assumptions provided by the model are typically conservative to avoid underestimating emissions. Although it is unlikely that the most intensive days of construction would occur concurrently, to conservatively estimate maximum potential daily emissions, it is assumed that these various construction activities could occur concurrently throughout the Planning Area during a year of maximum-potential development. In order to estimate maximum potential emissions, all inputs were modeled using emission factors for the year 2021, the earliest possible year of construction. Construction activities occurring in a later year would be assumed to use a similar or newer fleet of off-road equipment and on-

road vehicles; as fleet turnover occurs over time, older equipment and vehicles are replaced by those with new engines meeting more recent and more stringent emission standards.

Operations

Operational emissions would be generated by area-, energy-, and mobile-sources. The analysis assumes full buildout of the proposed General Plan update, with a modeling year of 2035 because this is the cumulative horizon year for the General Plan. Area sources would include hearth and consumer products for residential uses, and periodic architectural coatings (such as paints) and landscape equipment for residential and non-residential land uses. Energy sources would include natural gas combustion for space and water heating in residential and non-residential buildings. CalEEMod was used to model area- and energy-source operational emissions based upon proposed land uses.

Mobile sources would involve vehicle trips associated with residential (e.g., work, shopping, and other trips) and non-residential (e.g., customers, employees, and material delivery trips) activities within the Planning Area. For mobile sources, an estimate of project-specific annual vehicle miles traveled (VMT) associated with the proposed land use development was developed by the traffic analysis prepared in support of the General Plan (see Appendix D). Because the current version of CalEEMod has not yet been updated with the most recent EMFAC2017 emission inventory data, operational mobile-source emissions were estimated manually using the most current version of ARB's on-road emissions inventory model, EMFAC2017. These emissions estimates were added to the CalEEMod outputs to estimate total operational emissions.

4.4.4.2 THRESHOLDS OF SIGNIFICANCE

An air quality impact would be considered significant if it would exceed any of the thresholds of significance listed below, which are based on Appendix G of the CEQA Guidelines and on PCAPCD's *CEQA Air Quality Handbook* (PCAPCD 2017b). Based on Appendix G of the CEQA Guidelines, the General Plan would result in a significant impact on air quality if it would:

- ▶ conflict with or obstruct implementation of the applicable air quality plan;
- ▶ result in a cumulatively considerable net increase of any criteria pollutant for which the project region is designated a nonattainment area under an applicable federal or state ambient air quality standard;
- ▶ expose sensitive receptors to substantial pollutant concentrations; or
- ▶ result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

As stated in Appendix G of the CEQA Guidelines, the significance criteria established by the applicable air quality management district may be relied on to make the above determinations. Thus, pursuant to the PCAPCD-recommended thresholds (PCAPCD 2017b) for evaluating project-related air quality impacts, the General Plan would result in a significant impact on air quality if it would:

- ▶ generate construction-related criteria air pollutant or precursor emissions that exceed the PCAPCD-recommended daily thresholds of 82 pounds per day (lb/day) for ROG, NO_x, or PM₁₀;

- ▶ generate long-term regional criteria air pollutant or precursor emissions that exceed the PCAPCD-recommended daily thresholds of 55 lb/day of ROG or NO_x, or 82 lb/day of PM₁₀;
- ▶ generate emissions of toxic air contaminants or PM_{2.5} that would cause an excess cancer risk level of more than 10 in in one million or exceed a Hazard Index of 1; or
- ▶ expose sensitive receptors to excessive nuisance odors, as defined under PCAPCD Rule 205. [See “Regional and Local Plans, Policies, Regulations, and Ordinances,” in Section 3.3.2.1, “Criteria Air Pollutants,” above.]

Because there is considerable overlap between the threshold questions, this section has been organized to address the following topics:

- ▶ Short-term, construction-related emissions
- ▶ Long-term, operational emissions
- ▶ Exposure of sensitive receptors to substantial pollutant concentrations
- ▶ Exposure to objectionable odors

Two of the Appendix G checklist questions address conflicts with an air quality plan and contribution to an air quality violation. As described under Section 4.4.2.3, “Local Plans, Policies, Regulations, and Laws,” PCAPCD has adopted the *2017 Sacramento Regional 8-Hour Ozone Attainment and Reasonable Further Progress Plan* and the *2013 PM_{2.5} Implementation and Maintenance Plan and Redesignation Request for Sacramento PM_{2.5} Nonattainment Area*, as well as the *2018 Triennial Progress Report* as the most recent assessment of air quality improvements and air quality planning progress under the regional Air Quality Attainment Plan. The PCAPCD CEQA Thresholds of Significance Justification Report (PCAPCD 2016) explains that the recommended criteria air pollutant significance thresholds adopted by PCAPCD serve as a proxy for these impacts; therefore, the evaluation of potential conflicts with air quality plans and air quality violations is consolidated within the analysis sections listed above.

For cumulative impacts, PCAPCD states that if a project’s impacts would be significant at the project level (i.e., would exceed any of the thresholds listed above), it could also be considered significant on a cumulative level. Chapter 5 of this EIR addresses cumulative impacts in detail.

| Table 4.4-3 PCAPCD Mass Emission Thresholds | | |
|---|------------------------|----------------------------------|
| | Temporary Construction | Long-term Operational/Cumulative |
| ROG | 82 lbs/day | 55 lbs/day |
| NO _x | 82 lbs/day | 55 lbs/day |
| PM ₁₀ | 82 lbs/day | 82 lbs/day |
| Sources: Placer County Air Pollution Control District 2016. Notes: ROG = reactive organic gases; lbs = pounds; NO _x = nitrogen oxide; PM ₁₀ = particulate matter that is 10 microns in diameter and smaller PM _{2.5} = particulate matter that is 2.5 microns in diameter and smaller; CO = carbon monoxide; SO _x = sulfur oxide; CAAQS = California ambient air quality standards; NAAQS = National ambient air quality standards | | |

4.4.4.3 ISSUES NOT DISCUSSED FURTHER

All issues related to air quality are discussed in detail below.

4.4.4.4 IMPACT ANALYSIS

IMPACT 4.4-1 Generation of Short-Term Construction-Related Emissions of Criteria Air Pollutants and Precursors that Would Result in a Cumulatively Considerable Net Increase of Any Criteria Pollutant for which the Project Region is in Nonattainment, and Conflict with or Obstruct an Air Quality Plan. *Emissions of criteria air pollutants and precursors could exceed an ambient air quality standard or contribute substantially to an existing or predicted air quality exceedance. The impact is considered **significant**.*

Construction emissions are described as short-term or temporary in duration but have the potential to adversely affect air quality. Construction-related activities would result in temporary emissions of criteria air pollutants (e.g., PM₁₀, PM_{2.5}, CO) and ozone precursors (e.g., ROG and NO_x) from ground-disturbing activities (e.g., excavation, grading, and clearing); exhaust emissions from use of off-road equipment, material delivery, and construction worker commutes; building construction; asphalt paving; and application of architectural coatings.

Criteria pollutant emissions generated by these sources were quantified using emission factors and methodologies described in Section 4.4.4.1, *Methodology*. As noted in the methodology description, the construction-related emissions estimates use conservative assumptions based on construction beginning in the year 2021, a construction scenario of maximum overlap of the most intensive days of equipment use of each construction phase (site prep, grading, building construction, paving, and architectural coating), and development of up to 10 percent of the proposed General Plan annually. Because of these conservative assumptions, actual emissions could be less than those estimated. If construction is delayed or occurs over a longer period, emissions could be reduced because of a more modern and cleaner burning (less emitting) construction equipment fleet mix and a less intensive and overlapping construction schedule.²

Table 4.4-4 summarizes the maximum daily emissions of ROG, NO_x, and PM₁₀ associated with the maximum construction intensity for proposed buildout of the General Plan. Refer to Appendix B for detailed model inputs, assumptions and calculations.

As shown in Table 4.4-4, based on the conservative assumptions applied for the purpose of this analysis, maximum daily emission of ROG, NO_x and PM₁₀ would exceed PCAPCD thresholds of significance. The PCAPCD thresholds of significance are considered the allowable amount of emissions each project can generate without conflicting with or obstructing implementation of the applicable air quality plans developed to maintain and attain ambient air quality standards (PCAPCD 2016).

² Equipment exhaust and particulate matter associated with potential rock grinding and crushing, which could be required in some cases of construction, were not specifically calculated, since rock crushing and grinding would not be required for most construction and since the quantity of rock grinding and crushing that would be required for any given site cannot be quantified at this time. However, it could be required in some locations within the Planning Area due to geological conditions. This is one example of why this analysis specifically uses conservative assumptions – so that the overall emissions estimates presented in this section do capture impacts associated with the occasional need for this specialized activity.

| Table 4.4-4 Summary of Maximum Daily Construction-Related Emissions of Criteria Air Pollutants: Maximum Single-Year Construction Scenario (2021) | | | |
|---|---------------------------------|-----------------|------------------|
| Construction Phase | Maximum Daily Emissions (lb/dy) | | |
| | ROG | NO _x | PM ₁₀ |
| Demolition | 3 | 33 | 2 |
| Site Preparation | 4 | 42 | 20 |
| Grading | 5 | 50 | 11 |
| Building Construction | 26 | 250 | 52 |
| Paving | 1 | 14 | 1 |
| Architectural Coating | 472 | 4 | 8 |
| Maximum Daily Emissions | 512 | 394 | 94 |
| PCAPCD Thresholds of Significance | 82 | 82 | 82 |
| Does Project Exceed Thresholds? | Yes | Yes | Yes |
| Notes: lb/day = pounds per day; ROG = reactive organic gases; NO _x = oxides of nitrogen; PM ₁₀ = respirable particulate matter with an aerodynamic diameter of 10 micrometers or less; PCAPCD = Placer County Air Pollution Control District. | | | |
| Source: AECOM 2019; See Appendix B for detailed modeling assumptions, outputs, and results. | | | |

The following goal and policy related to construction-related air quality in Roseville would be revised as a part of the proposed General Plan Update, with additions shown in **bold, underlined** text and deletions shown in ~~strikethrough~~ text:

Goal AQ1.1: ~~Improve Roseville's air quality by: a) Achieving and~~ **Reduce local air pollutant emissions to assist with meeting and** maintaining ambient air quality standards established by the U.S. Environmental Protection Agency and the California Air Resources Board; and, b) ~~M~~ **and** minimizing public exposure to toxic or hazardous air pollutants and air pollutants that create a public nuisance through irritation to the senses (such as unpleasant odors).

- **Policy AQ1.3:** ~~Projects that could generate substantial air pollutant emissions or expose sensitive uses to substantial air pollutant concentrations should incorporate strategies to reduce operational emissions, applicable emissions control~~ **exposure to such emissions using measures recommended by the Placer County Air Pollution Control District, and other relevant applicable, feasible strategies, as needed, to avoid significant air quality impacts** ~~Develop consistent and accurate procedures for evaluating the air quality impacts of new projects.~~

The proposed General Plan Update policy change listed above provide additional clarity for how projects implemented under the General Plan Update would reduce air pollutant emissions, including those associated with construction activities within the Planning Area. This policy change would not result in any adverse environmental impacts.

Conclusion

As discussed in the analysis above, the project will generate emissions that exceed PCAPCD significance thresholds. Existing laws and regulations, including PCAPCD rules and regulations, combined with existing

General Plan and proposed General Plan Update policies, would reduce these impacts. In particular, projects greater than one acre in size would be subject to PCAPCD Rule 228 to minimize fugitive dust emissions of PM through implementation of dust control measures, such as PCAPCD's standard Dust Control Requirements; projects smaller than this are considered by the Air District to emit de minimis levels of dust. PCAPCD Rules 202 and 205 would also reduce exhaust-related emissions from the use of construction equipment. PCAPCD Rules 217 and 218 would reduce VOC emissions associated with paving and architectural coating activities.

The proposed General Plan Update Policy AQ1.3 is designed to reduce construction-related emissions generated by projects developed within the Planning Area by incorporating strategies recommended by PCAPCD to reduce exposure to such emissions, such as the use of electrified equipment, setbacks for staging areas from sensitive users, limitations on vehicle idling, and other measures. All future development within the Planning Area that could generate substantial emissions would incorporate strategies to reduce emissions, consistent with General Plan policy. In addition, all of the City's Specific Plans have involved preparation of an EIR and adoption and incorporation of mitigation measures into the Specific Plan to reduce construction-related air pollutant emissions impacts, which would apply to all development within each Specific Plan Area.

While all future development with the potential to generate substantial emissions would be required to reduce those emissions, the effectiveness of these measures would depend on the number and extent of strategies feasible to incorporate as a part of any given project. Since the timing and level of construction activities for future development projects is speculative, and cannot be known, it is not possible to quantify the extent to which the reduction strategies would result in emission reductions. Consequently, even with adherence to PCAPCD rules, proposed General Plan Update Policy AQ1.3, and Specific Plan mitigation measures, it is conservatively assumed that emissions from buildout of the General Plan could exceed PCAPCD-recommended thresholds. Therefore, implementation of the proposed General Plan Update could generate substantial constructed-related pollutant emissions, conflict with or obstruct implementation of the applicable air quality plan, and result in a cumulatively considerable net increase of criteria air pollutants for which the project region is designated a nonattainment area under an applicable federal or state ambient air quality standard. Therefore, this impact would be **significant**.

Mitigation Measure

No feasible mitigation measures are available.

Significance after Mitigation

Existing rules, regulations, existing General Plan policies, and proposed General Plan Update policy changes provide all available, feasible mitigation to reduce construction-related emissions. Because the exact buildout schedule of the proposed land uses cannot be determined, identifying the level of effectiveness of these rules, regulations, and policies is not possible at this time. Therefore, it is conservatively assumed that construction-related emissions could still exceed significance thresholds. Such emissions could exceed or contribute substantially to an existing or projected air quality violation. In addition, these emissions could conflict with or obstruct implementation of the applicable air quality plan. There is no additional feasible mitigation to address this impact. The impact is **significant and unavoidable**.

IMPACT 4.4-2 **Generation of Long-Term Operational Emissions of Criteria Air Pollutants and Precursors that Would Result in a Cumulatively Considerable Net Increase of Any Criteria Pollutant for which the Project Region is in Nonattainment, and Conflict with or Obstruct an Air Quality Plan.** *Long-term operational emissions would be generated from day-to-day activities associated with residential and non-residential land uses under the proposed General Plan Update. Operational emissions associated would exceed applicable PCAPCD thresholds. The level of operational emissions could conflict with or obstruct implementation of the applicable air quality plan. The impact is considered **significant**.*

Implementation of the General Plan would include new development in the Planning Area, including buildings, structures, paved areas, roadways, utilities, and other improvements. Daily activities associated with the operation of these land uses would generate criteria air pollutant and precursor emissions from mobile, energy, and area sources. Mobile sources are primarily vehicle trips coming to and leaving existing and planned land uses. Area sources include, but are not limited to, natural gas combustion for water and space heating, landscape maintenance equipment, hearth (fireplace) operation, and periodic architectural coatings. While construction emissions are considered short-term and temporary, operational emissions are considered long-term and occur beyond the duration of the General Plan. Therefore, operational emissions have greater potential to affect the attainment status of an air basin, particularly as a result of increased traffic and energy demands from additional development.

Table 4.4-5 summarizes the maximum daily emissions of ROG, NO_x, and PM₁₀ associated with long-term operations land uses within the Planning Area that would occur with full buildout of the General Plan, based on a 2035 modeling year, consistent with the cumulative horizon year for the General Plan. Refer to Appendix B for detailed model inputs, assumptions and calculations.

| Table 4.4-5 Summary of Maximum Daily Operational Emissions of Criteria Air Pollutants and Precursors: Full Buildout of the proposed General Plan Update (2035) | | | |
|---|---------------------------------|-----------------|------------------|
| Construction Phase | Maximum Daily Emissions (lb/dy) | | |
| | ROG | NO _x | PM ₁₀ |
| Area | 38,745 | 748 | 6,437 |
| Energy | 26 | 227 | 18 |
| Mobile ¹ | 161 | 1,643 | 3,487 |
| Total Daily Operational Emissions² | 38,931 | 2,618 | 9,942 |
| PCAPCD Thresholds of Significance | 55 | 55 | 82 |
| Does Project Exceed Thresholds? | Yes | Yes | Yes |
| Notes: lb/day = pounds per day; VOC = volatile organic compounds; NO _x = oxides of nitrogen; PM ₁₀ = respirable particulate matter with an aerodynamic diameter of 10 micrometers or less; PCAPCD = Placer County Air Pollution Control District. 1. Mobile emissions are calculated outside of CalEEMod using EMFAC 2017 emissions rates and VMT from the Transportation Impact Analysis. 2. Total emissions may not add correctly due to rounding. Source: AECOM 2019; See Appendix B for detailed modeling assumptions, outputs, and results. | | | |

As shown in Table 4.4-5, full buildout of the proposed General Plan Update would generate long-term operational emissions of ROG, NO_x and PM₁₀ that would substantially exceed PCAPCD-recommended thresholds of significance.

In addition to typical land use development emission sources (i.e., mobile, energy, area), implementation of the General Plan could involve new stationary sources that generate long-term operational emissions above the emissions shown in Table 4.4-5. These stationary sources would be required to obtain permits from PCAPCD. These sources could include, but are not limited to, diesel engine or gas turbine generators for emergency power generation; central heating boilers for commercial or large residential buildings; process equipment for light industrial uses; kitchen equipment at restaurants and schools; service station equipment; and dry cleaning equipment. Information on stationary sources that could operate within the Planning Area in the future is not available at this time, and there is no reliable methodology to estimate these emissions; therefore, any analysis of these would be speculative. The emissions from these sources would be in addition to the estimated operational emissions described above.

The following goals and policies related to operational air pollutant emissions would be revised as a part of the proposed General Plan Update, with additions shown in **bold, underlined** text and deletions in ~~struckthrough~~ text:

Goal AQ1.1: ~~Improve Roseville's air quality by: a) Achieving and~~ **Reduce local air pollutant emissions to assist with meeting and** maintaining ambient air quality standards established by the U.S. Environmental Protection Agency and the California Air Resources Board; and, b) ~~M~~ **and** minimizing public exposure to toxic or hazardous air pollutants and ~~air pollutants that create a public nuisance through irritation to the senses (such as unpleasant odors).~~

Goal AQ1.3: ~~Encourage the coordination~~ **Coordinate** and integration of all forms of public transport ~~while reducing motor vehicle emissions through a~~ **to** decrease in the average daily trips and vehicle miles traveled, **while encouraging an increase in** and by increasing the commute vehicle occupancy rate ~~by 50% to 1.5 or more persons per vehicle.~~

Goal AQ1.4: Increase the capacity of the **pedestrian, bicycle, and transit** transportation systems ~~and~~ **and** ~~Promote and the share of City owned~~ **vehicular transportation that uses less-polluting fuels, such as electricity,** including the roadway system and alternate modes of transportation.

Goal AQ1.5: Provide adequate pedestrian and ~~bikeway~~ **bicycle** facilities for present and future transportation needs.

Goal AQ1.6: Promote a well-designed and efficient ~~light rail and~~ transit system.

Goal AQ1.7: ~~While recognizing that the automobile is the primary form of transportation, the City of Roseville should make a commitment to shift from the automobile to other modes of transportation.~~ **Improve transit, biking, bicycle, and pedestrian access to lessen dependence on automobile travel and reduce household transportation costs**

- **Policy AQ1.1:** Cooperate with other agencies to develop a consistent and an effective approach to **reducing** air pollution ~~planning~~.

- ▶ **Policy AQ1.2:** Work with the Placer County Air Pollution Control District to monitor air pollutants of concern on a continuous basis, and support Air District efforts to minimize emissions from stationary sources.
- ▶ **Policy AQ1.3:** Projects that could generate substantial air pollutant emissions or expose sensitive uses to substantial air pollutant concentrations should incorporate strategies to reduce operational emissions, applicable emissions control exposure to such emissions using measures recommended by the Placer County Air Pollution Control District, and other relevant applicable, feasible strategies, as needed, to avoid significant air quality impacts ~~Develop consistent and accurate procedures for evaluating the air quality impacts of new projects.~~
- ▶ **Policy AQ1.12.** Develop transportation systems that ~~minimize vehicle delay and~~ reduce vehicle emissions by improving the desirability of walking, bicycling, and public transportation relative to vehicular travel ~~air pollution.~~
- ▶ **Policy AQ1.13.** ~~Develop~~ Identify feasible strategies to reduce ~~consistent and accurate procedures for mitigating transportation emissions from new and existing projects~~ and transportation associated with existing development within the Planning Area.
- ▶ **Policy AQ1.14.** Encourage alternative modes of transportation, including pedestrian, bicycle, and transit usage use.
- ▶ **Policy AQ1.15** Promote and incentivize low-emissions vehicles and associated charging infrastructure. Pursue funding from state programs and other sources to facilitate local purchase and use of electric vehicles.
- ▶ **Policy AQ1.16.** ~~Encourage~~ Implement land use policies that maintain and improve air quality and expand opportunities for transit-oriented development, which allows residents to significantly reduce vehicular transportation and associated air pollutant emissions.
- ▶ **Policy AQ1.17:** Conserve energy and reduce air pollutant emissions by encouraging energy efficient building designs and transportation systems and promoting energy efficiency retrofits of existing structures.
- ▶ **Policy AQ1.18:** Promote building and transportation energy efficiency in new residential and commercial development through encouraging and incentivizing implementation measures early in the design and development process.
- ▶ **Policy AQ1.22:** Support improvements to diesel engines, limits on idling, and incorporation of technology and management practices that reduce harmful emissions at the Rail Yard.

Goal CIRC4: ~~Reduce travel demand~~ vehicle miles traveled on the City's and regional roadway systems, while expanding mobility options for residents, employees, and visitors.

- ▶ **Policy CIRC3.6:** Identify opportunities to increase the number and/or capacity of park-and-ride lots as needed, to increase transit and carpool/vanpool use.

- ▶ **Policy CIRC4.1: Continue to enforce the City's TSM ordinance and monitor its effectiveness. The City will review and condition projects, as appropriate, to reduce travel demand per capita and per employee by promoting increased density near transit, improving the quality of non-vehicular transportation options, providing incentives for non-vehicular travel, encouraging the mixing of complementary land uses in proximity to one another, and using other feasible methods.**
- ▶ **Policy CIRC4.2: Work with appropriate agencies to develop implementation measures to reduce vehicular travel demand and total vehicle miles traveled and meet air quality goals.**
- ▶ **Policy CIRC4.3: Specific Plan Amendments and land use development projects not included in a Specific Plan shall be evaluated for consistency with the City's VMT Impact Standards.**
- ▶ **Policy CIRC4.4: If the evaluation required by CIRC4.3 finds a Specific Plan Amendment or land use development project not included in an adopted Specific Plan is inconsistent with thresholds established within the City's VMT Impact Standards, on-site land use, transportation, and urban design-related VMT-reducing features should be prioritized to demonstrate consistency. If feasible on-site features cannot achieve the VMT threshold, Specific Plan Amendments and land use development projects outside Specific Plan Areas may demonstrate equivalent consistency through off-site actions or fair-share fee contributions, or if consistency cannot be achieved, shall implement all feasible measures.**
- ▶ **Policy CIRC4.5: Policy CIRC4.3 does not apply to projects that propose residential or office uses in Transit Priority Areas or low-VMT areas. Low-VMT areas are those shown by the General Plan travel demand model or the SCS travel demand model to have per-capita, per-employee, or per-service-population VMT rates that are at least 15 percent less than the baseline citywide or regional rate.**
- ▶ **Policy CIRC4.6: Promote and incentivize Infill development, particularly affordable housing development, through assistance in obtaining outside grant funding and reductions or deferrals in impact fees.**
- ▶ **Policy CIRC5.1: Develop a comprehensive and safe system of recreational and commuter bicycle routes and trails that provides connections between the City's major employment destinations (including employment) and housing areas and between its existing and planned bikeways.**
- ▶ **Policy CIRC6.1: Establish and maintain a safe and continuous pedestrian network that provides connections between residential areas and commercial retail and services, employment, public services, parks, and public transit.**
- ▶ **Policy CIRC6.2: Promote development patterns that encourage people to walk to destinations.**
- ▶ **Policy CIRC6.3: Enhance pedestrian-friendly street environments and design public spaces and destinations in a way that encourages walking.**
- ▶ **Policy LU2.1: Promote land use development patterns that support a variety of transportation modes and accommodate pedestrian mobility.**

- ▶ **Policy LU2.2:** Allow ~~for land use patterns and mixed-~~ use development that integrates residential and non-residential land uses, ~~such~~ that residents may easily walk or bike to shopping, services, employment, and leisure activities.
- ▶ **Policy LU2.3:** Concentrate higher-intensity uses and appropriate support uses in **Pedestrian Districts and** within close proximity of transit and bikeway corridors, as identified in the **Transit Master Plans and** Bicycle Master Plan. ~~In addition, some component of public~~ **Public** uses, such as parks, plazas, public buildings, community centers, **schools**, and/or libraries, ~~should be located within Pedestrian Districts and transit and bikeway corridors~~ **easily accessible to the public.**
- ▶ **Policy LU2.4:** Promote and encourage the location of employee services, such as child care, restaurants, banking facilities, convenience markets, ~~etc~~ **and other daily needs**, within major employment centers for the purpose of reducing mid-day ~~service-related~~ vehicle trips.
- ▶ **Policy LU2.5:** Where feasible, improve existing developed ~~ment~~ areas to create better pedestrian, **bicycle**, and transit accessibility.
- ▶ **Policy LU2.6:** ~~Through City land use planning and development approvals,~~ Require **proposed** that neighborhood-serving uses (e.g. neighborhood commercial uses, day care, parks, schools, and other community facilities **and services**) **to** be physically linked with adjacent residential neighborhoods **through multi-modal transportation connections.**
- ▶ **Policy LU3.4:** Encourage infill development and ~~rehabilitation~~ **reinvestment** that:
 - Upgrades the quality and enhances the character of existing areas;
 - **Enhances the mix of land uses in proximity to one another so that more households can access services, recreation, and jobs without the use of a car;**
 - ~~enhances~~ **Facilitates pedestrian activity and** public transit use, ~~and pedestrian access;~~
 - **Results in land use patterns and densities that provide the opportunity for the construction of a variety of household-housing types that are** affordable to all income groups.

The proposed General Plan Update goal and policy changes listed above would reduce operational air pollutant emissions impacts by reducing vehicle miles traveled and thereby mobile emissions, promoting energy conservation and efficiency and thereby reducing indirect emissions from energy use, minimizing stationary and area source emissions, encouraging cleaner-fuel vehicles, such as electric vehicles, and working with PCAPCD to implement feasible strategies to reduce operational emissions. Therefore, the proposed goal and policy revisions would not result in any adverse environmental impacts.

Conclusion

As discussed in the analysis above, the project will generate emissions that exceed PCAPCD significance thresholds. PCAPCD currently enforces several rules and regulations that would reduce the long-term operational impacts described above. Rules that establish emissions standards for various commercial and industrial emission sources (e.g., internal combustion engines, gasoline dispensing facilities, water heaters and boilers) and ROG

concentrations in architectural coatings would help reduce operational emissions. In addition, vehicle emission standards established by ARB, such as the Low Emissions Vehicle Program and On-Road Heavy-Duty Program would help reduce long-term, mobile-source emissions.

Existing PCAPCD rules and regulations, combined with existing and proposed General Plan Update policies, would reduce operational emissions impacts. In particular, proposed General Plan Update policies would reduce air quality emissions from various sources (e.g., energy, water, transportation) through the promotion of energy efficient building designs and transportation systems. In addition, as noted above, the revised policies of the proposed General Plan Update promote development and transportation systems that would reduce vehicle emissions by reducing vehicle miles travelled. These policies have been developed to encourage locating residents, jobs, and retail amenities in proximity to each other to reduce the need for motor vehicle travel. These policies encourage modes of transportation that can reduce or eliminate air pollutant emissions. Since transportation is a major source of criteria air pollutants, this is important for reducing the operational impacts of the General Plan. Policies also support development of pedestrian and bicycle facilities that would promote non-vehicular modes of travel. Policies have also been designed to encourage pedestrian, bicycle, and transit access and mobility that would reduce transportation-related air quality impacts. Finally, the proposed General Plan Update would encourage the local use and purchase of electric vehicles, which would further reduce mobile-source emissions within the Planning Area and surrounding Air Basin.

All future development within the Planning Area that could generate substantial emissions would incorporate strategies to reduce emissions, consistent with General Plan policy. In addition, all of the City's Specific Plans have involved preparation of an EIR and adoption and incorporation of mitigation measures into the specific plan to reduce construction-related air pollutant emissions impacts, which would apply to all development within each Specific Plan Area.

Existing General Plan Air Quality Policy 4, Circulation - Transportation Systems Management Policy 2 (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Goals AQ1.1-1.7 and Policies AQ1.1-1.3, AQ1.12-1.18, AQ1.22; Goal CIRC4 and Policies CIRC3.6, CIRC4.1-4.7, CIRC5.1, CIRC6.1-6.3; Policies LU2.1-2.6 and LU3.4, as listed above, would reduce long-term operational air pollutant emissions impacts. However, because the timing and design of future development projects is speculative, and is not known at this time, it is not possible to quantify the extent to which the reduction strategies would result in emission reductions. Consequently, even with adherence to General Plan policies and Specific Plan mitigation measures, operational emissions of all land uses within the Planning Area with full buildout of the General Plan could still result in a net increase of criteria air pollutant emissions that could exceed PCAPCD-recommended thresholds of significance. The PCAPCD thresholds of significance are considered to be the allowable amount of emissions each project can generate without conflicting with or obstructing implementation of the applicable air quality plans developed to maintain and attain ambient air quality standards (PCAPCD 2016). Consequently, because the General Plan could generate long-term criteria air pollutant emissions that exceed the PCAPCD-recommended thresholds, implementation of the General Plan could result in an exceedance of an ambient air quality standard or conflict with or obstruct implementation of the applicable air quality plans. Therefore, this impact would be **significant**.

Mitigation Measures

Mitigation Measure 4.4-2a – The proposed General Plan Update should be amended as follows:

Implementation Measure

Projects that could have a potentially significant effect, as demonstrated by exceedance of the PCAPCD-recommended thresholds of significance, shall incorporate applicable PCAPCD-recommended standard operational mitigation measures, as listed below or as they may be updated in the future, or those design features determined by the City to be as effective:

- ▶ Wood burning or pellet stoves shall not be permitted. Natural gas or propane fired fireplaces shall be clearly delineated on plans submitted to obtain building permits.
- ▶ Where natural gas is available, gas outlets shall be provided in residential backyards for use with outdoor cooking appliances such as gas barbeques.
- ▶ Electrical outlets should be installed on the exterior walls of both the front and back of residences to promote the use of electric landscape maintenance equipment.
- ▶ All newly constructed residential buildings including one- and two-family dwellings, townhomes, and multi-family units in low-rise and high-rise residential buildings shall comply with the California Green Building Standards Code (CalGreen).
- ▶ Covenants, Conditions & Restrictions (CC&Rs) shall include the required distribution of educational information on how homeowners can increase energy efficiency and conservation in their new homes. The information shall be delivered as part of a “move-in” packet prior to occupancy of the residence.
- ▶ Streets should be designed to maximize pedestrian access to transit stops.
- ▶ Site design shall maximize access to transit, to accommodate bus travel, and to provide lighted shelters at transit access points.
- ▶ A pedestrian access network shall link complementary land uses.
- ▶ Provide bicycle storage to promote bicycling.
- ▶ Vanpool parking only spaces and preferential parking for carpools should be required for employment-generating uses.
- ▶ Consider using concrete or other non-polluting materials for paving parking lots instead of asphalt.
- ▶ Landscaping should be designed to eventually shade buildings and parking lots.

Mitigation Measure 4.4-2b – *The proposed General Plan Update should be amended as follows:*

Implementation Measure

If, following implementation of Mitigation Measure 4.4-2a, a project’s operational emissions would still exceed PCAPCD-recommended thresholds of significance, the City would require the project to offset remaining project emissions in excess of thresholds by establishing off-site mitigation or participation in PCAPCD’s Off-site Mitigation Program.

Significance after Mitigation

As discussed above, Mitigation Measures 4.4-2a and 2b would establish on-site and off-site mitigation to reduce operational emissions of criteria air pollutants from development projects within the Planning Area. However, because the specific development projects within the Planning Area cannot be defined at the time of this analysis, precise effectiveness and feasibility of these measures cannot be determined for individual future projects, and operational emissions of criteria air pollutants and precursors could still exceed significance thresholds. After incorporating proposed General Plan Update policies and Mitigation Measure 4.4-2a, certain projects may still have operational emissions that exceed PCAPCD thresholds, and it may not be feasible for all such future projects to contribute to the PCAPCD offsite mitigation program at a level that would reduce the projects' net emissions below the District's recommended thresholds. Such emissions could exceed or contribute substantially to an existing or projected air quality violation and/or expose sensitive receptors to substantial pollutant concentrations. In addition, these emissions could conflict with or obstruct implementation of the applicable air quality plan. There are no additional feasible mitigation measures available to address this impact. This impact is **significant and unavoidable**.

IMPACT 4.4-3 **Expose Sensitive Receptors to Substantial Pollutant Concentrations.** *During construction and operation of the General Plan, localized air pollutant emissions would be generated that could affect existing and proposed sensitive receptors. Construction activities would generate diesel particulate matter (diesel PM) emissions that could affect existing and proposed sensitive receptors. Existing regulations and policies, as well as revised policies would reduce potential exposure to substantial pollutant concentrations. The impact is considered **significant**.*

Some land uses are considered more sensitive to air pollution than others, due to the types of population groups or activities involved. Children, pregnant women, the elderly, those with existing health conditions, and athletes or others who engage in frequent exercise are especially vulnerable to the effects of air pollution. Accordingly, land uses that typically include sensitive receptors include schools, daycare centers, parks and playgrounds, and medical facilities.

Residential areas are considered sensitive to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to pollutants present. Recreational land uses are considered moderately sensitive to air pollution. Exercise places a high demand on respiratory functions, which can be impaired by air pollution, even though exposure periods during exercise are generally short. In addition, noticeable air pollution can detract from the enjoyment of recreation. Industrial and commercial areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent as most of the workers tend to stay indoors most of the time.

Construction activities and the operational phase of the General Plan could involve activities that could expose sensitive receptors to pollutant concentrations.

Short-Term Construction Emissions and Exposure to TACs at Surrounding Land Uses

Implementation of the General Plan would result in the construction of new buildings, structures, paved areas, roadways, utilities, and other improvements. Heavy-duty construction equipment, haul trucks, on-site generators, and construction worker vehicles associated with this construction could generate diesel PM, which the ARB has

identified as a TAC. This includes construction activities associated with development anticipated under the proposed General Plan Update.

Generation of diesel PM from construction projects typically occurs in a single area (e.g., at the project site) for a short period of time but could also include linear infrastructure projects to support new land uses. Because construction activities and subsequent emissions vary depending on the phase of construction (e.g., grading, building construction), the construction-related emissions to which nearby receptors are exposed would also vary throughout the construction period.

During some equipment-intensive phases, such as grading, construction-related emissions would be greater than other less equipment-intensive phases such as building construction or architectural coatings. Even in intensive phases of construction, there would not be substantial pollutant concentrations, with the potential exception of the immediate vicinity of the construction site. Concentrations of mobile-source diesel PM emissions are typically reduced by 70 percent at a distance of approximately 500 feet (ARB 2005).

The dose to which receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance in the environment and the extent of exposure a person has with the substance; a longer exposure period to a fixed amount of emissions would result in higher health risks for the Maximally Exposed Individual (MEI). According to the Office of Environmental Health Hazard Assessment (OEHHA), health risk assessments (HRAs) used to determine the exposure of sensitive receptors to TAC emissions should be based on a 30-year exposure period.

Construction activities associated with the General Plan would produce intermittent and temporary construction emissions. Development would occur throughout the Planning Area, including infill and mixed-use development and around existing sensitive receptors. However, because the use of off-road heavy-duty diesel equipment would be temporary and intermittent, and because of the highly dispersive properties of diesel PM (concentrations lower extremely quickly over distance; Zhu et al. 2002), construction-related TAC emissions associated with typical construction activities are not expected to expose sensitive receptors to substantial concentrations of TACs.

In addition, it is important to note that emissions from construction equipment would be reduced over the period of buildout of the General Plan. In January 2001, EPA promulgated a final rule to reduce emissions standards for heavy-duty diesel engines in 2007 and subsequent model years. These emissions standards represented a 90 percent reduction in NO_x emissions, 72 percent reduction of non-methane hydrocarbon emissions, and 90 percent reduction of PM emissions in comparison to the emissions standards for the 2004 model year. In December 2004, ARB adopted a fourth phase of emission standards (Tier 4) in the Clean Air Non-road Diesel Rule that are nearly identical to those finalized by EPA on May 11, 2004. As such, engine manufacturers were required to meet after-treatment-based exhaust standards for NO_x and PM starting in 2011 that are more than 90 percent lower than 2004 levels, putting emissions from off-road engines virtually on par with those from on-road heavy-duty diesel engines. As construction equipment continues to turnover and/or be retrofitted over time, diesel PM emissions associated with construction will continue to decrease.

The following goal and policy related to exposure of sensitive receptors to construction-related TAC emissions would be revised as a part of the proposed General Plan Update, with additions shown in **bold, underlined** text and deletions shown in ~~striketrough~~ text:

Goal AQ1.1: ~~Improve Roseville's air quality by: a) — Achieving and~~ **Reduce local air pollutant emissions to assist with meeting and** maintaining ambient air quality standards established by the U.S. Environmental Protection Agency and the California Air Resources Board; and, ~~b) and~~ minimizing public exposure to toxic or hazardous air pollutants and air pollutants that create a public nuisance through irritation to the senses (such as unpleasant odors).

- **Policy AQ1.3:** ~~Projects that could generate substantial air pollutant emissions or expose sensitive uses to substantial air pollutant concentrations should incorporate strategies to reduce operational emissions, applicable emissions control~~ **exposure to such emissions using measures recommended by the Placer County Air Pollution Control District, and other relevant applicable, feasible strategies, as needed, to avoid significant air quality impacts** ~~Develop consistent and accurate procedures for evaluating the air quality impacts of new projects.~~

The proposed General Plan Update changes listed above would reduce air pollutant emissions, including TAC emissions, and therefore these changes would not result in any adverse environmental impacts.

Conclusion – Construction Emissions

Compliance with California state laws that limit the idling of heavy-duty vehicles and equipment would limit the on-site generation of DPM within the bounds of any construction site within the Planning Area. PCAPCD rules (including Rule 202, 205, 217, and 218) would limit construction-related emissions, including DPM and ROG emissions. The proposed General Plan Update Policy AQ1.3 calls for the implementation of strategies to reduce exposure to such emissions. Proposed General Plan Update Policy AQ1.3, is designed to reduce emissions generated by projects developed within the Planning Area by incorporating strategies recommended by PCAPCD to reduce exposure to such emissions, such as the use of electrified equipment, setbacks for staging areas from sensitive users, limitations on vehicle idling, and other measures. All future development within the Planning Area that could generate substantial emissions will incorporate strategies to reduce emissions, consistent with General Plan policy. While the selection of specific measures would be project-specific, incorporation of measures such as use of diesel-powered construction equipment with engines that meet high tier emission standards (such as Tier 2, 3, or 4), adherence to idling limitations, and use of alternatively-fueled equipment where possible, would all reduce construction-related emissions of diesel exhaust, and thereby DPM during short-term construction activities that could occur in proximity to sensitive receptors. In addition, all the City's Specific Plans included preparation of an EIR and mitigation measures to reduce air pollutant emissions impacts, which would apply to all development within each Specific Plan Area.

All future development with the potential to generate substantial construction-related emissions would be required to reduce those emissions. Adherence to California state law limiting idling of heavy-duty equipment and vehicles, PCAPCD rules, and proposed General Plan Update Policy AQ1.3, would reduce exposure of sensitive receptors to substantial TAC concentrations. Emissions from construction equipment would be reduced during the planning horizon as rules and regulations are phased in and the construction equipment fleet becomes cleaner. The use of off-road heavy-duty diesel equipment during construction would be temporary and intermittent and diesel PM would disperse quickly with distance from construction sites. Health risk assessments use a 30-year exposure period when analyzing potential effects, and construction schedules for projects implemented under the General Plan would be substantially shorter than this. While infill development will occur during the planning horizon, the

City does not anticipate the scale of infill development adjacent to sensitive receptors that would result in any potentially significant impact. Therefore, the impact is considered **less than significant**.

Long-Term Operational Emissions and Exposure to TACs at Surrounding Land Uses

The General Plan Land Use Map includes residential, commercial, and industrial uses. Residential land uses do not typically generate substantial TAC emissions. Commercial land uses may potentially include stationary sources of TACs, such as dry-cleaning establishments and diesel-fueled back-up generators.³ These types of stationary sources, in addition to any other stationary sources (including industrial land uses) that may emit TACs would be subject to PCAPCD Rules and Regulations. Land uses that are more likely to generate substantial TAC emissions include industrial land uses that involve stationary sources and manufacturing processes.

ARB has developed the *Air Quality and Land Use Handbook: A Community Health Perspective* (ARB Handbook) to provide guidance on land use compatibility with sources of TACs (ARB 2005). These sources include freeways and high-traffic roads, commercial distribution centers, rail yards, refineries, dry cleaners, gasoline stations, and industrial facilities. The handbook is not a law or adopted policy but offers advisory recommendations for the siting of sensitive receptors near uses associated with TACs. The handbook indicates that land use agencies have to balance other considerations, including housing and transportation needs, economic development priorities, and other quality of life issues.

The recommendations relevant to the General Plan include:

- ▶ Avoid siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles per day, or rural roads with 50,000 vehicles per day.
- ▶ Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or where TRU unit operations exceed 300 hours per week).
- ▶ Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard. Within one mile of a rail yard, consider possible siting limitations and mitigation approaches.
- ▶ Avoid siting new sensitive land uses within 1,000 feet of a chrome plater.
- ▶ Avoid siting new sensitive land uses within 300 feet of any dry cleaning operation. For operations with two or more machines, provide 500 feet. For operations with 3 or more machines, consult with the local air district. Do not site new sensitive land uses in the same building with perc dry cleaning operations.

³ Potential risk associated with dry cleaners has, and will continue to be, dramatically reduced. At its public hearing on January 25, 2007, the ARB approved amendments to the Dry Cleaning ATCM and the adoption of requirements for Perc manufacturers and distributors. The amendments will over time phase out the use of Perc dry cleaning machines and related equipment by January 1, 2023. In addition, the amendments will put in place revisions to the Curriculum for the Environmental Training Program for Perc Dry Cleaning Operations (Training Curriculum). On December 27, 2007, the approved Dry Cleaning ATCM and the requirements for Perc manufacturers and distributors became state law.

- ▶ Avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50-foot separation is recommended for typical gas dispensing facilities.

Within or adjacent to the Planning Area, there are two freeways (Interstate 80 and State Highway 65), several distribution centers, a rail yard, dry cleaning operations, and gas stations, but there are no existing chrome platers. Areas with a land use designation of General Industrial on the City's General Plan Land Use Map allow heavy industrial uses, such as chrome platers, so there is the potential for such a use to be proposed in the future.

Freeways/High Capacity Roadways

None of the City's roadways would have traffic volumes in excess of 100,000 trips a day; therefore the ARB siting guidelines do not apply to the City's roadways. However, the City includes two freeways: Interstate 80 and Highway 65. Daily vehicle volumes on Interstate 80 within the Planning Area boundaries range from approximately 125,300 average annual daily trips at the northern boundary of the Planning Area along Interstate 80 at the junction with State Route 65 to approximately 192,100 average annual daily trips at the southern boundary of the Planning Area along Interstate 80 at the Sacramento – Placer County Line. Similarly, daily vehicle volumes along State Route 65 within the Planning Area range from approximately 76,800 average annual daily trips at Washington Boulevard to 117,000 average annual daily trips at the junction with Interstate 80. These traffic volumes exceed the 100,000 vehicles per day threshold that defines a high-volume roadway in an urban area (California Public Resources Code Section 21151.8) and for which ARB recommendations to avoid siting new sensitive land uses within 500 feet are applicable.

Although the ARB Handbook recommends siting sensitive receptors, such as residential uses, at least 500 feet from a freeway, it is recognized that siting such uses near major transportation hubs can reduce VMT and GHG. In many communities, infill and compact development is located near freeways and has many benefits, including the reduction of certain air emissions due to increased active transportation (promoting biking and walking), providing more transit-oriented development, and shortening personal vehicle trips, as well as facilitating community connectivity. While a per-capita reduction in vehicle miles travelled can often be achieved locally from infill and compact development, it is important to still consider potential exposure near high-volume roadways, particularly Interstate 80 and State Route 65 that see a substantial amount of traffic from pass-through regional trips, not only local trips.

Following the 2005 publication of the Handbook, ARB also published the *Technical Advisory: Strategies to Reduce Air Pollution Exposure Near High-Volume Roadways* as a supplement to the Handbook to provide information on scientifically based strategies to reduce exposure to emissions near high-volume roadways in order to protect public health (ARB 2017). This Technical Advisory explains that reduced exposure to traffic-related pollution can be achieved while pursuing infill development that independently provides public health benefits. With careful evaluation of exposure, health risks, and affirmative steps to reduce risk, where necessary, ARB's assumption is that infill development, mixed use, higher density, transit-oriented development, and/or other development types that benefit regional air quality can be compatible with protecting the health of individuals at the neighborhood level. The Technical Advisory identifies strategies to reduce air pollution exposure near roadways, including those that reduce vehicular emissions, such as incorporation of roundabouts for speed reduction, traffic signal management, and speed limit reductions on high-speed roadways (those greater than 55 miles per hour); strategies that reduce the concentrations of traffic pollution, such as urban design that promotes

air flow, solid barriers to pollution, and vegetation to reduce pollutant concentrations; and strategies that remove pollution from indoor air such as through high efficiency filtration. Without the inclusion of such strategies, development near the high-volume roadways in the Planning Area could expose future sensitive receptors to substantial mobile sources of TACs.

Diesel Trucks: Loading Docks and Distribution Sites

Operational activities that require the use of diesel-fueled vehicles for extended periods, such as commercial trucking facilities or delivery/distribution areas, may generate diesel PM emissions that could expose sensitive receptors to diesel PM emissions. Although project-specific commercial and industrial uses that would be developed under the General Plan cannot be identified at this time, it is possible that uses developed under the General Plan could have tenants that would require large delivery and shipping trucks that use diesel fuel. The diesel exhaust PM emissions generated by these uses would be produced primarily at single locations on a regular basis (e.g., loading dock areas). Idling trucks, including TRUs, increase diesel PM levels at these locations. Occupants of nearby existing and proposed residences could be exposed to diesel exhaust PM emissions on a reoccurring basis.

To address these potential impacts, ARB has adopted an idling restriction Airborne Toxic Control Measure (ATCM) for large commercial diesel-powered vehicles, which became effective February 1, 2005. In accordance with this measure, affected vehicles are required to limit idling to no longer than 5 minutes, under most circumstances. In addition, projects that utilize TRUs as part of their operations or facilities that meet the required number of loading docks would be required to comply with the ARB's Transport Refrigeration Unit ATCM, which sets in-use emission performance standards for TRUs to limit diesel PM emissions.

The regulations described above address the smaller-scale loading docks and sites, such as large-format retail stores and grocery stores, which have intermittent deliveries. However, this may not be sufficient for distribution centers, which experience large volumes of daily truck traffic. The ARB Handbook recommends sensitive uses be located a minimum of 1,000 feet from distribution centers, to allow the dispersion (lowering concentration) of air pollutants over distance. Distribution centers are permitted within the City's industrial land use designations. None of the City's existing distribution centers are located within 1,000 feet of a residential area or other sensitive receptor, but future development could expose sensitive receptors to diesel exhaust PM emissions.

Roseville Rail Yard

In October 2004, ARB released the Roseville Rail Yard Study that included a health risk assessment of the DPM emissions from locomotive operations at the Rail Yard (ARB 2004). Key findings of the Roseville Rail Yard Study include:

- ▶ The DPM emissions in 2000 from locomotive operations at the Roseville Rail Yard were estimated to be about 25 tons per year.
- ▶ The health risk assessment showed elevated concentrations of DPM and associated cancer risk impacting a large area around the Rail Yard. These elevated concentrations, which are above the regional background level, contribute to an increased risk of acute and chronic health conditions.

- ▶ With implementation of mitigation, DPM emissions reported in 2007 were 19 tons (down from 25 tons in 2000).

Since the release of the ARB 2004 Roseville Rail Yard Study and subsequent report for the Roseville Rail Yard Air Monitoring Project, locomotive emissions standards have increased through the EPA adoption of regulations to tighten emission standards for existing and remanufactured locomotives, and set exhaust emission standards for newly build locomotives of model years 2011–2014 (Tier 3) and 2015 and beyond (Tier 4). The regulation is expected to reduce PM emissions from locomotive engines by as much as 90 percent and oxides of nitrogen (NO_x) emissions by as much as 80 percent when fully implemented. With use of engines that meet more stringent emissions standards, it is expected that the overall health risk associated with the Roseville Rail Yard has been reduced from that identified by the 2004 ARB study. However, an updated health risk assessment of the Roseville Rail Yard has not been prepared since 2004 and the recommended buffer distance identified in the Air Quality and Land Use Handbook (ARB 2005), which is based upon findings from the Roseville Rail Yard study, is a reasonable minimum buffer distance to adhere to for separation of the Roseville Rail Yard and sensitive receptors.

As discussed previously for high-volume roadways, there are strategies that can be implemented to reduce air quality impacts, and allow the siting of sensitive receptors in closer proximity to the Roseville Rail Yard. While the ARB Technical Advisory presents strategies specifically in the context of high-volume roadways, the ARB Technical Advisory acknowledges that scientific evidence indicates that implementing the strategies contained in the Technical Advisory would decrease exposure to air pollution in a variety of locations and contexts, so these strategies are applicable in a broad range of developments, not just those located near high-volume roadways. In addition, ARB is working to reduce harmful emissions from locomotives and railyards and has draft concepts to reduce toxic air contaminants for locomotives in-use, idling, and maintenance activities, as well as emissions from other equipment at railyards. While these actions are not yet approved or implemented, ARB has demonstrated success in working with the South Coast Air Quality Management District. ARB has also petitioned EPA for locomotive engine emissions standards that would exceed the current Tier 4 emissions standards. Should these concepts and more stringent emissions standards go into effect throughout the planning horizon of the General Plan, emissions associated with the Rail Yard can be assumed to be further reduced over time.

Other Sources of TACs

Other sources of TACs include, but are not limited to, industrial processes, such as petroleum refining and chrome plating operations, and commercial operations, such as gasoline stations and dry cleaners. Within or adjacent to the Planning Area, there are dry cleaning operations and gas stations, but there are no existing chrome platers. The City's Land Use Map includes light industrial, industrial, and commercial land uses. The City's land use designations define allowable land use broadly, and provide for a range of consistent land uses typical of each land use type. The Zoning Ordinance, Specific Plans, and Community Design Guidelines provide more specific standards to ensure compatibility among adjacent land uses. The Land Use Element of the General Plan specifies the uses allowable within each land use designation type, as well as compatibility for adjacent land use designations.

While these standards will help reduce potential exposure of sensitive receptors to operational-source TAC emissions, industrial and commercial operations within the Planning Area could include facilities that would emit TACs, such as fueling stations, in proximity to proposed or existing sensitive receptors. The ARB Handbook recommends sensitive uses be located a minimum of 1,000 feet of a chrome plater, 300 feet of any dry cleaning

operation or 500 feet of a dry cleaning operation with two or more machines, and 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater) or 50 feet from a typical gas dispensing facility, to allow the dispersion (lowering concentration) of air pollutants over distance. In addition, any future or proposed facility or equipment that may emit pollutants from a stationary source into the atmosphere must first obtain an Authority to Construct permit from the PCAPCD. The PCAPCD reviews each proposed use and if it is determined that there are potential risks, a risk assessment and menu of site-specific measures that would lessen impacts associated with TACs would be required to be implemented.

The following policies related to operational TAC emissions in Roseville would be revised as a part of the proposed General Plan Update, with additions shown in **bold, underlined** text and deletions shown in ~~strikethrough~~ text:

- ▶ **Policy AQ1.2:** Work with the Placer County Air Pollution Control District to monitor air pollutants of concern on a continuous basis: **and support Air District efforts to minimize emissions from stationary sources.**
- ▶ **Policy AQ1.3:** **Projects that could generate substantial air pollutant emissions or expose sensitive uses to substantial air pollutant concentrations should incorporate strategies to reduce** ~~operational emissions, applicable emissions control~~ **exposure to such emissions using measures recommended by the Placer County Air Pollution Control District, and other relevant applicable, feasible strategies, as needed, to avoid significant air quality impacts** ~~Develop consistent and accurate procedures for evaluating the air quality impacts of new projects.~~
- ▶ **Policy AQ1.12:** Develop transportation systems that ~~minimize vehicle delay and~~ **reduce vehicle emissions by improving the desirability of walking, bicycling, and public transportation relative to vehicular travel** ~~air pollution.~~
- ▶ **Policy AQ1.13:** ~~Develop~~ **Identify feasible strategies to reduce** ~~consistent and accurate procedures for mitigating transportation emissions from new and existing projects~~ **and transportation associated with existing development within the Planning Area.**
- ▶ **Policy AQ1.14:** Encourage alternative modes of transportation, including pedestrian, bicycle, and transit ~~usage~~ **use.**
- ▶ **Policy AQ1.16:** ~~Encourage~~ **Implement** land use policies that maintain and improve air quality **and expand opportunities for transit-oriented development, which allows residents to significantly reduce vehicular transportation and associated air pollutant emissions.**
- ▶ **Policy AQ1.22:** **Support improvements to diesel engines, limits on idling, and incorporation of technology and management practices that reduce harmful emissions at the Rail Yard.**

The proposed General Plan Update changes listed above would reduce potential health impacts associated with TAC emissions by promoting the separation of sensitive land uses from sources of TACs, minimizing emissions from stationary sources, reducing vehicle miles traveled and therefore congestion on the high-volume roadways (Interstate 80 and Highway 65) and associated mobile emissions, and reducing emissions associated with the Rail Yard. Therefore, the proposed policy revisions would not result in any adverse environmental impacts.

Conclusion – Long-term Operations

Existing General Plan Air Quality Policy 4 and 8 (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Policies AQ1.2, 1.3, AQ1.12, AQ1.13, AQ1.14, AQ1.16, and AQ1.22, as listed above, would help to reduce operational TAC emissions. However, because specific development proposals cannot be determined at this time, it is possible that development planned under the General Plan could generate substantial TAC emissions as a result of long-term operations. In addition, individual development projects could be located within the siting distances recommended by ARB's Air Quality and Land Use Handbook, and sensitive receptors could experience the adverse health effects from TACs. With general plans, it is not possible to list each type of new stationary source or describe TAC exposure for any given project or location within the Planning Area without substantial speculation. It is expected that projects developed consistent with the General Plan would include stationary sources of TACs, such as gasoline-dispensing facilities, dry cleaners, and diesel-fueled backup generators. These stationary sources require permits from the PCAPCD, to ensure emissions do not exceed standards, and do not result in significant impacts. In addition, it is possible, particularly with the promotion of infill development near Interstate 80 and west of the Roseville Rail Yard, as well as development along State Route 65, that new sensitive receptors would be sited in proximity to existing sources of mobile TAC emissions. Without incorporation of recommended buffer distances between sensitive receptors and TAC sources, as described above, and/or inclusion of design features to reduce exposure to TACs, future sensitive receptors could be exposed to substantial concentrations of TACs. This impact is **significant**.

Mitigation Measures

Mitigation Measure 4.4-3 – The proposed General Plan Update should be amended as follows:

Implementation Measure

- ▶ The City shall require, as part of plans for development within the Planning Area, the implementation of ARB's *Air Quality and Land Use Handbook: A Community Health Perspective* guidance concerning land use compatibility and recommended setback distances with regard to sources of TAC emissions and sensitive land uses, or related guidance as it may be updated in the future.
- ▶ As an alternative to these buffer distances, proposed sensitive receptors, uses that involve substantial truck trips, and large gas stations may provide a site-specific health risk assessment, using methods consistent with applicable guidance from the Office of Environmental Health Hazard Assessment, with mitigation, if necessary, to demonstrate compliance with applicable PCAPCD-recommended health risk thresholds. When health risk impacts exceed PCAPCD-recommended thresholds, feasible on-site mitigation measures to reduce TAC exposure shall be implemented to mitigate health risk impacts below PCAPCD-recommended thresholds. On-site measures could include but are not limited to providing enhanced filtration systems (e.g., MERV 13 or greater) for near-by sensitive receptor buildings, use of solid barriers to pollution, and vegetation to reduce pollutant concentrations, changes to the TAC emission source's operation (e.g. technology or management practices that reduce harmful emissions at the Rail Yard), and positioning of exhaust and intake for ventilation systems to minimize exposure, among others.
- ▶ The City shall require, as part of development of land uses associated with sensitive receptors within 500 feet of high-volume roadways (defined as roadways carrying an average of 100,000 or more vehicles per day), the

incorporation of feasible design measures to reduce exposure by sensitive receptors of substantial emissions of TACs from nearby high-volume roadways and operation of the Roseville Rail Yard. Design measures shall include recommended strategies from the ARB Technical Advisory, as listed below or as they may be updated in the future, or those design features determined by the City to be as effective:

- Design that promotes air flow and pollutant dispersion along street corridors, including the use of wider sidewalks, bicycle lanes, and dedicated transit lanes, which create space for better air flow and pollutant dispersion along with increasing active transportation and mode shift;
- Installation of solid barriers, particularly in the downwind direction. Note that consideration of this strategy should also weigh the negative effect of dividing neighborhoods and obscuring sightlines.
- Installation of vegetation for pollutant dispersion; maximum benefit of this strategy is typically seen when combined with solid barriers.
- Installation of indoor high-efficiency filtration systems and devices to remove pollutants from the air. If this strategy is selected, a plan for ongoing operation and maintenance of the systems must also be developed to ensure long-term efficiency is achieved as intended by the system.

Significance after Mitigation

Conclusion – Construction Emissions

As noted above, construction-related effects are less than significant without the need for additional mitigation.

Long-Term Operations

As discussed under Impact 4.4-2, Mitigation Measure 4.4-2a would establish mitigation to reduce operational emissions of criteria air pollutants, including DPM, from development projects within the Planning Area. With implementation of this mitigation, buildout of the General Plan would be compliant with General Plan Policies AQ-3, AQ-14, and AQ-16. Mitigation Measure 4.4-3 discourages development in locations that would conflict with the buffer recommendations by ARB (ARB 2005). In the case that recommended buffer distances cannot be achieved, Mitigation Measure 4.4-3 also requires the implementation of design features specifically considering reduction in generation of and exposure to TACs. Mitigation Measure 4.4-3 would also reduce exposure for future sensitive receptors along high-volume roadways within the Planning Area by requiring the implementation of feasible design features identified by ARB as potential strategies to reduce exposure to TACs along high-volume roadways, such as Interstation 80 and State Route 65, as well as near the Roseville Rail Yard. Regarding permitted sources, as described above, the PCAPCD issues permits and monitors new and modified sources of air pollutants to ensure compliance with national, state, and local emissions standards that govern TAC sources. While these measures reduce potential likelihood of exposure of sensitive receptors to substantial pollutant concentrations, because the specific development projects within the Planning Area cannot be defined at the time of this analysis, precise effectiveness of these measures cannot be determined and the potential for sensitive receptors to be exposed to TACs is still considered significant. There are no additional feasible mitigation measures available. This impact is **significant and unavoidable**.

IMPACT 4.4-4 **Result in Concentrated Carbon Monoxide Levels ("hotspots").** *Buildout of the General Plan would contribute vehicles to local intersections that could cause a CO hotspot (i.e., exceedance of the CO ambient air quality standard). However, due to requirements for cleaner vehicle emissions, proposed land use and transportation goals and policies, and use of intelligent transportation system equipment, it is not anticipated that the General Plan's land uses would contribute substantial vehicle volumes to existing or future intersections that could cause a CO hotspot. The impact is considered **less than significant**.*

A mobile-source pollutant of localized concern is CO. Continuous engine exhaust may elevate localized CO concentrations, or "hot spots." Local mobile-source emissions of CO near roadway intersections are a direct function of traffic volume, speed, and delay. CO typically disperses rapidly with distance from the source under normal meteorological conditions. Under specific meteorological conditions, CO concentrations near roadways and/or intersections may reach unhealthy levels for local sensitive land uses such as residential units, hospitals, schools, and childcare facilities. CO hot spots are typically observed at heavily congested roadway intersections where a substantial number of gasoline-powered vehicles idle for prolonged durations throughout the day. Construction sites are less likely to result in localized CO hot spots due to the nature of construction activities, which normally utilize diesel-powered equipment for intermittent or short durations.

Emissions and ambient concentrations of CO have decreased substantially throughout California in the past three decades. The national statewide CO standard is attained statewide in California, and an exceedance of NAAQS or CAAQS in the region was last recorded in 1993. This is primarily attributable to requirements for cleaner vehicle emissions. The Federal Motor Vehicle Control Program has mandated increasingly lower emission levels for vehicles manufactured since 1973. Between 2000 and 2016, national average CO concentrations decreased by approximately 61 percent and regional average CO concentrations in the California and Nevada region decreased by approximately 60 percent (EPA 2018b).

While ambient CO concentrations in the region have not exceeded NAAQS or CAAQS in many years, localized CO concentrations could still occur, particularly at intersections of high-volume roadways. As described in the methodology section above, the PCAPCD screening criteria are used below to evaluate potential CO hot spot impacts. According to the PCAPCD screening criteria, a project could have the potential to create a violation of the CO standard if the project's CO emissions from vehicle operations are more than 550 pounds per day and if either of the following scenarios are true for any affected intersection:

- ▶ A traffic study for the project indicates that the peak-hour LOS on one or more streets or at one or more intersections (both signalized and non-signalized) in the project vicinity will be degraded from an acceptable LOS (e.g., A, B, C, or D) to an unacceptable LOS (e.g., E or F); or
- ▶ A traffic study indicates that the project will substantially worsen an already existing unacceptable peak-hour LOS on one or more streets or at one or more intersections in the project vicinity. "Substantially worsen" includes situations where a delay would increase by 10 seconds or more when project-generated traffic is included.

Although emissions modeling for operations under full buildout of the General Plan indicates that mobile-generated emissions of CO would exceed 550 pounds per day, these emissions estimates account for all mobile operations throughout the Planning Area and not those associated with one specific development project associated with the 2035 General Plan.

The City of Roseville invests in intelligent transportation system (ITS) equipment, including interconnecting traffic signals, enhanced signal controllers, and traffic cameras that allow traffic engineers to monitor real-time conditions, make modifications to signal operations, and be alerted to problems at intersections or with the traffic signal system. ITS can also obtain congestion data and traffic counts. By making traffic flow more efficiently, ITS avoids excessive congestion and improves the operational performance of the City's roadway system.

While use of ITS equipment is likely to minimize traffic congestion and reduce the chance for CO hotspots throughout the Planning Area, because the traffic study indicates that the project will worsen already existing peak-hour LOS F on one or more streets or at one or more intersections in the Planning Area, it is conservatively assumed that buildout of the 2035 General Plan could exceed PCAPCD's recommend CO hotspot screening criteria.

PCAPCD works closely with the Sacramento Metropolitan Air Quality Management District (SMAQMD) due to their proximity and similar air quality issues. SMAQMD provides additional screening methods to determine if a project would have the potential to create a violation of the CO standard. If all of the following criteria are met, the General Plan would result in a less-than-significant impact on air quality for local CO:

- ▶ The project would not result in an affected intersection experiencing more than 31,600 vehicles per hour.
- ▶ The project would not contribute traffic to a tunnel, parking garage, bridge underpass, urban street canyon, below-grade roadway, or other locations where horizontal or vertical mixing of air would be substantially limited.
- ▶ The mix of vehicle types at the intersection is not anticipated to be substantially different from the County average.

According to traffic analysis performed in support of this EIR, average daily traffic volumes would range from approximately 3,100 vehicles per day to a maximum of 76,200 vehicles per day, which would occur on Blue Oaks Boulevard between Foothills and Washington boulevards. The peak-hour volumes are anticipated to be approximately 7,600 vehicles per hour. To exceed the screening criteria value of 31,600 vehicles per hour, traffic levels would need to increase by more than four times the volume that is anticipated with buildout of the General Plan. Therefore, buildout of the General Plan would not increase traffic volumes on the roadways and at intersections to more than 31,600 vehicles per hour. In addition, the ITS system would address concerns of potential CO concentrations being trapped in a tunnel, parking garage, bridge underpass, urban street canyon, or below-grade roadway by allow traffic engineers to monitor real-time conditions, make modifications to signal operations, and be alerted to problems at intersections or with the traffic signal system. Finally, the mix of vehicle types within the Planning Area would not be different from the County average. If anything, transportation planning would promote the reduced reliance on personal automobiles, increased use of public transit, and increased use of alternative fuel vehicles compared to the County average, thereby reducing potential mobile-source CO emissions.

The City's Specific Plans each included a traffic analysis and an evaluation of potential CO hotspots. Most recently, the City's existing General Plan land uses were adopted in conjunction with the adoption of the Amoruso Ranch Specific Plan and associated EIR. The Amoruso Ranch Specific Plan EIR included a quantified hotspots analysis of the City's most congested intersections, and the analysis of CO hotspots found that, even at

the most heavily travelled intersection within the Planning Area, CO concentrations would be expected to be significantly lower than the NAAQS and would not pose any risk of generating a CO hotspot.

The following policies related to CO hotspots would be revised as a part of the proposed General Plan Update, with additions shown in **bold, underlined** text and deletions shown in ~~strikethrough~~ text:

- ▶ **Policy AQ1.12:** Develop transportation systems that ~~minimize vehicle delay and~~ **reduce vehicle emissions by improving the desirability of walking, bicycling, and public transportation relative to vehicular travel** ~~air pollution.~~
- ▶ **Policy AQ1.13:** Develop **Identify feasible strategies to reduce** ~~consistent and accurate procedures for mitigating~~ transportation emissions from new ~~and existing~~ projects **and transportation associated with existing development within the Planning Area.**
- ▶ **Policy AQ1.14:** Encourage alternative modes of transportation, including pedestrian, bicycle, and transit ~~usage~~ **use.**
- ▶ **Policy AQ1.15:** **Promote and incentivize low-emissions vehicles and associated charging infrastructure. Pursue funding from state programs and other sources to facilitate local purchase and use of electric vehicles.**
- ▶ **Policy AQ1.16:** ~~Encourage~~ **Implement** land use policies that maintain and improve air quality **and expand opportunities for transit-oriented development, which allows residents to significantly reduce vehicular transportation and associated air pollutant emissions.**
- ▶ **Policy CIRC2.1:** Maintain a ~~level of service (LOS)~~ "C" standard at a minimum of 70 percent of all signalized intersections and roadway segments in the City during the a.m. and p.m. peak hours. Exceptions to the LOS "C" standard may be considered ~~for intersections where the City finds that the required improvements are unacceptable based on established criteria identified in the implementation measures~~ **required to achieve the standard would adversely affect pedestrian, bicycle, or transit access, or where feasible LOS improvements and travel-demand-reducing strategies have been exhausted.**
- ▶ **Policy CIRC2.2:** Strive to meet the level of service standards through a balanced transportation system that reduces the auto emissions that contribute to climate change by providing alternatives to the automobile and avoiding excessive vehicle congestion through roadway improvements, Intelligent Transportation Systems, **pedestrian and bicycle improvements**, and transit improvements.
- ▶ **Policy CIRC2.3:** Work with neighboring jurisdictions to provide acceptable and compatible levels of service on the roadways that cross the City's boundaries.
- ▶ **Policy CIRC2.4:** Secure adequate funding for all components of the City's transportation system to ensure level of service policy is maintained.
- ▶ **Policy CIRC2.5:** ~~Enable the City to designate a Pedestrian District over a geographic area for the purpose of implementing measures that promote pedestrian walkability and reduce total vehicle miles traveled and resultant air pollution emissions that contribute to climate change. In these districts, the City recognizes that pedestrian~~ **and bicycle** travel takes **and transit access have** a higher priority than automobile travel, ~~which~~

~~could reduce the vehicular level of service.~~ **in the City’s Pedestrian Districts, and development projects in these areas are exempt from the City’s LOS standard.**

► **Policy CIRC2.6: Prioritize investments in pedestrian, bicycle, and transit access in Pedestrian Districts.**

The proposed General Plan Update policy changes listed above would reduce the potential for CO hotspots to occur by reducing vehicle miles traveled and thereby roadway congestion, promoting and incentivizing low-emissions vehicles, requiring LOS standards be met, and promoting pedestrian, bicycle, and transit access in Pedestrian Districts, and therefore this change would not result in any adverse environmental impacts.

Conclusion

Existing General Plan Level of Service Policies 2, 3, and 4 (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Policies AQ1.12 through 1.16, and CIRC2.5 and 2.6, listed above, would help to reduce the potential for CO hotspots. The City of Roseville ITS also serves to improve traffic flow, avoid excessive congestion, and improve the operational performance of the City’s roadway system, thereby reducing the likelihood for and extent of delays at intersections. In addition, as described in the foregoing analysis, the level of traffic on the roadways within the Planning Area would not reach a level that would generate a quantity of CO emissions from mobile sources that would result in or substantially contribute to a CO hotspot within the Planning Area. This impact would be considered **less than significant**.

| | |
|------------------------|--|
| IMPACT 4.4-5 | Result in Other Emissions (such as those leading to odors) Adversely Affecting a Substantial Number of People. <i>The proposed General Plan Update includes policies that would avoid exposure of a substantial number of people to objectionable odors. This impact is significant.</i> |
|------------------------|--|

Buildout of the General Plan could involve actions that would expose people to objectionable odors. The human response to odors is subjective and sensitivity to odors varies greatly among the public. Two situations increase the potential for odor problems. The first occurs when a new odor source is located near existing sensitive receptors. The second occurs when new sensitive receptors are developed near existing sources of odors.

During construction, the predominant source of power for construction equipment is diesel engines. Odors from these sources would be localized and generally confined to the immediate area surrounding the development area. Exhaust odors from diesel engines, as well as emissions associated with asphalt paving and the application of architectural coatings, may be considered offensive to some individuals. Similarly, diesel-fueled trucks traveling on local roadways would produce associated diesel exhaust fumes. However, odors associated with diesel fumes, asphalt paving, and architectural coatings would be temporary and would disperse rapidly with distance from the source. Projects constructed within the Planning Area would use typical construction techniques, and the odors would be typical of most construction sites and temporary in nature.

Operationally, the following land use types are widely considered major sources of odors: wastewater treatment and pumping facilities, chemical manufacturing facilities, sanitary landfills, fiberglass manufacturing facilities, transfer stations, painting/coating operations (e.g., auto body shops), composting facilities, food processing facilities, confined animal facilities, asphalt batch plants, rendering plants, metal smelting plants, and coffee roasters. This list is meant not to be entirely inclusive, but to act as general guidance. Future development of the Planning Area would include multiple land use types. Surrounding land uses include both agricultural and

industrial land uses, which are likely to generate odors that are detectable within and in the vicinity of the Planning Area. Future development within the Planning Area could result in the siting of sensitive receptors that would be exposed to these odor sources. It cannot be known at this time what specific development would be implemented and if any development would generate objectionable odors.

In the context of land use planning, one of the most important factors influencing the potential for an odor impact to occur is the distance between the odor source and receptors, or a “buffer zone.” The PCAPCD Handbook refers to the neighboring SMAQMD recommendations for buffer distances between sensitive receptors and a variety of odor-generating sources. These recommended buffer distances are listed below in Table 4.4-6.

| Table 4.4-6 Odor Screening Distances for Consideration in Land Use Planning | |
|--|--|
| Land Use / Type of Operation | Suggested Buffer Screening Distance |
| Wastewater Treatment Plant | 2 miles |
| Wastewater Pumping Facilities | 1 mile |
| Sanitary Landfill | 1 mile |
| Transfer Station | 1 mile |
| Composting Facility | 2 miles |
| Petroleum Refinery | 2 miles |
| Asphalt Batch Plant | 2 miles |
| Chemical Manufacturing | 1 mile |
| Fiberglass Manufacturing | 1 mile |
| Painting / Coating Operations | 1 mile |
| Rendering Plant | 4 miles |
| Coffee Roaster | 1 mile |
| Food Processing Facility | 1 mile |
| Feed lot / Dairy | 1 mile |
| Green Waste and Recycling Operations | 2 miles |
| Metal Smelting Plants | 1 mile |
| Source: SMAQMD 2016 | |

Odor sources in the Planning Area would be expected to include cooking and food processing facilities; industrial sources such as the Western Regional Sanitary Landfill (WRSL), Materials Recovery Facility (MRF), City of Roseville Pleasant Grove Wastewater Treatment Plant (PGWWTP), the Rio Bravo Rocklin biomass power facility, Mallard Creek composting facility, Dry Creek Wastewater Treatment Plant; and dairy and chicken farms (dispersed throughout the region surrounding the western and northern boundaries of the Planning Area). The Planning Area is also surrounded by agricultural uses in each direction that can generate odors from a variety of processes, such as agricultural burning, livestock pens, fertilization, and composting, among others.

The northern boundary of the Planning Area is approximately 1.5 miles south of the WRSL and approximately 1.8 miles south of the MRF. While only a screening tool and not to be used as the sole factor to determine

significance, these facilities are located outside of the recommended buffer distance of 1 mile for a sanitary landfill. During the winter months, the wind direction is more typically from north to south, toward the Planning Area from these facilities.

The WRS� and MRF have had a history of odor complaints. In 2013, the PCAPCD received three complaints for odor. The complaints came from the Crocker Ranch, Whitney Ranch, and West Park residential developments all located south of the WRS� (City of Roseville 2016). In February 2015, the WRS� registered over 200 plus odor complaints. The PCAPCD monitors the WRS� odor complaints and, in February 2015, it issued the WRS� a notice of violation (NOV). Since the NOV was issued, PCAPCD receives real-time data from the WRS� regarding odor complaints made on the WRS� website (City of Roseville 2016). According to PCAPCD, in 2015, after the issuance of the NOV, the WRS� registered less than 30 odor complaints (City of Roseville 2016). Residential land uses are south of these facilities, along the norther border of the Planning Area. Given the complaint history of the facilities, it is likely that sensitive receptors would experience occasional odors from landfill and MRF operations.

The PGWWTP is in the western portion of the Planning Area, and is currently surrounded by open space with existing low-density residential development approximately 0.2 miles to the west, 0.3 miles to the south, and 0.5 miles to the west. The prevailing wind direction is south to north, but winds from north to south occur more often in the winter months. Proposed residential uses approximately 0.5 miles to the north would have the highest likelihood of exposure to intermittent odors from the PGWWTP. However, wastewater processing at PGWWTP incorporates odor control techniques, such as oxygenating the wastewater holding ditches so that non-anaerobic bacteria cannot produce gases. Considering the odor-controlling processes at PGWWTP, while the PGWWTP may occasionally emit odors that could be observed by residents within a half mile, it is unlikely that a substantial number of people would experience frequent odors as a result of the PGWWTP.

The Rio Bravo Rocklin biomass plant is located more than 1.5 miles northeast of the nearest residences within the Planning Area, along the northern border of the Planning Area surrounding Woodcreek Oaks Boulevard. There is no recommended screening distance in Table 4.4-6 for this type of facility, which burns wood to generate power, but could be compared to a green waste processing facility. The Mallard Creek composting facility is adjacent to the northern boundary of the Planning Area, approximately 0.3-mile east of the residential neighborhood at Woodcreek Oaks Boulevard. Both facilities are within less than the 2-mile screening distances identified in Table 4.4-6 from sensitive receptors. However, the prevailing winds are to the north, away from the Planning Area. In addition, based upon PCAPCD records as of 2018, PCAPCD received one odor complaint for the Rio Bravo Rocklin biomass power facility in 2011 (Placer County 2019).

The City of Roseville and PCAPCD work in cooperation with industrial facilities and agricultural producers to limit the odor emissions associated with manufacturing processes and agricultural burning. Other smaller and dispersed odor sources include residential and commercial dumpsters, which can be in proximity of sensitive receptors. However, with proper disposal containers and regular trash collection services, odors from residential and commercial dumpsters are typically minimized. PCAPCD Rule 205 provides that air contaminants emitted by any person shall not cause annoyances, and the PCAPCD provides an on-line complaint website and phone number if any resident experiences odor concerns.

The following proposed General Plan Update goal and policy related to odor-generating emissions are proposed for revision, with additions shown in **bold, underlined** text and deletions shown in ~~striketrough~~ text:

Goal AQ1.1: ~~Improve Roseville's air quality by: a) Achieving and~~ **Reduce local air pollutant emissions to assist with meeting and** maintaining ambient air quality standards established by the U.S. Environmental Protection Agency and the California Air Resources Board; and, ~~b) and~~ **and** minimizing public exposure to toxic or hazardous air pollutants and air pollutants that create a public nuisance through irritation to the senses (such as unpleasant odors).

- **Policy AQ1.22: Support improvements to diesel engines, limits on idling, and incorporation of technology and management practices that reduce harmful emissions at the Rail Yard.**

The proposed General Plan Update changes to Goal AQ1.1 and Policy AQ1.22, listed above, would reduce potential exposure to odor sources, and therefore these changes would not result in any adverse environmental impacts.

Conclusion

Construction-related activities would generate odors from the use of diesel-powered equipment and from paving and architectural coating activities. However, these odorous emissions would be temporary and disperse rapidly with distance from the source; therefore, construction-generated odors would not result in the frequent exposure of receptors to objectionable odor emissions. Furthermore, compliance with PCAPCD Rules 205 (Nuisance) 217 (Cutback and Emulsified Asphalt Paving Materials) and 218 (Architectural Coatings) is required, which would ensure that odors generated by short-term construction would not affect a substantial number of people. Therefore, the impact from construction-related activities would be **less than significant**.

Long-term operations of future land uses developed with buildout of the General Plan could also generate other emissions, such as those leading to odors. All the City's Specific Plans included an odor evaluation and land uses were planned to adhere to recommended buffer distances, to the extent feasible. Revised proposed General Plan Update Goal AQ1.1 and Policy AQ1.22, listed above, would also reduce potential operational exposure to odor sources. It is not known at this time what specific development would be implemented and if any development would generate objectionable odors. However, future land uses could result in the operation of new land use that generates objectionable odors or the siting of sensitive receptors in proximity to existing odor-generating land uses within the Planning Area. In addition, proposed land use under the General Plan would include infill development adjacent to Interstate 80, a high-volume roadway, and near the Roseville Rail Yard. While an interstate or rail yard are not typically source of concern for substantial odor generation, these would present a source of diesel exhaust emissions. Because future development of the Planning Area could include the siting of new odor generating sources or could include the siting of future sensitive receptors in proximity to existing odor-generating sources (e.g. residential use within infill development areas) development under the General Plan could result in the exposure of receptors to objectionable odor emissions. The impact of potential odor-causing emissions from long-term operations is **significant**.

Mitigation Measures

Mitigation Measure 4.4-5 – *The proposed General Plan Update should be amended as follows:*

Implementation Measure

All new Specific Plans and proposed amendments to Specific Plans shall be evaluated for odor impacts using the SMAQMD-recommended screening distances for odor sources, or the most current adopted or recommended

version. If the minimum buffer distance is not feasible, as an alternative to these buffer distances, technology- and design-based measures shall be evaluated as part of the Specific Plan design guidelines to minimize, contain, or prevent the generation of odor-causing emissions and the dispersion of such emissions to nearby sensitive receptors. For example, in the case of siting odor-producing sources, activities could be maintained within an enclosed space and appropriate air filtration systems could be implemented to reduce odors expelled from the building. For developments that would host sensitive receptors, design would include air site layout, landscaping, indoor air filtration systems, or other appropriate measures to minimize exposure of proposed sensitive receptors to odors.

Significance after Mitigation

Development within the City shall comply with all applicable rules and regulations as listed above (e.g. PCAPCD Rule 205, 217, and 218). In addition, Compliance with General Plan Goal AQ1.3 would reduce local air pollutant emissions, including those leading to odors. Compliance with General Plan Policy AQ1.22 could reduce potential exposure by nearby sensitive receptors to odor emissions from the Roseville Rail Yard. Implementation of Mitigation Measure 4.4-3 to reduce indoor exposure to TACs, described in detail under Impact 4.4-3, would also result in a reduction in the intensity of offensive odors from surrounding odor sources. Implementation of Mitigation Measure 4.4-5 would reduce odor-producing emissions or reduce the potential that sensitive receptors would be exposed to such emissions, depending on the technology implemented for specific projects. However, because buffer distances and implementation of specific technology- and design-based measures cannot be known at this time, it is conservatively assumed that sensitive receptors could be exposed to substantial odor-generating emissions. There is no additional, feasible mitigation available. As a result, this impact is **significant and unavoidable**.

This page intentionally left blank

4.5 GREENHOUSE GAS EMISSIONS

4.5.1 INTRODUCTION

This section describes the potential greenhouse gas (GHG) emissions and related impacts associated with the proposed General Plan Update. The impact analysis examines GHG emissions associated with both construction and operational activities within the Planning Area. To provide context for the impact analysis, this chapter begins with a discussion of the environmental setting, including the existing science related to GHGs and an overview of state and local GHG emissions inventories. Next, the regulatory framework is described, which provides part of the basis for impact significance thresholds used in the impact analysis. The regulatory framework includes the existing General Plan policies that are relevant to GHG emissions. The section concludes with impact analysis methodology used to estimate GHG emissions attributable to buildout of the General Plan and significance criteria, and an analysis of potential GHG emissions impacts of the proposed General Plan Update.

The General Plan would not, by itself, contribute GHG emissions that have a significant impact related to climate change; however, cumulative emissions from many projects and plans all contribute to global GHG concentrations and the climate system. Accordingly, this section considers the cumulative contribution of implementation of the General Plan to the significant cumulative impact of climate change.

The City has reviewed, and incorporated recommendations based on a letter from the Placer County Air Pollution Control District (PCAPCD) provided in response to the EIR Notice of Preparation (NOP), which includes recommendations related to thresholds of significance and mitigation.¹

4.5.2 ENVIRONMENTAL SETTING

4.5.2.1 OVERVIEW OF GREENHOUSE GASES

Certain gases in the earth's atmosphere, classified as GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the earth's atmosphere from space. A portion of the radiation is absorbed by the earth's surface, and a smaller portion of this radiation is reflected toward space through the atmosphere. However, infrared radiation is selectively absorbed by GHGs in the atmosphere. As a result, infrared radiation released from the earth that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the "greenhouse effect," is responsible for maintaining a habitable climate on Earth. Anthropogenic (e.g., human caused) emissions of these GHGs lead to atmospheric levels in excess of natural ambient concentrations and have the potential to adversely affect the environment because such emissions contribute, on a cumulative basis, to global climate change.

The Intergovernmental Panel on Climate Change (IPCC) concluded that variations in natural phenomena, such as solar radiation and volcanoes, produced most of the warming of the earth from pre-industrial times to 1950. Some variations in natural phenomena also had a small cooling effect. From 1950 to the present, increasing GHG

¹¹ The comment letter provided recommendations regarding appropriate methods of evaluation and thresholds of significance. PCAPCD recommended using the CalEEMod emission modeling software to estimate project-related emissions from construction and operational phases and recommended comparing emissions estimates to the PCAPCD-adopted thresholds of significance as a metric for the level of significance of potential impacts of such emissions. If the analysis demonstrates the potential for the proposed General Plan Update to cause or generate significant adverse impacts, PCAPCD provided reference to PCAPCD's recommended mitigation measures for GHGs to be considered to minimize or eliminate such adverse impacts.

concentrations resulting from human activity, such as fossil fuel burning and deforestation, have been responsible for most of the observed temperature increase (IPCC 2015).

During the same period when increased global warming has occurred, many other changes have occurred in other natural systems. Sea levels have risen; precipitation patterns throughout the world have shifted, with some areas becoming wetter and others drier; snowlines have increased elevation, resulting in changes to the snowpack, runoff, and water storage; and numerous other conditions have been observed. Although it is difficult to prove a definitive cause-and-effect relationship between global warming and other observed changes to natural systems, there is a high level of confidence in the scientific community that these changes are a direct result of increased global temperatures caused by the increased presence of GHGs in the atmosphere (IPCC 2018).

4.5.2.2 PRINCIPAL GREENHOUSE GASES AND SOURCES

GHGs are present in the atmosphere naturally, are released by natural and anthropogenic (human-caused) sources and are formed from secondary reactions taking place in the atmosphere. Natural sources of GHGs include the respiration of humans, animals, and plants; decomposition of organic matter; volcanic activity; and evaporation from the oceans. Anthropogenic sources include the combustion of fossil fuels by stationary and mobile sources, waste treatment, and agricultural processes.

The following are the principal GHG pollutants that contribute to climate change and their primary emission sources:

- ▶ Carbon Dioxide: Natural sources of CO₂ include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; and evaporation from oceans. Anthropogenic (human) sources include burning of coal, oil, natural gas, and wood.
- ▶ Methane: CH₄ is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock and other agricultural practices and by the decay of organic waste in municipal solid waste landfills.
- ▶ Nitrous Oxide: Primary human-related sources of N₂O are agricultural soil management, sewage treatment, mobile and stationary combustion of fossil fuel, adipic acid production, and nitric acid production. N₂O is also produced naturally from a wide variety of biological sources in soil and water, particularly microbial action in wet tropical forests.
- ▶ Fluorinated gases: These gases are typically emitted in smaller quantities, but because they are potent GHGs, they are sometimes called High Global Warming Potential (High GWP) gases. These High GWP gases include:
 - Chlorofluorocarbons (CFC)s: These GHGs are used for refrigeration, air conditioning, packaging, insulation, solvents, or aerosol propellants.
 - Perfluorinated Chemicals (PFCs): PFCs are emitted as by-products of industrial processes and are also used in manufacturing.

- Sulfur hexafluoride (SF₆): This is a strong GHG used primarily as an insulator in electrical transmission and distribution systems.
- Hydrochlorofluorocarbons (HCFCs): These have been introduced as temporary replacements for CFCs and are also GHGs.
- Hydrofluorocarbons (HFCs): These were introduced as alternatives to ozone-depleting substances in serving many industrial, commercial, and personal needs. HFCs are GHGs emitted as by-products of industrial processes and are also used in manufacturing.

GHGs are not monitored at local air pollution monitoring stations and do not represent a direct impact to human health. Rather, GHGs generated locally contribute to global concentrations of GHGs, which result in changes to the climate and environment.

Methods have been set forth to describe emissions of GHGs in terms of a single gas to simplify reporting and analysis. The most commonly accepted method to compare GHG emissions is the global warming potential (GWP) methodology defined in IPCC reference documents. GWP is a concept developed to compare the ability of each GHG to trap heat in the atmosphere relative to another gas. GWP is based on several factors, including the relative effectiveness of a gas to absorb infrared radiation and the length of time the gas remains in the atmosphere (“atmospheric lifetime”). IPCC defines the GWP of various GHG emissions on a normalized scale that recasts all GHG emissions in terms of metric tons of CO₂ equivalents (MT CO₂e), which compares the gas in question to that of the same mass of CO₂ (CO₂ has a GWP of 1, by definition).

4.5.2.3 GREENHOUSE GAS EMISSION INVENTORIES

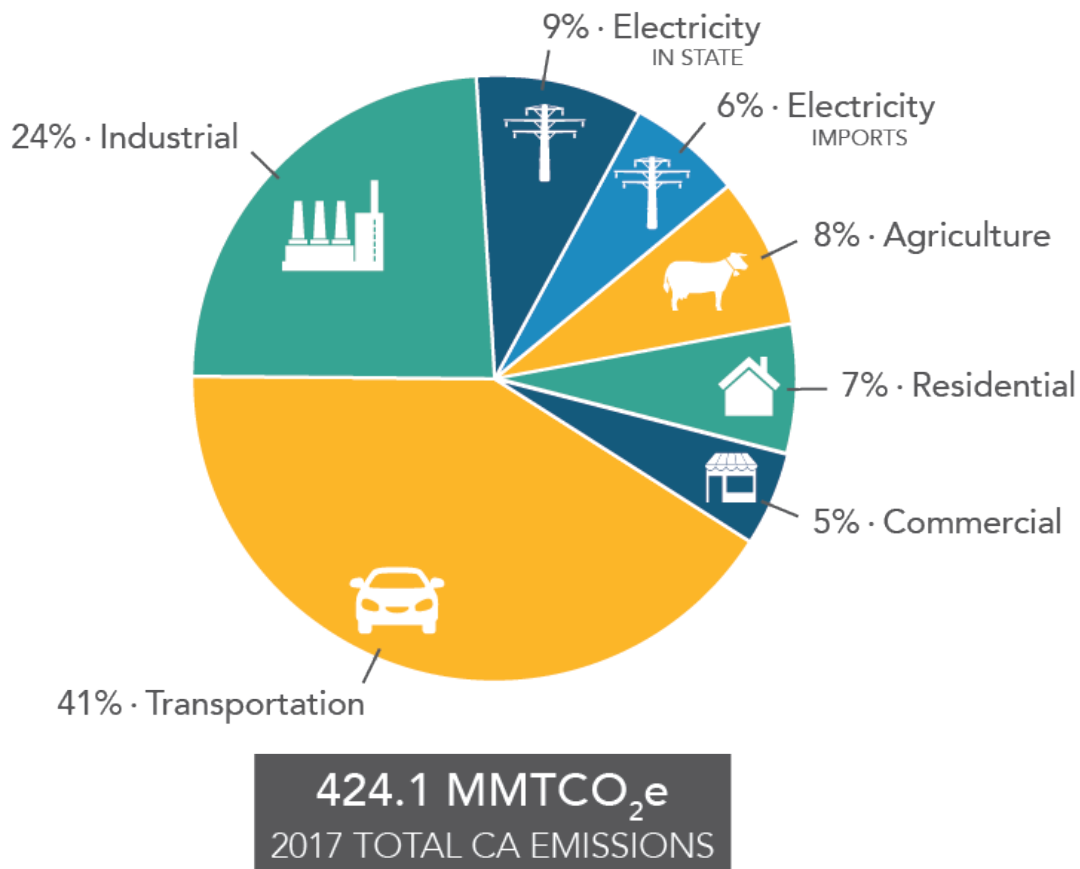
In order to better understand the sources and magnitudes of GHG emissions, public and private entities at the federal, state, and local level are developing GHG inventories. The Assembly Bill (AB) 32 Scoping Plan (the Scoping Plan) identifies the primary GHG emission “sectors,” or types of activities, that account for the majority of GHG emissions generated within California. A brief description of each GHG emission sector is provided below.

- ▶ **Transportation:** This sector represents the GHG emissions associated with on-road motor vehicles, off-road equipment, recreational vehicles, aviation, ships, and rail. Transportation is the largest emissions sector for the state as a whole.
- ▶ **Electricity:** This sector represents the GHG emissions associated with use and production of electrical energy. Approximately 25 percent of electricity consumed in California is imported; thus, GHG emissions associated with out-of-state electricity production are also included as part of this sector.
- ▶ **Industry:** This sector represents the GHG emissions associated with industrial land uses (e.g., manufacturing plants and refineries). Industrial sources are predominantly composed of stationary sources (e.g., boilers and engines) associated with process emissions.
- ▶ **Commercial and Residential:** Commercial and residential GHG emission sources include area sources such as landscape maintenance equipment, fireplaces, and natural gas consumption for space and water heating.

- ▶ **Agriculture:** This sector represents the GHG emissions associated with agricultural processes. Agricultural sources of GHG emissions include off-road farm equipment, irrigation pumps, residue burning, livestock, and fertilizer volatilization.
- ▶ **High Global Warming Potential:** This sector represents the generation of high GWP GHGs. Examples of high GWP GHG sources include refrigerants (e.g., hydrofluorocarbons [HFCs], chlorofluorocarbons [CFCs]) and electrical insulation (e.g., sulfur hexafluoride). Although these GHGs are typically generated in much smaller quantities than CO₂, their high GWP results in considerable CO₂e.
- ▶ **Recycling and Waste:** This sector represents the GHG emissions associated with waste management facilities and landfills.

California State Inventory

The California Air Resources Board (ARB) prepares an annual, statewide GHG emissions inventory, including an analysis of emissions by sector. As shown in Exhibit 4.5-1, California produced 424.1 million MT CO₂e in 2017 (the latest available full year of reporting). Combustion of fossil fuel in the transportation sector was the single largest source of California's GHG emissions in 2017, accounting for 41 percent of total GHG emissions. Transportation was followed by industry, which accounted for 24 percent, and then the electricity sector (including in-state and out-of-state sources) accounted for 9 percent of total GHG emissions (ARB 2020).

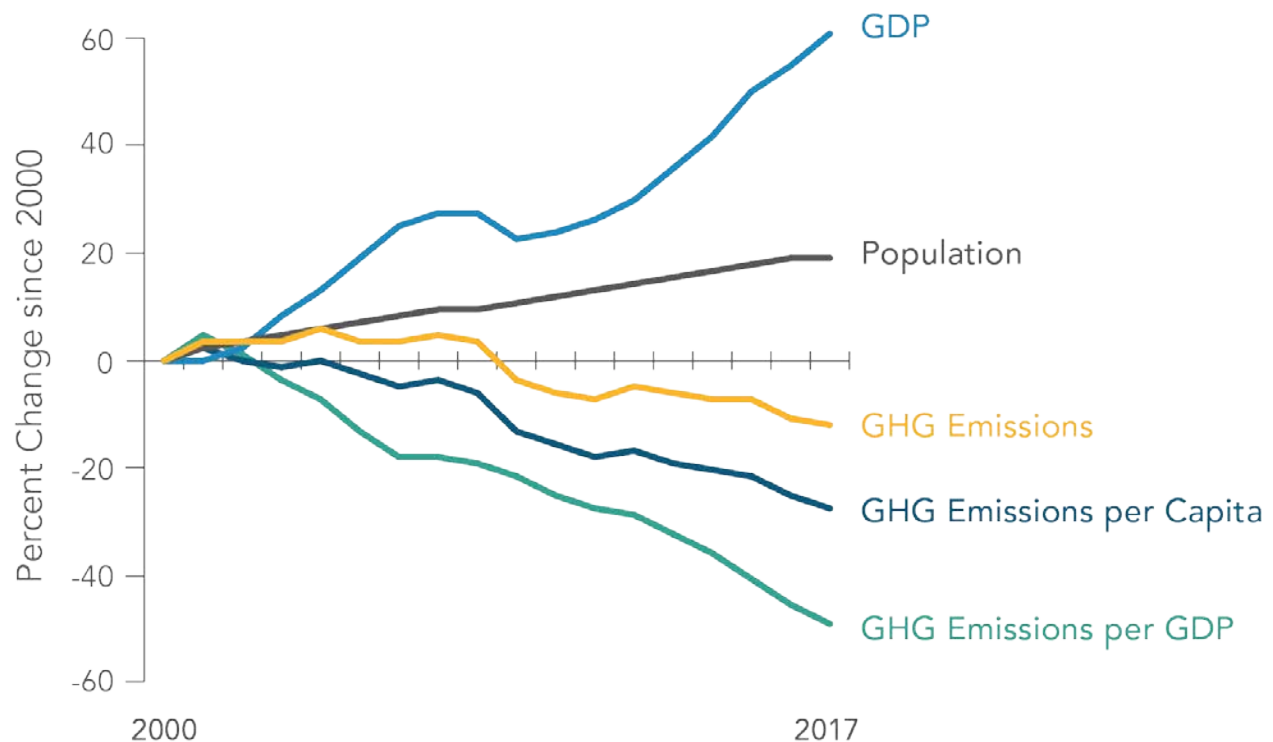


Source: ARB 2020

Exhibit 4.5-1

2017 California GHG Emissions Inventory by Sector

California has implemented several programs and regulatory measures to reduce GHG emissions. Exhibit 4.5-2 demonstrates California's progress in achieving statewide GHG emissions reduction targets. Since 2007, California's GHG emissions have been declining; GHG emissions have continued to decline even as population and gross domestic product (GDP) have increased.



Source: ARB 2020

Exhibit 4.5-2

Trends in California GHG Emissions (Years 2000 to 2017)

Placer County Inventory

In 2018, the Sierra Business Council published a community-wide GHG emissions inventory in collaboration with Placer County (Placer County 2018). The inventory estimated 2015 GHG emissions for unincorporated Placer County community-wide activities and sources and County operations, and compared this 2015 emissions inventory to the baseline year of 2005 using the International Local Government Operations Protocol and the U.S. Community Protocol.

Like the state as a whole and most communities around the state, by far, the largest contribution to total GHG emissions in unincorporated Placer County is transportation. The inventory identified GHG emissions from multiple sectors: residential energy use, non-residential energy use, transportation, waste, water and wastewater, and agriculture, livestock and forestry. According to this estimate, total community-wide GHG emissions

decreased 18 percent from 1,440,913 to 1,181,915 MT CO₂e from 2005 to 2015. Over this time, the population of unincorporated Placer County increased by 6 percent and employment increased by 19 percent. Overall per-capita (per person) emissions decreased by 23 percent and per-service population (a combination of residents and employees) emissions decreased by 24 percent. Residential and non-residential energy use declined due to reduced energy use and increased electricity emissions efficiency. Agricultural emissions also declined substantially, due in large part to a reduction in acres of rice cultivation and number of livestock. Transportation emissions declined slightly because of improvements in vehicle fuel efficiency and cleaner burning fuels despite an increase in overall vehicle miles traveled (VMT).

4.5.3 REGULATORY FRAMEWORK

While many federal, state, regional, and local GHG-related plans, policies, and regulations do not directly apply to the implementation of the proposed General Plan Update, the information below is helpful for understanding the overall context for GHG emissions impacts and strategies to reduce GHG emissions.

4.5.3.1 FEDERAL PLANS, POLICIES, REGULATIONS AND LAWS

U.S. Environmental Protection Agency “Endangerment” and “Cause or Contribute” Findings

On December 7, 2009, the EPA Administrator signed two distinct findings regarding GHGs under Section 202(a) of the CAA:

- ▶ *Endangerment Finding:* The current and projected concentrations of the six key GHGs—CO₂, methane, nitrous oxide, hydrofluorocarbons, perfluorinated chemicals, and sulfur hexafluoride—in the atmosphere threaten the public health and welfare of current and future generations.
- ▶ *Cause or Contribute Finding:* The combined emissions of these GHGs from new motor vehicles and new motor vehicle engines contribute to GHG pollution, which threatens public health and welfare.

Mandatory Greenhouse Gas Reporting Rule

On September 22, 2009, EPA released its final Greenhouse Gas Reporting Rule (Reporting Rule). The Reporting Rule is a response to the fiscal year 2008 Consolidated Appropriations Act (House of Representatives Bill 2764; Public Law 110-161), which required EPA to develop “...mandatory reporting of GHGs above appropriate thresholds in all sectors of the economy....” The Reporting Rule applies to most entities that emit 25,000 MT CO₂e or more per year. Since 2010, facility owners have been required to submit an annual GHG emissions report with detailed calculations of the facility’s GHG emissions. The Reporting Rule also mandates compliance with recordkeeping and administrative requirements to enable EPA to verify annual GHG emissions reports.

U.S. Environmental Protection Agency and National Highway Traffic Safety Administration Standards

EPA and the National Highway Traffic Safety Administration (NHTSA) implemented national GHG emission and fuel economy standards for model year 2012–2016 light-duty cars and trucks. The second phase of the standards includes GHG and fuel economy standards for model years 2017–2025. The 2017–2025 standards are anticipated to save approximately 4 billion barrels of oil and 2 billion MT of GHG emissions. In 2025, if all standards are met through fuel efficiency improvements, the average industry fleetwide fuel efficiency for light-

duty cars and trucks would be approximately 54.5 miles per gallon (EPA 2012). In 2018, the United States Department of Transportation and EPA proposed to amend the existing CAFE standards and establish new standards for model years 2021 through 2026. In 2019, EPA and NHTSA published the “Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program.” (84 Fed. Reg. 51,310 (Sept. 27, 2019.)) The One National Program revokes California’s authority to set its own GHG emissions standards and set zero-emission vehicle mandates in California. Part 2 of the regulations pertaining to emissions standards for model years 2021 through 2026 are still pending.

Standards for light-duty cars and trucks, EPA and NHTSA have implemented Phase 1 of the Medium- and Heavy-Duty Vehicle GHG Emissions and Fuel Efficiency Standards, which apply to model years 2014–2018. It is anticipated that medium- and heavy-duty vehicles built to these standards from 2014–2018 will reduce CO₂ emissions by approximately 270 million MT over their lifetimes (EPA 2012). Phase 2 of these standards apply to model years 2021–2027 and would reduce GHG emissions by 1 billion MT over the lifetimes of those vehicles (EPA 2015).

4.5.3.2 STATE PLANS, POLICIES, REGULATIONS, AND LAWS

Independent of federal requirements, the State of California (State) has adopted its own GHG regulations and emission reduction goals. The following presents a summary of the State’s GHG emission targets and related regulations, as well as a summary of key State policies and programs related to emission sources relevant to the proposed General Plan Update.

Statewide Emission Reduction Targets Pursuant to the California Global Warming Solutions Act of 2006 (Assembly Bill 32 and Senate Bill 32, and Executive Orders S-3-05 and B-30-15)

Executive Order S-3-05 (2005) and Assembly Bill (AB) 32 (2006)

Issued by the Governor in recognition of California’s vulnerability to the effects of climate change, Executive Order (EO) S-3-05 established progressive GHG emission reduction targets for the State, as follows:

- ▶ By 2010, reduce GHG emission to the year 2000 level;
- ▶ By 2020, reduce GHG emissions to the year 1990 level; and,
- ▶ By 2050, reduce GHG emissions to 80 percent below the 1990 level.

The California Global Warming Solutions Act of 2006, commonly known as AB 32, further detailed and put into law the midterm GHG reduction target established in EO S-3-05 to reduce statewide GHG emissions to 1990 levels by 2020 and created a comprehensive, multi-year program to reduce GHG emissions in California. AB 32 also directed CARB to accomplish the following core tasks:

- ▶ Establish the statewide goal of reducing GHG emissions.
- ▶ Establish a mandatory reporting system to track and monitor emissions levels.
- ▶ Develop various compliance options and enforcement mechanisms.

EO B-30-15 (2014) and Senate Bill (SB) 32 (2016)

EO B-30-15 established a statewide GHG reduction goal of 40 percent below 1990 levels by 2030. This emission reduction goal serves as an interim goal between the AB 32 target to achieve 1990 emission levels by 2020 and

the long-term goal set by EO S-3-05 to reduce statewide emissions 80 percent below 1990 levels by 2050. In addition, the executive order aligned California's 2030 GHG reduction goal with the European Union's 2030 reduction target that was adopted in October 2014.

SB 32 signed into law the emissions goal of EO B-30-15, extending the provisions of AB 32 from 2020 to 2030 with a new target of 40 percent below 1990 levels by 2030.

EO B-55-18 (2018)

EO B-55-18 acknowledges the environmental, community, and public health risks posed by future climate change. It further recognizes the climate stabilization goal adopted by 194 states and the European Union under the Paris Agreement. Based on the worldwide scientific agreement that carbon neutrality must be achieved by midcentury, EO B-55-18 establishes a new state goal to achieve carbon neutrality as soon as possible and no later than 2045, and to achieve and maintain net negative emissions thereafter. The EO charges the ARB with developing a framework for implementing and tracking progress towards these goals. EO B-55-18 is only binding on state agencies.

California's Climate Change Scoping Plan

ARB adopted the Climate Change Scoping Plan (Scoping Plan) in December 2008, which contains California's primary strategies for achieving the GHG reductions required by AB 32. The Scoping Plan encourages local governments to align land use, transportation, and housing plans to minimize vehicle trips.

CARB is required to update the Scoping Plan at least once every five years to evaluate progress and develop future inventories that may guide this process. The First Update to the Climate Change Scoping Plan: Building on the Framework (2014 Scoping Plan Update) determined that the state was on schedule to achieve the 2020 target. However, an accelerated reduction in GHG emissions would be required to achieve the EO S-3-05 emissions reduction target for 2050.

California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target (2017 Scoping Plan Update) was driven by the 2030 target (pursuant to SB 32). The 2017 Scoping Plan Update established a plan of action, consisting of a variety of strategies to be implemented, rather than a single solution, to achieve the SB 32 emissions target.

Sustainable Communities and Climate Protection Act of 2008 (SB 375)

The Sustainable Communities and Climate Protection Act of 2008 (SB 375) built upon the existing framework of regional planning. In 2010, ARB adopted regional GHG targets for passenger vehicles and light trucks for 2020 and 2035 for the 18 metropolitan planning organizations (MPOs) in California. In 2018, ARB updated these targets. Under this legislation, each MPO is required to incorporate these GHG emissions targets into the regional transportation planning process and adopt either a "sustainable communities strategy" or an "alternative planning strategy" as part of its regional transportation plan to identify land use, housing, and transportation strategies that will achieve the regional GHG reduction targets.

Renewables Portfolio Standard

SB 1078, SB 107, EO S-14-08, and SB X1-2 have established increasingly stringent renewable portfolio standard (RPS) requirements for California's utility companies. RPS-eligible energy sources include wind, solar, geothermal, biomass, and small-scale hydro projects.

- ▶ **SB 1078** required investor-owned utilities to provide at least 20% of their electricity from renewable resources by 2020.
- ▶ **SB 107** accelerated the SB 1078 timeframe to take effect in 2010.
- ▶ **EO-S-14-08, codified by SB X1-2**, increased the RPS further to 33% by 2020.
- ▶ **SB 350** increased the RPS to 50% by 2030.
- ▶ **SB 100** increased the RPS to 60% by 2030 and required the State's electricity to come from carbon-free resources by 2045.

These requirements reduce the carbon content of electricity generation and reduce GHG emissions associated with both existing and new development.

Advanced Clean Cars Program/Zero Emission Vehicle Program (AB 1493)

AB 1493, also known as the Pavley regulations, required CARB to adopt regulations by January 1, 2005, that would result in the achievement of the "maximum feasible" reduction in GHG emissions from vehicles used in the state primarily for noncommercial, personal transportation. In 2009, the EPA Administrator granted a CAA waiver of preemption to California, allowing the state to implement its own GHG emissions standards for motor vehicles. California agencies worked with federal agencies to conduct joint rulemaking to approve a new emissions-control program for model years 2017–2025.

The program was implemented through a single package of standards called Advanced Clean Cars (California Code of Regulations [CCR] Title 13, Sections 1962.1 and 1962.2), inclusive of the Low-Emission Vehicle III amendments, the Zero-Emission Vehicle program, and the Clean Fuels Outlet regulation.

As described above under Federal Regulations, the SAFE Vehicles Rule Part One: One National Program was effective November 26, 2019. Through this ruling, EPA withdrew California's waiver of preemption and NHTSA finalized regulatory text related to preemption. California and 22 other states have filed suit to challenge the NHTSA preemptive regulations and California filed suit to challenge EPA's waiver rescission. Thus, the future status of these programs is currently speculative.

Building Energy Policies

Title 24, Part 6

Title 24 of the California Code of Regulations was established in 1978 and serves to enhance and regulate California's building standards. Although not initially developed to reduce GHG emissions, Part 6 of Title 24 specifically establishes Building Energy Efficiency Standards that save energy, increase electricity supply

reliability, increase indoor comfort, avoid the need to construct new power plants, and help preserve the environment.

Title 24, Part 11

The California Green Building Standards Code (Part 11 of Title 24), commonly referred to as CALGreen, set minimum mandatory standards, as well as voluntary standards pertaining to the planning and design of sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and interior air quality.

Title 20

Title 20 of the California Code of Regulations requires manufacturers of appliances to meet state and federal standards for energy and water efficiency. Performance of appliances must be certified through the California Energy Commission to demonstrate compliance with standards.

4.5.3.3 LOCAL PLANS, POLICIES, REGULATIONS, AND LAWS

At the local level, GHG emission sources are managed through land use, development and transportation planning practices.

Placer County Air Pollution Control District

PCAPCD regulates local air quality and air pollutant emissions sources in Placer County. In its *CEQA Air Quality Handbook*, PCAPCD includes a chapter that outlines guidance for analyzing construction emissions, including GHG emissions, and a GHG-specific chapter that discusses the recommended approach to evaluating operational GHG emissions. PCAPCD also includes a list of analysis expectations and methodologies for CEQA analyses.

On October 13, 2016, the PCAPCD Board of Directors adopted the Review of Land Use Projects under CEQA Policy, which established thresholds of significance for GHG emissions. In developing the thresholds, the district took into account health-based air quality standards and the strategies to attain air quality standards, historical CEQA project review data in Placer County, statewide regulations to achieve GHG emission reduction targets, and the geographic and land use features of Placer County. PCAPCD adopted three threshold approaches: (1) a bright-line threshold of 10,000 metric tons of CO₂e per year for the construction and operational phases of land use projects as well as stationary source projects; (2) an efficiency matrix for the operational phase of land use development projects when emissions exceed a de minimis level of emissions; and (3) a de minimis for the operational phases of 1,100 metric tons of CO₂e per year. The Air District's objective was to identify a "reasonable threshold which would capture larger-scale projects with significant GHG emission contributions that should implement mitigation" that was largely based on the work of other air districts for mass emissions and considered how the selected thresholds would affect projects (PCAPCD 2016). The Air District used assumptions (such as a single average household size figure, model defaults, the previous versions of the CalGreen Code, and assumptions related to statewide reduction programs) to create an efficiency matrix that is tied to population for residential projects and building square footage for non-residential projects that is more permissive for rural project locations compared to urban project locations.² These thresholds were designed to apply to land use

² Although the Low Carbon Fuel Standard was removed from the CalEEMod software by ARB since the emissions reductions occur "upstream" from development projects, it appears LCFS was incorporated in the PCAPCD approach.

projects, but are not necessarily applicable to a General Plan analysis, so are not used herein. Refer to the “Thresholds of Significance” section, below, for a discussion of the selected threshold.

Sacramento Area Council of Governments

The Sacramento Area Council of Governments (SACOG). SACOG is the MPO for the Sacramento region, maintaining a regional transportation plan in coordination with each of the local 28 member cities and counties, including Placer County. SACOG plays a central role in transportation infrastructure planning for the region, while also serving as a forum for the study, planning and resolution of other planning issues facing the local member governments. The most recent Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) for the SACOG region, the 2020 MTP/SCS, was adopted in November 2019. The 2020 MTP/SCS lays out a plan that links land use, air quality, and transportation needs. Under SB 375, the proposed MTP/SCS is subject to review and approval by the ARB. Specifically, the SCS component of the regional plan will be reviewed by CARB to determine whether the adopted SCS, if implemented, would meet the region’s 2035 19 percent per-capita passenger vehicle greenhouse gas reduction target. As shown in the 2020 MTP/SCS and EIR, the region is making progress in VMT reductions and is making significant strides in the development of new initiatives, projects, and programs in the 2020 MTP/SCS.

Existing City of Roseville General Plan

The following goals and policies are included in the existing General Plan, and are relevant to reducing GHG emissions within the City (City of Roseville 2016).

Air Quality Goal 2: Integrate air quality planning with the land use and transportation planning process.

Air Quality Goal 3: Encourage the coordination and integration of all forms of public transport while reducing motor vehicle emissions through a decrease in the average daily trips and vehicle miles traveled and by increasing the commute vehicle occupancy rate by 50% to 1.5 or more persons per vehicle.

Air Quality Goal 5: Provide adequate pedestrian and bikeway facilities for present and future transportation needs.

Air Quality Goal 6: Promote a well-designed and efficient light rail and transit system.

Air Quality Goal 7: While recognizing that the automobile is the primary form of transportation, the City of Roseville should make a commitment to shift from the automobile to other modes of transportation.

- ▶ **Air Quality - Transportation and Circulation Related Policy 6:** Develop consistent and accurate procedures for mitigating transportation emissions from new and existing projects.
- ▶ **Air Quality - Transportation and Circulation Related Policy 7:** Encourage alternative modes of transportation including pedestrian, bicycle, and transit usage.
- ▶ **Air Quality – Land-Use-Related Policy 9:** Encourage land use policies that maintain and improve air quality.

- ▶ **Air Quality - Energy Conservation Related Policy 10:** Conserve energy and reduce air emissions by encouraging energy efficient building designs and transportation systems.
- ▶ **Circulation - Level of Service Policy 2:** Strive to meet the level of service standards through a balanced transportation system that reduces the auto emissions that contribute to climate change by providing alternatives to the automobile and avoiding excessive vehicle congestion through roadway improvements, Intelligent Transportation Systems, and transit improvements.
- ▶ **Circulation - Level of Service Policy 5:** Enable the City to designate a Pedestrian District over a geographic area for the purpose of implementing measures that promote pedestrian walkability and reduce total vehicle miles travelled and resultant air pollution emissions that contribute to climate change. In these districts, the City recognizes that pedestrian travel takes a higher priority than automobile travel, which could reduce the vehicular level of service.
- ▶ **Circulation – Transit Policy 1:** Pursue and support transit services within the community and region and pursue land use, design and other mechanisms that promote the use of such services.
- ▶ **Circulation - Transportation Systems Management Policy 2:** Work with appropriate agencies to develop measures to reduce vehicular travel demand and total vehicle miles traveled and meet air quality goals.
- ▶ **Circulation - Bikeway/Trails Policy 1:** Develop a comprehensive and safe system of recreational and commuter bicycle routes and trails that provides connections between the City’s major employment and housing areas and between its existing and planned bikeways.

Housing - Residential Energy Efficiency and Conservation Goal 1: Continue efforts to encourage energy efficiency in housing construction and maintenance.

- ▶ **Housing - Residential Energy Efficiency and Conservation Policy 1:** Roseville electric shall commit to offering Energy Efficiency and Renewable Energy programs.
- ▶ **Housing - Residential Energy Efficiency and Conservation Policy 2:** Roseville Electric shall continue to apply energy-efficient requirements to all residential construction.

Land Use General Goal 2: While recognizing that the automobile is the primary form of transportation, the City of Roseville should make a commitment to shift from the automobile to other modes of transportation.

- ▶ **Land Use - Community Form – Relationship to Transit, Pedestrian, Air Quality (RTPAQ) Policy 1:** Promote land use patterns that support a variety of transportation modes and accommodate pedestrian mobility.
- ▶ **Land Use - Community Form – Relationship to Transit, Pedestrian, Air Quality (RTPAQ) Policy 2:** Allow for land use patterns and mixed use development that integrate residential and non-residential land uses, such that residents may easily walk or bike to shopping, services, employment and leisure activities.
- ▶ **Land Use - Community Form – Relationship to Transit, Pedestrian, Air Quality (RTPAQ) Policy 3:** Concentrate higher intensity uses and appropriate support uses within close proximity of transit and bikeway

corridors as identified in the Bicycle Master Plan. In addition, some component of public use such as parks, plazas, public buildings, community centers and/or libraries should be located within the corridors.

- ▶ **Land Use - Community Form – Relationship to Transit, Pedestrian, Air Quality (RTPAQ) Policy 4:** Promote and encourage the location of employee services such as childcare, restaurants, banking facilities, convenience markets, etc., within major employment centers for the purpose of reducing midday service-related vehicle trips.
- ▶ **Land Use - Community Form – Relationship to Transit, Pedestrian, Air Quality (RTPAQ) Policy 5:** Where feasible, improve existing development areas to create better pedestrian and transit accessibility.
- ▶ **Land Use - Community Form – Relationship to Transit, Pedestrian, Air Quality (RTPAQ) Policy 6:** Through City land use planning and development approvals, require that neighborhood serving uses (e.g. neighborhood commercial uses, day care, parks, schools, and other community facilities) be physically linked with adjacent residential neighborhoods.
- ▶ **Land Use - Community Form – Downtown, Neighborhoods Policy 5:** Encourage infill development and rehabilitation that: upgrades the quality and enhances the character of existing areas; enhances public transit use and pedestrian access; efficiently utilizes and does not overburden existing services and infrastructure; and results in land use patterns and densities that provide the opportunity for the construction of household types affordable to all income groups.
- ▶ **Land Use - Community Form – Relationship to New Development Policy 1:** Require that new development areas and associated community-wide facilities (open space resources, parks, libraries, etc.) be linked and oriented to existing developed areas of the community through road networks, public transit systems, open space systems, bike way and pedestrian systems, and other physical connections.
- ▶ **Land Use - Community Form – Jobs/Housing and Economic Development Policy 1:** Strive for a land use mix and pattern of development that provides linkages between jobs and employment uses, will provide a reasonable jobs/housing balance, and will maintain the fiscal viability of the City.
- ▶ **Land Use - Community Form – Community Design Policy 2:** Continue to develop and apply design standards that result in efficient site and building designs, pedestrian friendly projects that stimulate the use of alternative modes of transportation, and the establishment of a functional relationship between adjacent developments.
- ▶ **Public Facilities - Electric Utility Policy 8:** Pursue reasonable and cost-effective energy efficiency, conservation, and management programs that pertinent to the electric utility system.
- ▶ **Public Facilities - Water and Energy Conservation Policy 7:** Require large electricity users to submit a use and conservation plan concurrent with development review specifying measures to be taken to minimize demand.
- ▶ **Public Facilities - Water and Energy Conservation Policy 8:** Enforce energy requirements and encourage development and construction standards that promote energy efficiency and conservation.

- **Public Facilities - Water and Energy Conservation Policy 10:** Continue and expand energy efficiency and conservation programs to serve all utility users.

City of Roseville Communitywide Sustainability Action Plan

The City of Roseville Communitywide Sustainability Action Plan was an early action by the City in 2010 to set forth a comprehensive strategy to reduce GHG emissions and air pollutant emissions within the community, and addressed both municipal and community-wide emissions (City of Roseville, 2010a). Although it was ultimately not adopted by the City of Roseville, the Sustainability Action Plan was published, and includes important information about GHG emissions within the City, including a baseline 2006 GHG emissions inventory and an efficiency-based emissions target for the year 2020.

Adopted Specific Plans and Mitigation Measures

Currently, the City has adopted 14 Specific Plans. A Specific Plan is a comprehensive planning and zoning document that implements the General Plan by providing development and conservation standards for a defined geographic location within the Planning Area. Each Specific Plan has developed guidelines for site, architectural, landscaping, lighting, roadway networks, pedestrian/bicycle paths, open space corridors, parks, and other aspects of design. Each adopted Specific Plan included an EIR, some of which evaluated potential impacts related to GHG emissions. Where appropriate, mitigation measures were adopted to reduce GHG emissions, and these measures are required to be implemented in the respective Specific Plan Areas. Adopted mitigation measures for GHGs include incorporating a suite of best available and practical approaches to reduce operational emissions in tentative map and design review permit applications, and in consultation with PCAPCD. Copies of the adopted Specific Plans and their associated EIRs are available through the City of Roseville Development Services Department, Planning Division.

4.5.4 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

4.5.4.1 METHODOLOGY

The discussion below presents the methods used for GHG emissions analysis and how significance of GHG emissions impacts was determined. Buildout of the General Plan would generate GHG emissions as a result of short-term construction and long-term operational activities. GHG emissions have the potential to adversely affect the environment because such emissions contribute cumulatively to global climate change. It is unlikely that a single project will contribute significantly to climate change, but cumulative emissions from many projects could affect global GHG concentrations and the climate system. Therefore, impacts are analyzed within the context of the potential contribution to the cumulatively significant impact of climate change.

Potential GHG emissions impacts associated with short-term construction and long-term operations of buildout of the General Plan were evaluated consistent with methods described in Section 4.4, “Air Quality.” Detailed inputs, assumptions, and calculations are provided in Appendix B.

In order to provide a more comprehensive assessment of cumulative GHG emissions, construction-related GHG emissions that would result from construction of all proposed land use with buildout of the General Plan were

summed and then amortized over a 30-year operational lifetime³ and added to the operational emissions associated with these land uses. The annual operational emissions, along with the amortized construction emissions were compared with applicable significance thresholds to determine cumulative significance.

The proposed General Plan Update consists of changes to goals, policies, and implementation measures, which are analyzed as part of this EIR, but does not include any changes to land use designations, expansion to the City's Planning Area, or other physical changes to areas planned for development compared to the existing General Plan. This EIR analyzes buildout of the Planning Area consistent with the existing General Plan land use designations to existing conditions, which constitute the baseline physical conditions for determining whether potential impacts are significant.

4.5.4.2 THRESHOLDS OF SIGNIFICANCE

The CEQA Guidelines Appendix G has identified significance criteria to be considered for determining whether a project could have significant impacts due to GHG emissions. The proposed project would have a significant impact if it would:

- ▶ generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment, or
- ▶ conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

Whether or not implementation of the General Plan would generate GHG emissions that would have a significant impact on the environment depends on whether the rate of GHG emissions would provide its share of AB 32, Executive Order B-30-15, SB 32, and Executive Order S-3-05 emissions reductions. The City has elected to use an efficiency threshold to quantify consistency with these statewide plans. Efficiency thresholds express emissions based on the amount of GHG emitted per capita or per service population. A per capita analysis measures only the residential population, while a per service population analysis measures the total of the residential population *and* employment accommodated by a given project. When dividing total GHG emissions by service population, a community is able to evaluate its overall growth and conservation plans and consider whether emissions will decrease on a per-unit basis in a way that is consistent with the State's emissions goals.

The threshold used in this analysis is 2.25 MT CO₂e per service population, with a target year of 2035 (the General Plan horizon year). The discussion below describes how this target was calculated.

As described in the Regulatory Framework section above, State legislation and Executive Orders have established GHG reduction targets for several target years: 2020, 2030, and 2050. AB 32 established a statewide GHG emissions reduction target to return to 1990 emissions levels by the year 2020, SB 31 established a target of 40 percent below 1990 levels by 2030, and Executive Order (EO) S-3-05 established a long-term emissions target of 80 percent below 1990 levels by 2050. AB 32 also required ARB to prepare a plan to reduce GHG emissions, which included the need to establish a statewide greenhouse gas emissions limit, equal to the 1990 level, to be achieved by 2020. Table 4.5-1 shows the State's 2020, 2030, and 2050 emissions targets based on the approved

³ The 30-year operational lifetime is based upon the expected operational life of a project. Estimates derived from the State of California Executive Order D-16-00 and US Green Building Council's *The Costs and Financial Benefits of Green Building* (SMAQMD 2016).

1990 limit. A 2035 target year value was interpolated between the 2030 and 2050 targets to correspond with the General Plan’s planning horizon.

| Table 4.5-1 Statewide Emissions Inventory and Reduction Targets | | | | | |
|---|--------------------|--------------------|--------------------|--------------------|-------------------|
| | 1990 | 2020 | 2030 | 2035 | 2050 |
| Statewide Emissions Targets (MMT CO ₂ e) | 431.0 ¹ | 431.0 ¹ | 258.6 ² | n/a | 86.2 ⁴ |
| Interpolated Mid-term Reduction Target | n/a | n/a | n/a | 215.5 ³ | n/a |
| Amount below 1990 Levels | 0% | 0% | 40% | 50% | 80% |
| Note: MMT CO ₂ e = million metric tons of carbon dioxide equivalent ¹ California 1990 Greenhouse Gas Emissions Level and 2020 Limit, ARB: < http://www.arb.ca.gov/cc/inventory/1990level/1990level.htm > ² 40% below 1990 levels per SB 32 ³ Interpolated between 2030 and 2050 targets ⁴ 80% below 1990 levels per EO-S-3-05 | | | | | |

As previously stated, statewide emissions reduction targets can be adjusted and expressed on a per-capita or per-service population basis, called an efficiency target, to represent the rate of emissions needed statewide to achieve targets. For example, to create an efficiency target that achieves the AB 32 target, one would divide the statewide emissions target for 2020 (shown in Table 4.5-2) by the statewide population and employment forecasts for 2020 to yield an emissions “budget” for each California resident and employee. As noted previously, ARB’s Proposed Scoping Plan recommends an efficiency target approach for local governments for 2030 and 2050 target years.

Local governments do not have control over all the statewide emissions sources – many emissions sources reflected in the ARB inventories are not relevant in every city or county. The statewide emissions targets, population, and employment can be tailored to focus on the emission sources and service population that are relevant for the Planning Area. Some emissions sources and employment sectors are not relevant to this proposed General Plan Update (such as agriculture and forestry), and the efficiency threshold developed for this EIR removes consideration of irrelevant emissions sources and employment that are not found in the Planning Area to provide a customized threshold that is appropriate for this Planning Area specifically.

In order to develop a GHG efficiency target that is appropriate for the Planning Area, the non-land use-related emissions and jobs must be removed from consideration. Therefore, a scaled version of the full statewide emissions inventory was developed as part of this analysis, which is based on the land uses over which the City can have some influence through land use planning, zoning, development approval, and permitting authority. The revised inventory is more appropriate for use in GHG emissions target-setting because it focuses attention on the emissions sources that can be influenced and are applicable locally. Table 4.5-2 presents a revised version of the 1990 statewide emissions shown in Table 4.5-1 and includes only the sectors and sub-sectors over which the City has some influence, and which are present in the City. This data was used to generate the City’s significance threshold.

To align with the modifications to the applicable sectors described above, the service population information has also been tailored based on the City’s demographics and services. Using tailored demographic forecasts and GHG targets, both per capita and per service population emissions efficiency targets have been developed for the 2020, 2030, 2035, and 2050 target years, as shown in Table 4.5-3. The 2020 target is an informational baseline figure. In reporting thresholds for multiple future target years, stated in terms of per capita *and* per service population, the City is creating and using significance thresholds that can be used for future projects within the City. For this EIR,

the most appropriate threshold is the 2035 threshold of 2.25 MT CO₂e per service population (see Table 4.5-3 below), because this aligns with the General Plan horizon year and the per service population metric is most appropriate⁴ for large-scale projects involving a broad range of land uses, such as this General Plan.

Table 4.5-2 Adjusted Statewide Emissions Inventory – Land Use-Related Sectors

| Main Sector / Sub Sector Level 1 | Total Emissions (MMT CO ₂ e/yr) ¹ | Adjusted Land Use-Related Emissions (MMT CO ₂ e/yr) | Notes/Adjustments |
|-----------------------------------|---|--|--|
| Agriculture & Forestry | 18.9 | 0.0 | Not included in land use sector |
| Commercial | 14.4 | 13.9 | Excludes National Security emissions from Sub Sector Level 1 |
| Electricity Generation (Imports) | 61.5 | 61.5 | Land use sector includes all emissions |
| Electricity Generation (In State) | 49.0 | 34.4 | Excludes Combined Heat and Power: Industrial from Sub Sector Level 1 |
| Industrial | 105.3 | 11.7 | Industrial emissions excluded from land use sector, except as described in sub sectors below Construction emissions from Sub Sector Level 2 included in land use sector Waste water treatment emissions are included in community-wide GHG inventory |
| <i>CHP: Industrial</i> | <i>9.7</i> | <i>0.0</i> | |
| <i>Flaring</i> | <i>0.1</i> | <i>0.0</i> | |
| <i>Landfills</i> | <i>7.4</i> | <i>7.4</i> | |
| <i>Manufacturing</i> | <i>32.1</i> | <i>0.7</i> | |
| <i>Mining</i> | <i>0.03</i> | <i>0.0</i> | |
| <i>Not Specified</i> | <i>2.7</i> | <i>0.0</i> | |
| <i>Oil & Gas Extraction</i> | <i>14.8</i> | <i>0.0</i> | |
| <i>Petroleum Marketing</i> | <i>0.02</i> | <i>0.0</i> | |
| <i>Petroleum Refining</i> | <i>32.8</i> | <i>0.0</i> | |
| <i>Pipelines</i> | <i>1.92</i> | <i>0.0</i> | |
| <i>Waste Water Treatment</i> | <i>3.6</i> | <i>3.6</i> | |
| Not Specified | 1.3 | 1.3 | Land use sector includes all emissions |
| Residential | 29.7 | 29.7 | Land use sector includes all emissions |
| Transportation | 150.6 | 140.9 | Excludes Aviation, Rail, and Water-borne emissions from Sub Sector Level 1 |
| Total | 431.0 | 293.4 | |

Notes: Sectors/sub-sectors may not sum exactly due to rounding

¹ California 1990 Greenhouse Gas Emissions Level and 2020 Limit by Sector, ARB:
[<http://www.arb.ca.gov/cc/inventory/1990level/1990level.htm>](http://www.arb.ca.gov/cc/inventory/1990level/1990level.htm)

⁴ Note that this differs from the transportation analysis, which uses per capita. This is because the per capita data from the City's traffic analysis is more reliable, and this metric aligns with SB 375 and other regulations related to VMT.

| Table 4.5-3 City of Roseville Efficiency Thresholds* | | | | |
|---|-------------------------|-------------------------|-------------------------|-------------------------|
| | 2020 | 2030 | 2035 | 2050 |
| Emissions Targets (MT CO ₂ e/yr) ¹ | 293,400,000 | 176,040,000 | 146,700,000 | 58,680,000 |
| Percent Mass Emissions Reduction | n/a | 40% below 2020 | 50% below 2020 | 80% below 2020 |
| Population ² | 40,719,999 | 44,019,846 | 45,521,334 | 49,158,401 |
| Employment | 18,686,300 ³ | 20,634,693 ⁴ | 21,338,529 ⁴ | 23,043,437 ⁴ |
| Service Population (SP) | 57,898,579 | 63,029,965 | 65,179,875 | 70,387,622 |
| Per Capita Emissions Efficiency Targets (MT CO ₂ e/capita/yr) | 7.21 | 4.00 | 3.22 | 1.19 |
| Per Service Population Emissions Efficiency Targets (MT CO ₂ e/SP/yr) | 5.07 | 2.79 | 2.25 | 0.83 |
| <p>*Future projects which use these thresholds for environmental analysis should include a brief justification of the type of efficiency target and the target year selected. Per capita is most applicable to projects which only include residential uses, or in cases where reliable data to generate a service population estimate is unavailable. Projects should generally use the 2035 target year. Note that future projects consistent with the General Plan will not require further analysis, per the tiering provisions of CEQA.</p> <p>Note: MMT CO₂e = million metric tons of carbon dioxide equivalent; Service Population (SP) = population + employment</p> <p>¹ California 1990 Greenhouse Gas Emissions Level and 2020 Limit by Sector, ARB: <http://www.arb.ca.gov/cc/inventory/1990level/1990level.htm>; targets for future years based upon percent mass emissions reduction targets established by SB 32 and EO-S-3-05, and an interpolation between 2030 and 2050 targets for the year 2035, in alignment with state reduction targets presented in Table 4.5-1.</p> <p>² DOF Table P-1 Total Estimated and Projected Population for California and Counties: July 1, 2010 to July 1, 2060 in 5-year increments. February 2017. Available online at: <http://www.dof.ca.gov/Forecasting/Demographics/projections/></p> <p>³ Interpolated from revised (i.e., land-use related) Employee Development Department (EDD) Employment Projections for 2014 (15,694,600) and 2024 (18,167,900). Available online at: <http://www.labormarketinfo.edd.ca.gov/data/employment-projections.html>. Sorted to remove jobs from: 11-9013 Farmers, Ranchers, and Other Agricultural Managers; 19-1032 Foresters; 19-4041 Geological and Petroleum Technicians; 19-4093 Forest and Conservation Technicians; 45-000 Farming, Fishing, and Forestry Occupations; 47-5000 Extraction Workers; 49-3011 Aircraft Mechanics and Service Technicians; 49-3041 Farm Equipment Mechanics and Service Technicians; 49-9041 Industrial Machinery Mechanics; 49-9043 Maintenance Workers, Machinery; 49-9044 Millwrights; 51-0000 Production Occupations; 53-2000 Air Transportation Workers; 53-4000 Rail Transportation Workers; and 53-5000 Water Transportation Workers.</p> <p>⁴ EDD does not provide employment estimates to 2050, so the ratio of employment to population estimated in 2024 (i.e., 43.2%) was applied to the DOF population estimates for 2030, 2035, and 2050 to estimate employment in those years.</p> <p>See Appendix B for detailed calculations and data inputs.</p> | | | | |

4.5.4.3 ISSUES NOT DISCUSSED FURTHER

All issues related to GHG emissions are discussed in detail below.

4.5.4.4 IMPACT ANALYSIS

IMPACT 4.5-1 *Generation of Greenhouse Gas Emissions or Conflict with an Applicable Plan, Policy, or Regulation Adopted for the Purpose of Reducing the Emissions of GHGs. Buildout of the General Plan would involve land use change and construction and operation of public facilities and infrastructure that would result in construction and operational GHG emissions. The impact is **cumulatively considerable**.*

The proposed General Plan Update will generate GHG emissions due to construction as the Planning Area builds out and due to operation of completed uses. This analysis section addresses construction emissions first, followed by operational emissions. The intensity and pace of construction under the General Plan will depend on market and economic conditions. Buildout of the General Plan would involve land use change and associated

infrastructure and public facility improvements that would generate GHG emissions from a variety of sources. Construction-related GHG emissions would be generated primarily from exhaust emissions associated with off-road construction equipment, heavy-duty material haul trucks, and construction worker commutes.

Daily GHG emissions would vary depending on the type of construction activities. For example, daily GHG emissions would be higher during construction-equipment-intensive phases, such as site grading, and lower during less intensive phases, such as building construction. The City anticipates that there will be times with little construction activity and other times when multiple projects are proceeding at once, resulting in higher daily and annual emissions. GHG emissions generated by these sources were quantified using emission factors and methodologies described in Section 4.5.3.1, “Methodology.” The construction-related emissions estimates use conservative assumptions based on construction occurring in the earliest possible year (year 2021), a construction scenario of maximum overlap of the most intensive days of equipment use of each construction phase (site prep, grading, building construction, paving, and architectural coating), and concurrent construction to develop up to 10 percent of the proposed General Plan Update buildout acreage in a single year. Because of these conservative assumptions, actual emissions could be less than those estimated. If construction is delayed or occurs over a longer period, emissions could be reduced because of a more modern and cleaner burning (less emitting) construction equipment fleet mix and a less intensive and overlapping construction schedule.

Table 4.5-4 summarizes the maximum annual and total construction-related GHG emissions from buildout of the General Plan. In order to provide a more comprehensive assessment of cumulative GHG emissions, construction-related GHG emissions that would result from full buildout of the General Plan were summed and then amortized over an estimated 30-year operational lifetime and added to the operational emissions associated with these land uses. The amortized construction-related GHG emissions are also presented in Table 4.5-4. Refer to Appendix B for detailed model inputs, assumptions and calculations.

| Table 4.5-4. Summary of Maximum Construction-Related Greenhouse Gas Emissions for the Maximum Single-Year Construction Scenario (year 2021) and with Full Buildout | |
|--|----------------------|
| | MT CO ₂ e |
| Maximum Single-Year Construction Scenario | 54,820 |
| Total Construction Emissions from Full Buildout ¹ | 548,204 |
| Amortized Construction Emissions, per year ² | 18,273 |
| Notes: MT CO ₂ e = metric tons of carbon dioxide equivalents | |
| ¹ Total construction emissions are estimated by multiplying the annual worst-case constructions, which represents construction emissions associated with development of 10 percent of the total proposed land uses, by ten. | |
| ² Construction emissions are amortized over 30 years, which is the average assumed lifetime of proposed land use development. | |
| Source: AECOM 2019; See Appendix B for detailed modeling assumptions, outputs, and results. | |

Long-term operational emissions would be generated by the day-to-day activities associated with existing and proposed land uses within the Planning Area. Operational GHG emission sources would include energy consumption (i.e., electricity and natural gas), transportation, waste, and water and wastewater. Operational GHG emissions are distinguished by direct and indirect GHG emissions. Direct GHG emissions are generated at the location of consumption or use. For example, mobile-source emissions are direct because GHG emissions are generated as a vehicle begins to move. Indirect emissions occur at a different time or location from the point of consumption or use. For example, electricity-related GHG emissions are indirect because although a consumer uses electricity at their home, the fuel combustion and emissions associated with creating that electricity likely occurred off-site or at a different time. Table 4.5-7 presents the operational GHG emissions estimates for existing

land uses and activity within the Planning Area, proposed new land uses, and total operations under the proposed General Plan Update. Existing operational emissions are based on data from the transportation modeling prepared for the proposed General Plan Update. Operational emissions for buildout of the proposed General Plan Update are provided for the year 2035, consistent with the cumulative horizon year for the General Plan. Amortized construction-related emissions are then added to the total operational emissions of the Planning Area anticipated with full buildout of the General Plan in 2035, and these emissions are compared the GHG efficiency threshold for 2035 (see Table 4.5-3).

| Table 4.5-5 Modeled GHG Emissions Generated within the Planning Area (<i>emissions are presented in MT CO₂e unless otherwise stated</i>) | | |
|---|---------------------|---|
| | Existing Conditions | Total Planning Area (Existing + New Development) |
| Operational Source | | |
| Area | Not Available | 115,302 |
| Energy ¹ | 446,557 | 303,238 |
| Mobile ² | 565,734 | 1,071,201 |
| Waste | 33,236 | 87,758 |
| Water | 4,903 | 33,268 |
| Total Annual Operational Emissions | 1,050,430 | 1,610,767 |
| Total Annual Operational (2035) + Amortized Construction Emissions | - | 1,629,040 |
| Existing Service Population (residents + employees) | 204,802 | 318,252 |
| Total⁴ Annual Project Emissions (MT CO₂e) per Service Population³ | 5.13 | 5.12 |
| <i>GHG Efficiency Threshold (MT CO₂e per service population)</i> | - | 2.25 |
| Exceed threshold? | - | Yes |
| Notes: ¹ Energy emissions are calculated based upon Roseville Electric Utility emissions factor for year 2016, and projected Roseville Electric Utility emission factor for 2035 based upon increased RPS percentage within the power mix. ² Mobile emissions are calculated outside of CalEEMod using EMFAC 2017 emissions rates and VMT from the Transportation Impact Analysis. ³ Annual project emissions (amortized construction + operational) per service population are calculated based upon estimate of 198,000 residents + 120,000 employees in the City of Roseville in 2035 with buildout of the proposed General Plan Update (See General Plan Land Use Element) ⁴ Totals do not add due to rounding. Source: Modeled by AECOM in 2019 | | |

As shown in Table 4.5-5, without consideration of the reduction benefits associated with proposed General Plan Update policies and implementation measures, buildout of the proposed General Plan Update would result in a GHG emissions efficiency of 5.12 MT CO₂e per service population in 2035, which exceeds the GHG efficiency threshold of 2.25 MT CO₂e per service population. The estimated GHG emissions efficiency is calculated using a conservative estimate of total residents and employees anticipated within the Planning Area in the year 2035; estimates for total service population show that employment could be nearly 10 percent higher, which could generate a GHG emissions efficiency of approximately 4.86 MT CO₂e per service population.

The emissions shown in this table are unmitigated; they do not take into consideration mobile source emissions reductions that would be available or implementation of the proposed General Plan Update's revised policies related to infill development, VMT, transit service, bicycle and pedestrian access, and related topics. In addition, the degree to which the proposed General Plan Update will achieve VMT reductions depends on a number of factors, many of which are not within the City's control and cannot be predicted. VMT reduction depends on factors such as demographic change, household preferences for housing types and locations, the cost of fuel, and the competitiveness of regional transit relative to driving (which relates to congestion along vehicular commute routes that are not under the City's jurisdiction, as well as transit provided by agencies other than the City), and funding availability to improve non-vehicular travel options.

To the extent that the City can influence whether the proposed General Plan Update will reduce VMT, this will depend on planning that reduces travel demand per capita and per employee by promoting increased density near transit, improving the quality of non-vehicular transportation options, providing incentives for non-vehicular travel, encouraging the mixing of complementary land uses in proximity to one another, and other feasible methods.

The results reported here can also be considered conservative because some of the analysis uses default CalEEMod assumptions, which tend to overestimate emissions. For example, based on a comparison to 2016 waste generation and waste use data provided by the City of Roseville, the emissions estimated by CalEEMod represent waste generation and water use rates that are approximately one-third higher than actual rates for the City of Roseville in 2016. It can be assumed that, based on regulations and trends in conservation, waste generation and water use rates would decline over time and not increase. Therefore, it is also reasonable to assume that the waste and water emissions presented for 2035 are at least one-third higher than what is likely to occur within the Planning Area in the year 2035.

EPA and ARB have developed regulations, programs, and strategies that address GHG emissions. See Section 4.5.3, "Regulatory Framework," for a description of regulations that would help reduce GHG emissions associated with the Proposed Project. Those regulations that pertain to mobile- and energy-related emissions would have the most substantial effect on reducing future emissions within the Planning Area. As cleaner burning fuel and fuel efficiency of vehicles improves over time, mobile emissions decrease per vehicle mile travelled. As utility providers are mandated to meet more stringent emission standards and incorporate a greater percentage of renewable energy sources in the power grid, emissions from electricity decline per unit of energy.

The following goals and policies related to GHG emissions would be revised as a part of the proposed General Plan Update, with additions shown in **bold, underlined** text and deletions shown in ~~striketrough~~ text:

Goal AQ1.3: ~~Encourage the coordination~~ **Coordinate** and integration of all forms of public transport ~~to, while reducing motor vehicle emissions, through a decrease in the average daily vehicular trips and vehicle miles traveled,~~ **while encouraging an increase in,** and by increasing the commute vehicle occupancy rate by 50% to 1.5 or more persons per vehicle.

Goal AQ1.4: Increase the capacity of the **pedestrian, bicycle, and transit** transportation systems ~~and~~ **and** ~~Promote and the share of City owned~~ **vehicular transportation that uses less-polluting fuels, such as electricity,** including the roadway system and alternate modes of transportation.

Goal AQ1.5: Provide adequate pedestrian and ~~bikeway~~ **bicycle** facilities for present and future transportation needs.

Goal AQ1.6: Promote a well-designed and efficient ~~light rail and~~ transit system.

Goal AQ1.7: ~~While recognizing that the automobile is the primary form of transportation, the City of Roseville should make a commitment to shift from the automobile to other modes of transportation.~~ **Improve transit, biking, bicycle, and pedestrian access to lessen dependence on automobile travel and reduce household transportation costs.**

Goal AQ1.8: Reduce City greenhouse gas emissions, consistent with local, regional, and state goals.

- ▶ **Policy AQ1.1:** Cooperate with other agencies to develop a consistent and an effective approach to **reducing** air pollution ~~planning~~.
- ▶ **Policy AQ1.3:** **Projects that could generate substantial air pollutant emissions or expose sensitive uses to substantial air pollutant concentrations should incorporate strategies to reduce operational emissions, applicable emissions control exposure to such emissions using measures recommended by the Placer County Air Pollution Control District, and other relevant applicable, feasible strategies, as needed, to avoid significant air quality impacts** ~~Develop consistent and accurate procedures for evaluating the air quality impacts of new projects.~~
- ▶ **Policy AQ1.6:** **Require new development and City projects to reduce greenhouse gas emissions sources in the Planning Area to the greatest degree feasible.**
- ▶ **Policy AQ1.7:** **The City will participate in and support regional greenhouse gas reduction and adaptation programs that are consistent with the General Plan and have available funding.**
- ▶ **Policy AQ1.9:** **Preserve and enhance carbon sequestration resources in the City to improve air quality and reduce net greenhouse gas emissions.**
- ▶ **Policy AQ1.10:** **Improve overall health and sustainability of the community by reducing emissions of greenhouse gases that contribute to climate change.**
- ▶ **Policy AQ1.11:** **Promote local purchase and use of electric vehicles through incentives and strategic expansion of charging infrastructure.**
- ▶ **Policy AQ1.12:** Develop transportation systems that ~~minimize vehicle delay and~~ **reduce vehicle emissions by improving the desirability of walking, bicycling, and public transportation relative to vehicular travel** ~~air pollution~~.
- ▶ **Policy AQ1.13:** ~~Develop~~ **Identify feasible strategies to reduce** ~~consistent and accurate procedures for mitigating transportation emissions from new and existing projects~~ **and transportation associated with existing development within the Planning Area.**
- ▶ **Policy AQ1.14:** Encourage alternative modes of transportation, including pedestrian, bicycle, and transit usage **use**.

- ▶ **Policy AQ1.15: Promote and incentivize low-emissions vehicles and associated charging infrastructure. Pursue funding from state programs and other sources to facilitate local purchase and use of electric vehicles.**
- ▶ **Policy AQ1.16: Encourage ~~Implement~~ land use policies that maintain and improve air quality and expand opportunities for transit-oriented development, which allows residents to significantly reduce vehicular transportation and associated air pollutant emissions.**
- ▶ **Policy AQ1.17: Conserve energy and reduce air pollutant emissions by encouraging energy efficient building designs and transportation systems and promoting energy efficiency retrofits of existing structures.**
- ▶ **Policy AQ1.18: Promote building and transportation energy efficiency in new residential and commercial development through encouraging and incentivizing implementation measures early in the design and development process.**
- ▶ **Policy AQ1.19: Encourage energy efficiency by identifying potential cost savings, resource, and health benefits.**
- ▶ **Policy AQ1.22: Support improvements to diesel engines, limits on idling, and incorporation of technology and management practices that reduce harmful emissions at the Rail Yard.**
- ▶ **Policy CIRC2.6: Prioritize investments in pedestrian, bicycle, and transit access in Pedestrian Districts.**

Goal CIRC.3: ~~Promote~~ Provide a safe, convenient, and efficient transit system, ~~utilizing both bus and rail modes, to enhance mobility~~; reduce congestion; reduce auto emissions, including emissions that contribute to climate change; improve the environment; and provide viable non-automotive means of transportation in and through Roseville.

- ▶ **Policy CIRC3.1: Pursue and support transit services within the community and region and pursue land use, design, and other mechanisms that promote the use of such services. Promote transit service that is convenient, cost- effective, and responsive to the challenges and opportunities of serving Roseville and surrounding communities, and explore opportunities for transit innovation and service improvements.**
- ▶ **Policy CIRC3.6: Identify opportunities to increase the number and/or capacity of park-and-ride lots as needed, to increase transit and carpool/vanpool use.**

Goal CIRC4: Reduce ~~travel demand~~ vehicle miles traveled on the City's and regional roadway systems, while expanding mobility options for residents, employees, and visitors.

- ▶ **Policy CIRC4.1: Continue to enforce the City's TSM ordinance and monitor its effectiveness. The City will review and condition projects, as appropriate, to reduce travel demand per capita and per employee by promoting increased density near transit, improving the quality of non-vehicular transportation options, providing incentives for non-vehicular travel, encouraging the mixing of complementary land uses in proximity to one another, and using other feasible methods.**

- ▶ **Policy CIRC4.2:** Work with appropriate agencies to develop implementation measures to reduce vehicular travel demand and total vehicle miles traveled and meet air quality goals.
- ▶ **Policy CIRC4.3: Specific Plan Amendments and land use development projects not included in a Specific Plan shall be evaluated for consistency with the City's VMT Impact Standards.**
- ▶ **Policy CIRC4.4: If the evaluation required by CIRC4.3 finds a Specific Plan Amendment or land use development project not included in an adopted Specific Plan is inconsistent with thresholds established within the City's VMT Impact Standards, on-site land use, transportation, and urban design-related VMT-reducing features should be prioritized to demonstrate consistency. If feasible on-site features cannot achieve the VMT threshold, Specific Plan Amendments and land use development projects outside Specific Plan Areas may demonstrate equivalent consistency through off-site actions or fair-share fee contributions, or if consistency cannot be achieved, shall implement all feasible measures.**
- ▶ **Policy CIRC4.5: Policy CIRC4.3 does not apply to projects that propose residential or office uses in Transit Priority Areas or low-VMT areas. Low-VMT areas are those shown by the General Plan travel demand model or the SCS travel demand model to have per-capita, per-employee, or per-service-population VMT rates that are at least 15 percent less than the baseline citywide or regional rate.**
- ▶ **Policy CIRC4.6: Promote and incentivize Infill development, particularly affordable housing development, through assistance in obtaining outside grant funding and reductions or deferrals in impact fees.**
- ▶ **Policy CIRC5.1:** Develop a comprehensive and safe system of recreational and commuter bicycle routes and trails that provides connections between the City's major employment destinations (including employment) and housing areas and between its existing and planned bikeways.

Goal CIRC6.1: Increase the percentage of pedestrian trips in Roseville.

- ▶ **Policy CIRC6.1: Establish and maintain a safe and continuous pedestrian network that provides connections between residential areas and commercial retail and services, employment, public services, parks, and public transit.**
- ▶ **Policy CIRC6.2: Promote development patterns that encourage people to walk to destinations.**
- ▶ **Policy LU2.1:** Promote land use development patterns that support a variety of transportation modes and accommodate pedestrian mobility.
- ▶ **Policy LU2.2:** Allow ~~for land use patterns and~~ mixed-use development that integrates residential and non-residential land uses, ~~such~~ that residents may easily walk or bike to shopping, services, employment, and leisure activities.
- ▶ **Policy LU2.3:** Concentrate higher-intensity uses and appropriate support uses in Pedestrian Districts and within close proximity of transit and bikeway corridors, as identified in the Transit Master Plans and Bicycle Master Plan. ~~In addition, some component of public~~ **Public** uses, such as parks, plazas, public buildings, community centers, schools, and/or libraries, ~~should be located within Pedestrian Districts and transit and bikeway corridors~~ **easily accessible to the public.**

- ▶ **Policy LU2.4:** Promote and encourage the location of employee services, such as child care, restaurants, banking facilities, convenience markets, ~~etc~~ **and other daily needs**, within major employment centers for the purpose of reducing mid-day ~~service-related~~ vehicle trips.
- ▶ **Policy LU2.5:** Where feasible, improve existing developed ~~ment~~ areas to create better pedestrian, **bicycle**, and transit accessibility.
- ▶ **Policy LU2.6:** ~~Through City land use planning and development approvals,~~ Require **proposed** ~~that~~ neighborhood-serving uses (e.g. neighborhood commercial uses, day care, parks, schools, and other community facilities **and services**) **to** be physically linked with adjacent residential neighborhoods **through multi-modal transportation connections**.
- ▶ **Policy LU3.4:** Encourage infill development and ~~rehabilitation~~ **reinvestment** that:
 - **Upgrades the quality and enhances the character of existing areas;**
 - **Enhances the mix of land uses in proximity to one another so that more households can access services, recreation, and jobs without the use of a car;**
 - ~~enhances~~ **Facilitates pedestrian activity and** public transit use, ~~and pedestrian access;~~
 - **Efficiently utilizes and does not overburden existing services and infrastructure; and**
 - **Results in land use patterns and densities that provide the opportunity for the construction of a variety of household-housing types that are** affordable to all income groups.
- ▶ **Policy LU7.2:** Continue to develop and apply design standards that result in efficient site and building designs, pedestrian-friendly projects that stimulate the use of alternative modes of transportation, and ~~the establishment of~~ functional relationships between adjacent developments.
- ▶ **Policy LU8.10:** In addition to being consistent with the other goals and policies of the General Plan, ~~S~~**specific P**plans shall comply with the following:
 - a. Provide a public focal point, community, and/or theme feature. These features shall be specific to each area and be designed to promote and enhance community character. A special feature may include, but is not limited to, a community plaza, central park, or some other type of gathering area; outdoor amphitheater; community garden; regional park with special facilities; sports complex; or cultural facilities.
 - b. Provide entryways at entrances to the City in accordance with the Community Design Guidelines. Where possible, the entryways shall take advantage of and incorporate existing natural resources into the entry treatment. The ~~S~~**specific P**plans shall identify the location and treatment of the entryways, and shall consider the use of open space, oak regeneration areas, signage, and/or special landscaping to create a visual edge or buffer that provides a strong definition to entryways into the City.
 - c. The ~~S~~**specific P**plan areas shall be planned and oriented to be an integral part of the City consistent with the policies of the Community Form component of this Element.
 - d. Develop design guidelines, specifying screening and a transition between public utilities (e.g. substations, pump stations) and other uses, in conjunction with the public utility departments and agencies. In

addition, development along power line and pipeline easements shall incorporate design treatment to ensure compatibility and safety. Design guidelines and treatment may include minimum setbacks, building and landscape design standards, and possible limitations on certain types of uses and activities.

- e. Preserve natural resource areas where they exist, and where feasible, along new roadways. Such roadways may create a public boundary between the resource area and other uses. The ~~S~~specific ~~P~~plans shall identify locations and standards for the preservation of natural resources along roadways, and shall identify sources of financing for such road segments.

- ▶ **Policy PF4.4: Comply with federal, state, and local greenhouse gas reduction targets, including the renewable portfolio standards and carbon-free electricity requirements.**

- ▶ **Policy PF4.6:** Pursue reasonable and cost-effective energy efficiency, conservation, and load management programs **that provide benefits to the community.** ~~pertinent to the electric utility system.~~

Goal PF9.1: Preserve scarce resources by recognizing the importance of **efficiency** ~~conservation~~ in water and energy management.

Goal PF9. 2: Balance ~~conservation~~ **efficiency** efforts with water and energy supplies for the maximum benefit of Roseville's residents.

- ▶ **Policy PF9.1:** Develop and implement water ~~conservation~~ **efficiency** standards
- ▶ **Policy PF9.4:** Develop and ~~adopt a landscape ordinance that provides~~ **implement** standards for the use of drought tolerant, and water-conserving **efficient** landscape practices for both public and private projects.
- ▶ **Policy PF9.5:** Develop and implement public education programs designed to increase public participation in energy, water ~~conservation~~**efficiency**, and recycled water use.
- ▶ **Policy PF9.8:** Preserve ~~scarce~~ **natural** resources by undertaking ~~major~~ projects in energy conservation and load management, including increasing efficiency in the City's electrical system.
- ▶ **Policy PF9.9:** Continue ~~and expand~~ energy efficiency and conservation programs to serve all utility users.

The proposed General Plan Update goal and policy changes listed above provide greater clarity related to the City's intent to encourage infill development and mixing of land uses in proximity, which allows non-vehicular travel. The revisions also relate to improving public transit options and bicycle and pedestrian facilities to encourage a shift away from vehicular travel and encourage cleaner-fuel vehicle use. The revisions clarify the City's intent to reduce GHG emissions in a way that is consistent with local, regional, and state goals, and that PCAPCD recommendations for reducing GHG emissions should be incorporated into projects to reduce emissions. Policy revisions clarify that, in addition to reducing emissions, the City should take advantage of existing sequestration potential in the City's open spaces, as well as encourage energy efficiency in new buildings. The revisions to goals and policies would result a reduction of GHG emissions, and would not result in any adverse environmental impacts.

Conclusion

Both existing General Plan goals and policies that are not proposed for revision and goals and policies that would be revised as a part of the proposed General Plan Update would reduce GHG emissions from activities in the

Planning Area. Implementation of existing General Plan Air Quality General Policy 4; Bikeways/Trails Policy 2; Residential Energy Efficiency and Conservation Goal 1 and Policies 1, and 2; Water and Energy Conservation Policies 3, 7, and 8 (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Goals AQ1.3–1.8 and Policies AQ1.1, 1.3, 1.6, 1.7, 1.9–1.19 and 1.22; Goal CIRC3 and Policies 3.1, and 3.6; Goal CIRC4 and Policies CIRC4.1–4.6; and Policy CIRC5.1; Goal CIRC6.1 and Policies CIRC6.1 and 6.2; Policies LU2.1–2.6, 3.4, 7.2, and 8.10; Policy PF4.6; Goals PF9.1 and 9.2 and Policies PF9.1, 9.4, 9.5, 9.8, and 9.9, listed above, would reduce GHG emissions.

Many of the changes embodied in the proposed General Plan Update are focused on achieving GHG emission reductions within the Planning Area through implementation of strategies and related policies that result in GHG emission reductions, while also providing co-benefits to the community, such as improved bicycle, pedestrian and transit mobility options, reductions in household and business transportation and utility costs, improvements to air quality and public health, and improving fiscal sustainability (by managing ongoing costs related to vehicular transportation facilities). In addition, the proposed General Plan Update puts greater emphasis on facilitating infill development, thereby promoting public health through active transportation and reducing GHG emissions.

Land Use Element policies referenced in this EIR chapter provide for the integration of existing and proposed land uses to create a land use mix and development pattern that results in reduced VMT due to accommodation of alternative modes of transportation and accessibility of services in proximity to relevant residential and employment centers. Goals and policies from the Circulation Element promote alternative modes of transportation and expansion of the use of such systems and require plan amendments and projects not included in existing adopted plans to achieve a VMT rate consistent with the MTP/SCS. The Air Quality and Climate Change Element contains policies that would reduce criteria emissions or substantial pollutant concentrations, but would also reduce GHG emissions. Air Quality and Climate Change Element policies would promote and incent low emissions vehicles and associated charging infrastructure, and encourage energy efficient project design for new construction and retrofit of existing structures.

Implementation of the proposed General Plan Update would encourage transportation and energy efficiencies within the Planning Area that would reduce the rate of GHG emissions. However, because there are many important factors about the character and location of future development, and the demographic characteristics of future households and employees within the Planning Area, the overall competitiveness of transit compared to driving throughout the region, the cost of fuel, and other factors, the degree to which General Plan Update policies and implementation measures will reduce emissions is currently unknown. Consequently, emissions from implementation of the proposed General Plan Update could still result in a net increase of GHG emissions that could exceed the local GHG emissions efficiency threshold of significance identified in Section 4.5.4.2, which represents the City's share of emissions reduction to be in alignment with State and regional plans to reduce GHG emission. Therefore, implementation of the proposed General Plan Update could result in the generation of GHG emissions at a level that may have a significant impact on the environment and conflict with State GHG emission targets adopted for the purpose of reducing the emissions of GHGs. Therefore, this impact is **cumulatively considerable**.

Mitigation Measures

Mitigation Measure 4.5-1a: Implement Mitigation Measure 4.4-2a.

Mitigation Measure 4.5-1b: Implement Mitigation Measure 4.3-1.

Mitigation Measure 4.5-1c. The proposed General Plan Update should be amended as follows:

Implementation Measure

Area Sources

- ▶ The City shall utilize electric landscape maintenance equipment to the extent feasible on parks and public/quasi-public lands.
- ▶ The installation of wood-burning fireplaces or appliances in new development shall not be permitted.

Energy

- ▶ The City will pursue within existing and future City facilities and may partner with other public agencies and organizations to promote replacement of appliances and office equipment with energy-efficient models with a priority from highest to lowest in terms of typical GHG reductions, on: water heater, vending machine, copier, refrigerator, printer, dishwasher, water cooler, computer, and clothes washer.
- ▶ The City will pursue improvements to existing and future City facilities and may partner with other public agencies and organizations to implement comprehensive building efficiency improvements, inclusive of, but not limited to, implement lighting efficiency upgrades, improved building temperature controls, building air sealing, duct air sealing and duct replacement, upgrading and/or insulating water heaters, ensuring proper functioning and efficiency of heating and air conditioning systems, reducing heat loss through and around windows, installation of cool roofs, and implementing energy conservation education.
- ▶ The City will support education and outreach to promote rebates, incentives, and other programs (as they become available) which would promote reductions in greenhouse gas emissions, and use available information on rebates used by consumers to determine where to focus education and outreach, including programs designed to promote electric appliances and replace natural gas appliances, and programs related to lighting.
- ▶ The City will promote the U.S. Department of Housing and Urban Development Energy Efficient Mortgage (EEM) program and similar programs that assist buyers in purchasing homes meeting energy-efficiency criteria.
- ▶ The City will partner with other agencies and organizations to expand the City's urban forest to promote sequestration, but also with a focus on selection and placement that reduces the need for air conditioning and the urban heat island effect.

Land Use and Transportation

- ▶ The City will direct its own investments and review proposed development projects to reduce vehicular travel demand, promote non-vehicular travel, and facilitate local purchase and use of electric vehicles.
- ▶ The City will continue to direct its own investments and pursue outside funding for infrastructure and operational programs to promote ease and convenience of pedestrian, bicycle, and transit travel for daily trips.
- ▶ The City will integrate its land use and transportation planning and review and condition proposed projects to better situate residents in proximity to workplaces, goods and services, and recreational opportunities, making updates to implementing plans, such as the Capital Improvement Program, Bicycle Master Plan, Pedestrian Master Plan, Transportation Systems Management program, transportation impact fee program, and transit plans.
- ▶ The City will support applications for affordable housing funds from agencies that reward and incentivize good planning, such as infill housing and housing built close to jobs, transportation, and amenities.
- ▶ The City will partner with other agencies and proposed developments to expand bicycle parking and other facilities, pedestrian facilities and amenities, and electric vehicle charging stations, with a focus on daily destinations.
- ▶ The City will support a reduction of parking requirements for projects with a location, design, surrounding mix of uses, access to non-vehicular transportation facilities, and/or ongoing travel demand management programs that would reduce the need for vehicular trips.

Significance after Mitigation

In order to provide emissions reductions that would achieve the local GHG emissions efficiency target, estimated GHG emissions within the Planning Area would need to be reduced by up to 55 percent. Implementation of the above described mitigation would substantially reduce GHG emissions within the Planning Area with buildout of the General Plan.

Consistency with proposed General Plan Update Policy AQ1.3 would require projects that could have a potentially significant effect to incorporate applicable PCAPCD standard construction mitigation measures. Among other actions, the PCAPCD-identified standard construction measures include actions that would reduce exhaust emissions associated with equipment and vehicle use during construction activities, thereby also reducing construction-related GHG emissions.

Implementation of Mitigation Measure 4.5-1a (Mitigation Measure 4.4-2a), as detailed in Impact 4.4-2 of Section 4.4, “Air Quality,” would require projects that could have a potentially significant effect to incorporate applicable PCAPCD standard operational mitigation measures. Among other actions, the PCAPCD-identified standard operational measures include actions that would reduce area, energy, and mobile source emissions associated with building operations and transportation activities within the Planning Area, thereby also reducing operational GHG emissions. Implementation of Mitigation Measure 4.5-1b (Mitigation Measure 4.3-1) would substantially reduce VMT directly and indirectly, and mobile sources are the largest part of the City’s existing inventory and future forecast GHG emissions. Implementation of Mitigation Measure 4.5-1c would require implementation of all

feasible measures and design features to minimize GHG emissions associated with area, energy, land use and transportation, water and waste emissions sources.

Implementation of these mitigations measures during future improvements associated with buildout of the General Plan, for both existing and new development, would result in a reduction of GHG emissions compared to the estimated emissions shown in Table 4.5-5. However, the precise effectiveness of these measures cannot be determined, and GHG emissions could still exceed the significance threshold. As detailed in Section 4.5.4.2, “Thresholds of Significance,” this threshold was identified as the local GHG efficiency rate that would be required in the year 2035, the planning horizon for the General Plan, to align with statewide emissions reduction legislation and applicable executive orders for the target year and ensure that the City meets its share of the State’s GHG reduction mandates, considering the types of projects to be implemented under the General Plan and the specific location of the Planning Area. Therefore, implementation of the proposed General Plan Update could generate GHG emissions, either directly or indirectly, that may conflict with applicable State plans, policies, and regulations adopted for the purpose of reducing the emissions of GHGs and could contribute substantially to the cumulatively considerable impact climate change on the environment. There are no additional feasible mitigation measures available to address this impact. This impact is **significant and unavoidable**.

4.6 NOISE AND VIBRATION

4.6.1 INTRODUCTION

This section describes potential impacts related to noise and vibration in the Planning Area associated with the proposed General Plan Update. To provide context for the impact analysis, this chapter begins with an environmental setting describing the existing conditions in the Planning Area related to noise-sensitive receptors, and noise-generating land uses and vehicular transportation. Next, the regulatory framework is described, which informs the selection of the significance thresholds used in the impact analysis. The regulatory framework also includes existing General Plan policies related to the impact analysis of this chapter. The section concludes with the applicable significance thresholds, the impacts of the proposed changes to adopted General Plan policies, recommended mitigation measures, and the significance conclusions.

No Notice of Preparation NOP comments related to noise and vibration were received.

4.6.2 ENVIRONMENTAL SETTING

This section describes the existing conditions in the Planning Area. Primary linear noise sources in Roseville include Interstate 80 (I-80); State Route 65 (SR 65); and the Union Pacific Railroad (UPRR), which is oriented north-northeast to south-southwest through the Planning Area. I-80 bisects the east and west quadrants of the City, oriented northeast to southwest and SR 65 is oriented northwest to southeast in the Planning Area. Exhibit 4.6-1 shows the location of these noise sources. Other noise sources in the City include stationary sources, and natural sources (wind, birds, etc.). The Planning Area does not intersect with any military bases, special use airspaces, or low-level flight paths, and is not located in safety zones or noise contours associated with airfields or airports that are a concern for land use compatibility planning.

4.6.2.1 FUNDAMENTALS OF ENVIRONMENTAL NOISE

Below is a brief description of certain terminology used throughout this report to characterize the noise environment in Roseville.

Sound, Noise, and Acoustics

Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium (e.g., air); it consists of variations in air pressure that the ear can detect. Noise is often described as unwanted sound (i.e., loud, unexpected, or annoying sound), and thus is a subjective reaction to the physical phenomenon of sound. Acoustics is the physics of sound. Sound levels are measured and expressed in decibels (dB), which is the unit of measurement for describing the amplitude of sound.

In acoustics, the fundamental scientific model consists of a sound (or noise) source, a receiver, and the propagation path(s) between the two. The loudness of the sound source and obstructions or atmospheric factors affecting the propagation of the sound to the receiver determines the sound level and characteristics of the sound perceived by the receiver. Acoustics primarily addresses the propagation and control of sound.

Frequency

The number of sound pressure peaks travelling past a given point in space during a single second is referred to as the frequency, expressed in cycles per second or Hertz (Hz). A given sound may consist of energy at a single frequency (pure tone) or in many frequencies over a broad frequency range (or band). Human hearing is generally affected by sound frequencies between 20 Hz and 20,000 Hz (20 kHz).

A-Weighted Decibels

Exhibit 4.6-2 illustrates sound levels associated with common sound sources. The perceived loudness of sounds is dependent on many factors, including sound pressure level and frequency content. Acoustical professionals often quantify sounds by “weighting” frequencies based on how sensitive humans are to that particular frequency. Within the usual range of environmental sound levels, perception of loudness is relatively predictable, and this perception is approximated using the A-weighting method. There is a strong correlation between A-weighted sound levels (expressed as dBA) and community response to noise. For this reason, the A-weighted sound level has become the standard descriptor for environmental noise assessment, and noise levels shown in this report are A-weighted.

Human Response to Changes in Noise Levels

Under controlled conditions in a laboratory setting a human is able to discern 1 dB changes in sound levels when exposed to steady, single-frequency (“pure-tone”) signals in the mid-frequency range (1,000 Hz-8,000 Hz). In typical noisy environments, changes in noise level of 1–2 dB are generally not perceptible. However, people are able to begin to detect sound level changes of 3 dB in typical environments. A 5-dB change is readily noticeable, a 6-dB change is clearly noticeable, and a 10-dB change is generally perceived as a doubling or halving of loudness (Caltrans 2013).

Noise Descriptors

Noise in our daily environments fluctuates over time. Some fluctuations are minor, but some are substantial. Noise may occur in regular patterns or at random, levels may fluctuate rapidly or slowly, and some noise levels vary widely while others are relatively constant. Because these factors can influence human perception of sound, various noise descriptors have been developed to help describe noise exposure as it relates to time:

- ▶ **Equivalent Sound Level (L_{eq}):** The L_{eq} represents an average of the sound energy occurring over a specified time period. In effect, the L_{eq} is the steady-state sound level containing the same acoustical energy as the time-varying sound that actually occurs during the same period. The 1-hour, A-weighted equivalent sound level ($L_{eq}[h]$) is the energy average of A-weighted sound levels occurring during a 1-hour period, and is the basis for noise abatement criteria (NAC) used by the California Department of Transportation (Caltrans) and the Federal Highway Administration (FHWA).
- ▶ **Percentile-Exceeded Sound Level (L_n):** The L_n represents the sound level exceeded “n” percentage of a specified period.¹

¹ For example, L_{10} is the sound level exceeded 10 percent of the time, and L_{90} is the sound level exceeded 90 percent of the time.

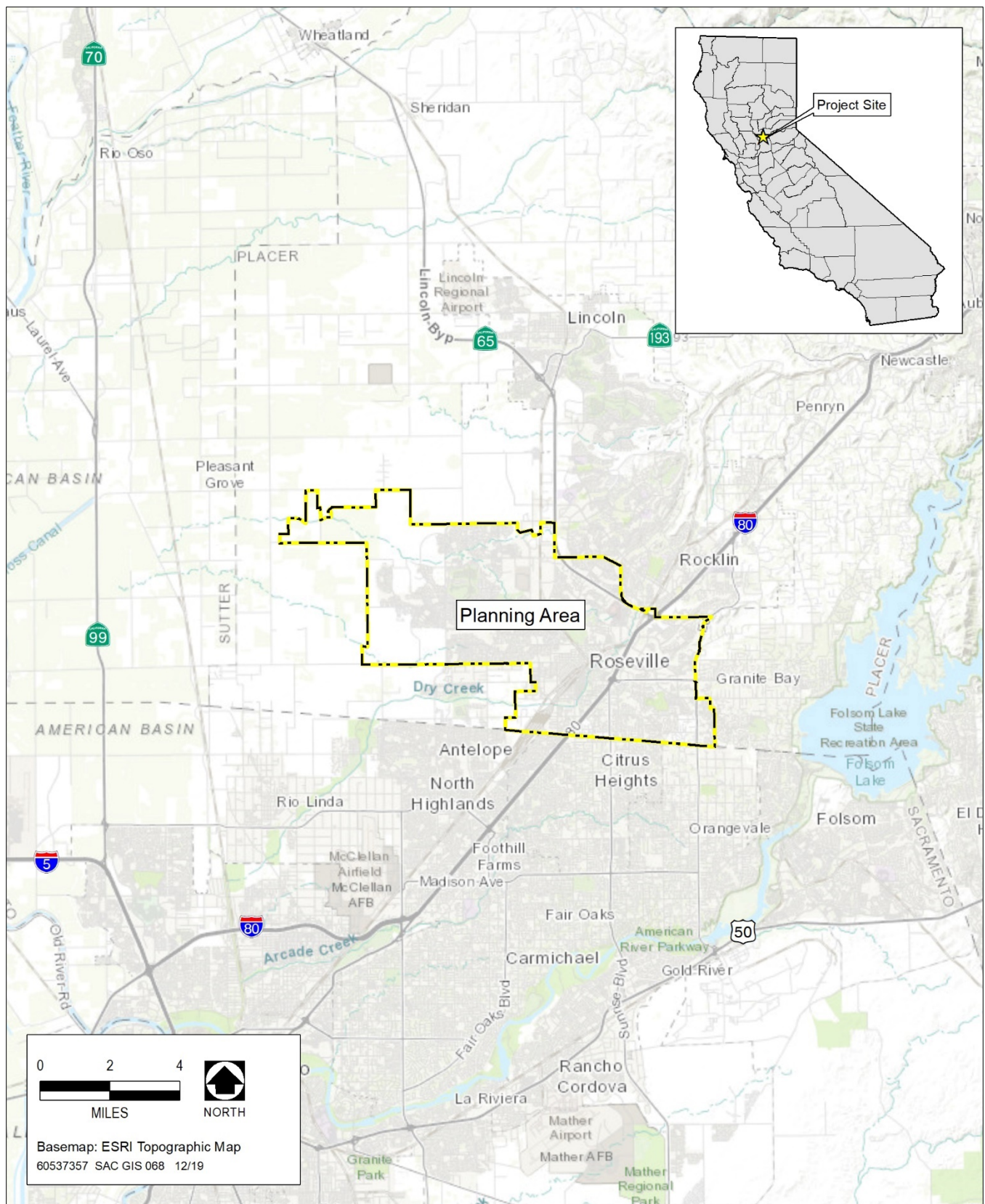
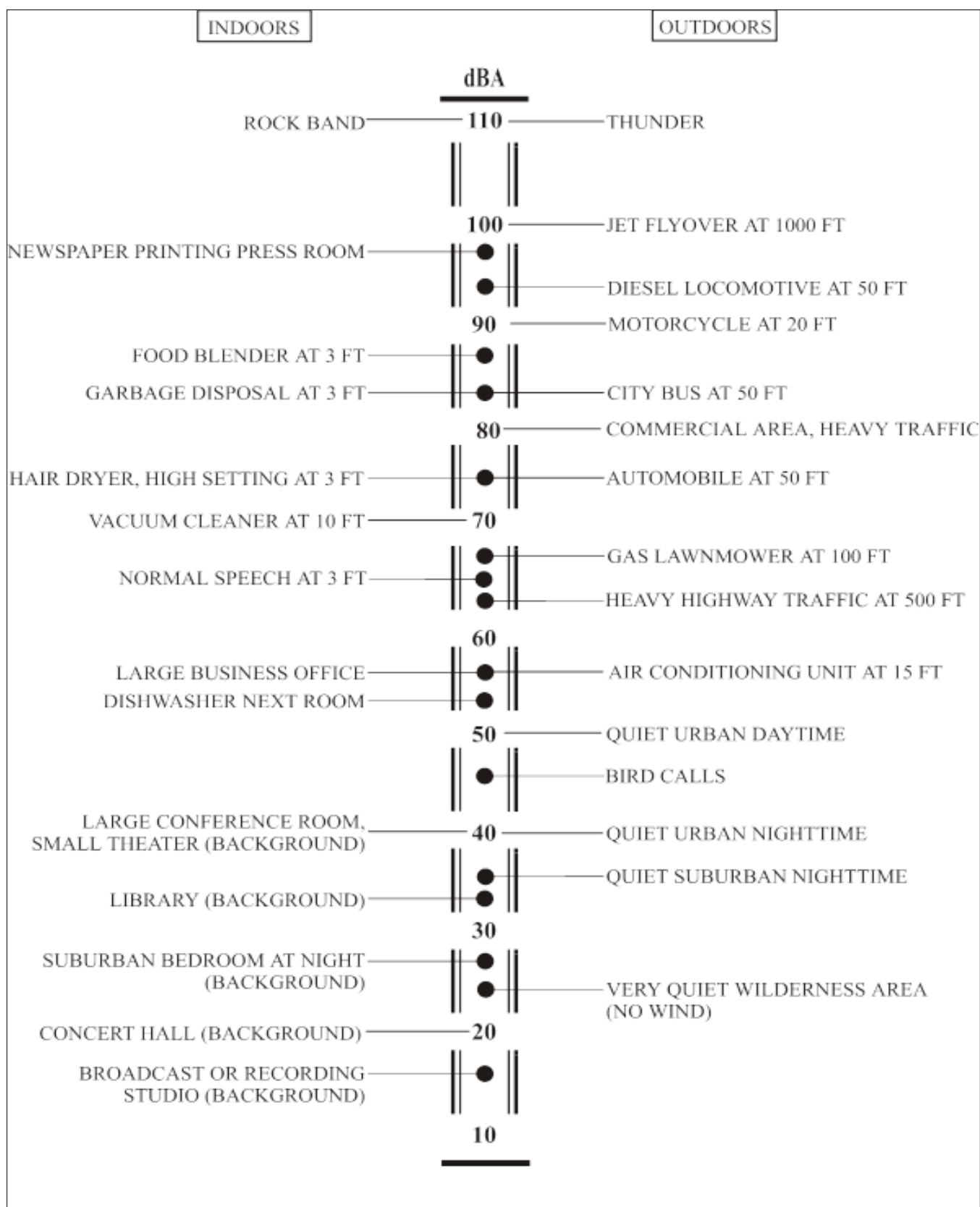


Exhibit 4.6-1.

Vicinity Map



Source: Caltrans 2013

Exhibit 4.6-2.

Decibel Scale and Common Noise Sources

- ▶ **Maximum Sound Level (L_{\max}):** The L_{\max} is the highest instantaneous sound level measured during a specified period.
- ▶ **Day-Night Average Level (L_{dn}):** The L_{dn} (or DNL) is the energy-average of A-weighted sound levels occurring over a 24-hour period, with a 10-dB penalty applied to A-weighted sound levels occurring during nighttime hours (10 p.m.–7 a.m.).
- ▶ **Community Noise Equivalent Level (CNEL):** Similar to L_{dn} , CNEL is the energy-average of the A-weighted sound levels occurring over a 24-hour period, with a 10-dB penalty applied to A-weighted sound levels occurring during the nighttime hours (10 p.m.–7 a.m.), and a 5 dB penalty applied to the A-weighted sound levels occurring during evening hours (7 p.m.–10 p.m.). The CNEL is usually within 1 dB of the L_{dn} , and the two are basically interchangeable. As it is easier to compute and of more common use, the L_{dn} is used as the long-term noise measure in this study.

4.6.2.2 EXISTING NOISE ENVIRONMENT

Noise-Sensitive Land Uses

Noise-sensitive land uses are generally defined as locations where people reside or where the presence of unwanted sound could adversely affect the use of the land. Places where people live, sleep, worship, and study are sensitive to noise because intrusive sound can be disruptive to these activities. Noise-sensitive uses include residentially designated areas, nursing homes, schools, libraries, and places of worship. Noise sources include highway and surface streets, railways, aircraft, and stationary noise sources such as commercial and industrial uses, construction sites, as well as neighborhood parks and schools. Exhibit 4.6-3 identifies existing noise sensitive non-residential uses in Roseville.

Noise conflicts can occur when larger-scale commercial and industrial uses are located near or adjacent to residential neighborhoods, but recreational and other non-residential land uses can also create conflicts. Whether or not the juxtaposition of different land uses creates a noise conflict depends on the design, scale, character, and operation of both the noise-generating use and the noise-sensitive use.

Residential neighborhoods are located throughout the Planning Area, while large-scale commercial uses are somewhat concentrated around I-80 and SR 65, and east of I-80, and between Douglas Boulevard and Roseville Parkway and east of I-80, in areas that are largely separated from most residences. The Harding Boulevard area from Douglas Boulevard to Eureka Road has a mix of commercial service uses that may represent noise sources in an area relatively close to some residential uses. South of Douglas Boulevard, east of I-80 has commercial uses that may represent noise sources in an area relatively close to some residential uses. Also, the adjacent areas along SR 65 and the area west of Washington Boulevard in the northwestern portion of the City, also have commercial uses with residential uses in closer proximity compared to the southwestern areas of the City.

Industrial uses within the City area located mostly west of Washington Boulevard north of Pleasant Grove Boulevard to the north of SR 65, and along the railroad to the west of Vernon Street, and along Atlantic Street to the west of I-80. Light industrial uses are also located in the western portion of the Planning Area, east of Westbrook Boulevard north of Pleasant Grove Boulevard.

Developed parks can represent a source of noise, particularly parks that accommodate organized sports. Parks in Roseville are interspersed throughout residential areas. Similarly, public and institutional uses can emit noise. For

example, schools, which are located throughout the City and are surrounded by residential uses, can represent a source of noise during events.

Existing Sources of Noise

Noise sources within the City of Roseville can be characterized as “transportation-related” and “fixed” (non-transportation-related). Transportation-related noise sources consist of roadway traffic noise and railroad noise. Major transportation routes are dominant sources of noise in the Planning Area. These include traffic on Interstate 80 (I-80), State Route 65 (SR 65), and other local arterials and streets; and train operations on the Union Pacific Railroad. The fixed noise sources include, but are not limited to, industrial facility noise, operations associated with commercial land uses, racetrack operations, and special events such as softball and soccer games. These types of noise sources are further explained in the

Traffic

Traffic operations data was used to estimate existing traffic noise levels at a distance of 100 feet from the centerline of the studied roadways.² Additionally, the 60 dB L_{dn} , 65 dB L_{dn} , and 70 dB L_{dn} traffic noise contour distances were determined. Please see Table 4.6-1 for a summary of traffic noise levels and contour distances for the existing condition.³ Traffic noise contours were prepared using the Federal Highway Administration’s (FHWA 1978) traffic noise prediction model (FHWA-RD-77-108) for Interstate 5 (I-5), State Route 65 (SR 65), major and minor arterials, and collector roadway segments. Please see Exhibit 4.6-4a for existing traffic noise contours attributable to major and minor arterials and collector roadway segments within the City of Roseville. Contours for I-80 and SR 65 are shown on Exhibit 4.6-4b.⁴

-
- 2 Existing noise levels in the City have been characterized thru traffic noise modeling. The Federal Highway Administration (FHWA) Highway Traffic Noise Prediction Model (FHWA-RD-77-108), existing traffic volumes, and posted traffic speed, day/night traffic distribution, and assumption regarding the traffic fleet mix (i.e., percentage of automobiles, medium trucks, and heavy trucks) were used to assess existing traffic noise exposure for both highways and major roadways in the City of Roseville General Plan study area. Traffic volumes and truck percentages for I-80 and SR 65 were obtained from Caltrans 2017 Traffic Counts and are Annual Average Daily Traffic (AADT) values. The FHWA Model is the standard model recommended by the FHWA and is the analytical method presently favored for traffic noise prediction by most state and local agencies, including Caltrans. The current version of the Model is based upon the CALVENO noise emission factors for automobiles, medium trucks, and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver and the acoustical characteristics of the site. The FHWA Model predicts day-night average noise levels (L_{dn}), and hourly L_{eq} values for free-flowing traffic conditions and is generally considered to be accurate within 1.5 dB of the measured condition. Traffic data representing average daily traffic volumes for existing conditions were obtained from Caltrans and Fehr & Peers Associates. Day/night traffic distribution for all studied roadways was based upon the day-night average daily traffic volumes. Posted traffic speeds, and vehicle mixes provided by Caltrans (for highways) and observed during the Model calibration noise level measurements, were assumed for the traffic noise modeling effort.
 - 3 In some cases, the actual distances to noise level contours may vary from the distances predicted by the FHWA Model, because the modeling does not take into account existing sound barriers or structures, vegetation, or other factors that can attenuate (reduce) noise. Factors such as roadway curvature, roadway grade, shielding from local topography or structures, roadway elevations, or elevation of receivers may also affect actual sound propagation. Therefore, the distances reported in Table 4.6-1 are estimates of noise exposure along roadways in the City of Roseville and are expected to overestimate noise levels.
 - 4 All of the noise contour exhibits show a continuum of color saturation for each decibel category to show the location of the contour, assuming hard intervening and assuming soft intervening surfaces.

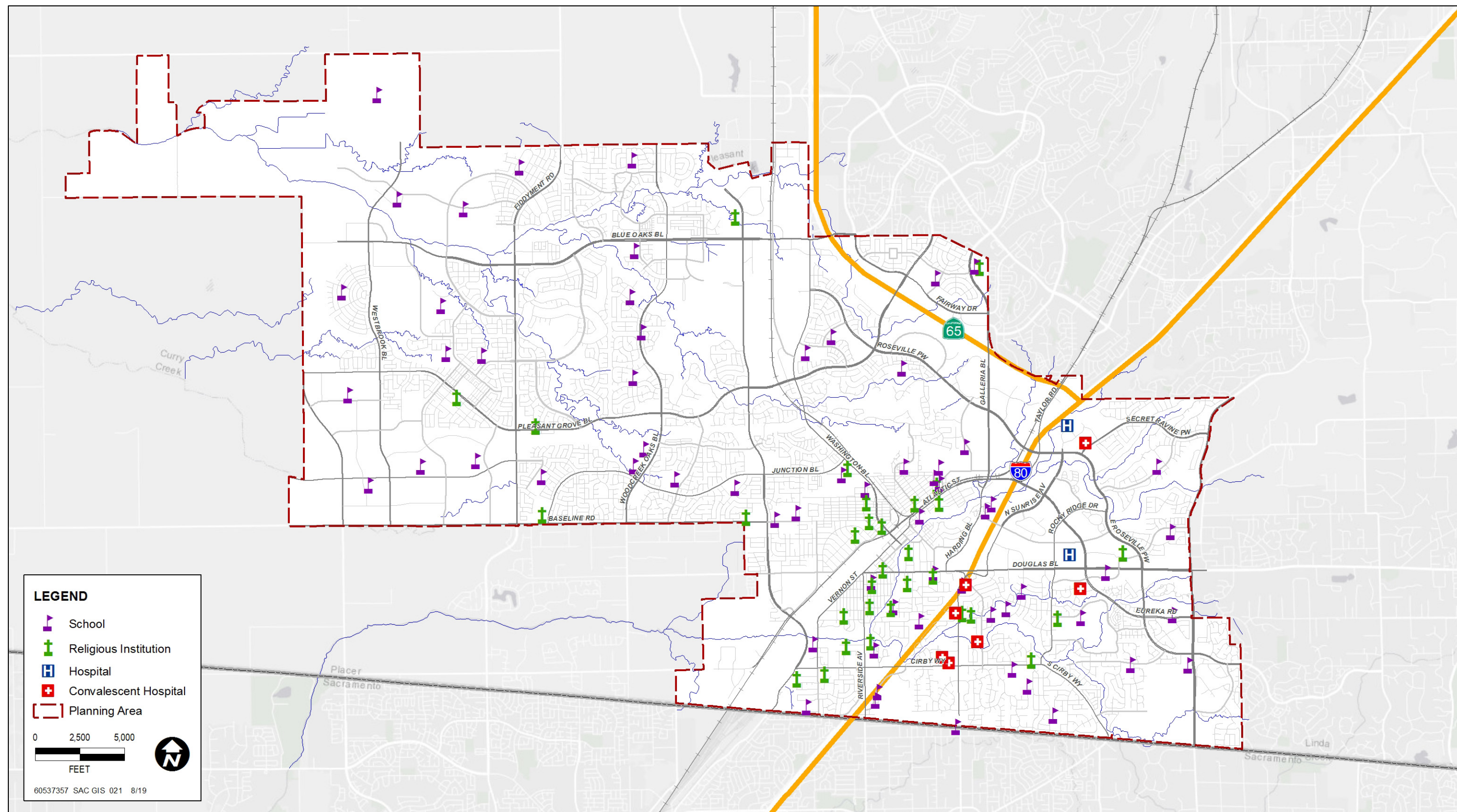


Exhibit 4.6-3.

Noise Sensitive Uses

This page intentionally left blank

Table 4.6-1 Existing Traffic Noise Levels and Contour Distances

| ID | Roadway | Roadway Segment | ADT | L _{dn} @ 100 ft | Distance to Contours | | |
|----|---------------------|--|--------|--------------------------------|-------------------------|------------------------|------------------------|
| | | | | | 70 dBA L _{dn} | 65 dBA L _{dn} | 60 dBA L _{dn} |
| 1 | Blue Oaks Blvd | From Fiddymment Rd to West | 2,500 | 57 | 5 | 16 | 51 |
| 2 | Blue Oaks Blvd | From Fiddymment Rd to Del Webb Blvd | 12,600 | 64 | 26 | 82 | 259 |
| 3 | Blue Oaks Blvd | From Del Webb Blvd to Woodcreek Oaks Blvd | 22,400 | 67 | 46 | 146 | 460 |
| 4 | Blue Oaks Blvd | From Woodcreek Oaks Blvd to Foothills Blvd | 36,100 | 69 | 74 | 235 | 742 |
| 5 | Blue Oaks Blvd | From Foothills Blvd to Washington Blvd | 43,200 | 69 | 89 | 281 | 887 |
| 6 | Fiddymment Rd | From Blue Oaks to North | 8,500 | 63 | 18 | 58 | 183 |
| 7 | Fiddymment Rd | From Blue Oaks Blvd to Pleasant Grove Blvd | 16,100 | 65 | 35 | 110 | 347 |
| 8 | Fiddymment Rd | From Pleasant Grove Blvd to Baseline Rd | 26,000 | 67 | 56 | 177 | 561 |
| 9 | Woodcreek Oaks Blvd | From Blue Oaks Blvd to North | 10,100 | 63 | 22 | 70 | 222 |
| 10 | Woodcreek Oaks Blvd | From Blue Oaks Blvd to Pleasant Grove Blvd | 14,700 | 65 | 32 | 102 | 324 |
| 11 | Woodcreek Oaks Blvd | From Pleasant Grove Blvd to Junction Blvd | 14,600 | 65 | 32 | 102 | 321 |
| 12 | Woodcreek Oaks Blvd | From Junction Blvd to Baseline Rd | 7,400 | 62 | 16 | 52 | 163 |
| 13 | Foothills Blvd | From Blue Oaks Blvd to North | 7,500 | 62 | 17 | 54 | 171 |
| 14 | Foothills Blvd | From Blue Oaks Blvd to Pleasant Grove Blvd | 15,300 | 65 | 35 | 110 | 349 |
| 15 | Foothills Blvd | From Pleasant Grove Blvd to Junction Blvd | 30,100 | 68 | 69 | 217 | 686 |
| 16 | Foothills Blvd | From Junction Blvd to Main St | 28,700 | 68 | 65 | 207 | 654 |
| 17 | Foothills Blvd | From Baseline Rd to Vineyard | 34,900 | 69 | 80 | 252 | 795 |
| 18 | Foothills Blvd | From Vineyard to Cirby Way | 35,400 | 69 | 81 | 255 | 807 |
| 19 | Washington Blvd | From Blue Oaks Blvd to Roseville Pkwy | 18,200 | 66 | 38 | 121 | 382 |
| 20 | Washington Blvd | From Roseville Pkwy to Pleasant Grove Blvd | 14,400 | 65 | 30 | 96 | 303 |
| 21 | Washington Blvd | From Pleasant Grove Blvd to Junction Blvd | 19,200 | 66 | 40 | 128 | 403 |
| 22 | Washington Blvd | From Junction Blvd to Main St | 20,400 | 66 | 43 | 136 | 429 |
| 23 | Washington Blvd | From Main St to Oak St | 21,900 | 67 | 46 | 146 | 460 |
| 24 | Pleasant Grove Blvd | From Fiddymment Rd to West | 10,300 | 63 | 22 | 68 | 216 |
| 25 | Pleasant Grove Blvd | From Fiddymment Rd to Woodcreek Oaks Blvd | 24,000 | 67 | 50 | 159 | 504 |
| 26 | Pleasant Grove Blvd | From Woodcreek Oaks Blvd to Foothills Blvd | 33,800 | 69 | 71 | 225 | 710 |
| 27 | Pleasant Grove Blvd | From Foothills Blvd to Washington Blvd | 42,600 | 70 | 90 | 283 | 895 |
| 28 | Pleasant Grove Blvd | From Washington Blvd to Roseville Pkwy | 46,700 | 70 | 98 | 310 | 981 |

Table 4.6-1 Existing Traffic Noise Levels and Contour Distances

| ID | Roadway | Roadway Segment | ADT | L _{dn} @ 100 ft | Distance to Contours | | |
|----|---------------------|---|--------|--------------------------------|-------------------------|------------------------|------------------------|
| | | | | | 70 dBA L _{dn} | 65 dBA L _{dn} | 60 dBA L _{dn} |
| 29 | Pleasant Grove Blvd | From Roseville Pkwy to SR65 SB Ramps | 50,000 | 70 | 105 | 332 | 1051 |
| 30 | Pleasant Grove Blvd | From Fairway Dr to SR 65 NB Ramps | 43,300 | 70 | 91 | 288 | 910 |
| 31 | Pleasant Grove Blvd | From Fairway Dr to North | 23,900 | 67 | 50 | 159 | 502 |
| 32 | Junction Blvd | From Woodcreek Oaks Blvd to West | 11,000 | 63 | 22 | 69 | 217 |
| 33 | Junction Blvd | From Woodcreek Oaks Blvd to Foothills Blvd | 12,200 | 64 | 24 | 76 | 241 |
| 34 | Junction Blvd | From Foothills Blvd to Washington Blvd | 14,100 | 64 | 28 | 88 | 279 |
| 35 | Baseline Rd | From Fiddymment Rd to West | 11,800 | 65 | 31 | 98 | 309 |
| 36 | Baseline Rd | From Fiddymment Rd to Junction Blvd | 12,500 | 65 | 33 | 103 | 327 |
| 37 | Baseline Rd | From Junction Blvd to Woodcreek Oaks Blvd | 12,600 | 65 | 33 | 104 | 330 |
| 38 | Baseline Rd | From Woodcreek Oaks Blvd to Foothills Blvd | 16,800 | 66 | 44 | 139 | 440 |
| 39 | Main St | From Foothills Blvd to Washington Blvd | 8,600 | 63 | 20 | 62 | 196 |
| 40 | Roseville Pkwy | From Washington Blvd to Pleasant Grove Blvd | 13,600 | 65 | 31 | 97 | 308 |
| 41 | Roseville Pkwy | From Pleasant Grove Blvd to Galleria Blvd | 43,500 | 70 | 99 | 312 | 985 |
| 42 | Roseville Pkwy | From Galleria Blvd to Taylor Rd | 47,700 | 70 | 108 | 342 | 1080 |
| 43 | Roseville Pkwy | From Taylor Rd to Sunrise Ave | 51,400 | 71 | 116 | 368 | 1164 |
| 44 | Roseville Pkwy | From Sunrise Blvd to Secret Ravine | 43,200 | 70 | 98 | 309 | 978 |
| 45 | Roseville Pkwy | From Secret Ravine to Rocky Ridge Dr | 34,900 | 69 | 79 | 250 | 790 |
| 46 | Roseville Pkwy | From Rocky Ridge Dr to Douglas Blvd | 30,400 | 68 | 69 | 218 | 689 |
| 47 | Roseville Pkwy | From Douglas Blvd to Eureka Rd | 16,800 | 66 | 38 | 120 | 380 |
| 48 | Roseville Pkwy | From Eureka Rd to Sierra College Blvd | 21,500 | 67 | 49 | 154 | 487 |
| 49 | Fairway Dr | From Pleasant Grove Blvd to Northwest | 22,400 | 66 | 43 | 137 | 433 |
| 50 | Fairway Dr | From Pleasant Grove Blvd to Stanford Ranch Rd | 23,000 | 66 | 44 | 140 | 444 |
| 51 | Stanford Ranch Rd | From Fairway Dr to North | 22,300 | 67 | 46 | 145 | 458 |
| 52 | Stanford Ranch Rd | From Fairway Dr to SR 65 NB Ramps | 43,700 | 70 | 90 | 284 | 898 |
| 53 | Galleria Blvd | From Roseville Pkwy to SR 65 SB Ramps | 49,400 | 70 | 100 | 317 | 1004 |
| 54 | Galleria Blvd | From Roseville Pkwy to Berry Rd | 26,300 | 67 | 53 | 169 | 535 |
| 55 | Harding Blvd | From Wills Rd to Lead Hill Blvd | 25,100 | 67 | 51 | 161 | 510 |
| 56 | Harding Blvd | From Lead Hill Blvd to Estates Dr | 20,200 | 66 | 41 | 130 | 411 |
| 57 | Harding Blvd | From Douglas Blvd to Estates Dr | 17,400 | 65 | 35 | 112 | 354 |

Table 4.6-1 Existing Traffic Noise Levels and Contour Distances

| ID | Roadway | Roadway Segment | ADT | L _{dn} @ 100 ft | Distance to Contours | | |
|----|--------------------|--|--------|--------------------------------|-------------------------|------------------------|------------------------|
| | | | | | 70 dBA L _{dn} | 65 dBA L _{dn} | 60 dBA L _{dn} |
| 58 | Vernon St | From Lincoln St to Grant St | 7,300 | 62 | 16 | 51 | 162 |
| 59 | Atlantic St | From Wills Rd to Yosemite St | 20,200 | 67 | 45 | 142 | 449 |
| 60 | Eureka Rd | From I-80 EB Ramps to Sunrise Ave | 43,400 | 70 | 94 | 299 | 945 |
| 61 | Eureka Rd | From Sunrise Ave to Rocky Ridge Dr | 33,900 | 69 | 74 | 233 | 738 |
| 62 | Eureka Rd | From Rocky Ridge Dr to Douglas Blvd | 26,000 | 68 | 57 | 179 | 566 |
| 63 | Eureka Rd | From Douglas Blvd to Roseville Pkwy | 20,700 | 67 | 45 | 143 | 451 |
| 64 | Douglas Blvd | From Harding Blvd to Vernon | 27,700 | 68 | 62 | 195 | 615 |
| 65 | Douglas Blvd | From Sunrise Blvd to Rocky Ridge Dr | 48,200 | 70 | 107 | 339 | 1071 |
| 66 | Douglas Blvd | From Rocky Ridge Dr to Eureka Rd | 45,100 | 70 | 100 | 317 | 1002 |
| 67 | Douglas Blvd | From Eureka Rd to Roseville Pkwy | 41,000 | 70 | 91 | 288 | 911 |
| 68 | Douglas Blvd | From Roseville Pkwy to Sierra College Blvd | 49,700 | 70 | 110 | 349 | 1104 |
| 69 | Sunrise Ave | From Roseville Pkwy to Eureka Rd | 17,600 | 66 | 41 | 129 | 409 |
| 70 | Sunrise Ave | From Eureka Rd to Lead Hill Blvd | 21,100 | 67 | 49 | 155 | 490 |
| 71 | Sunrise Ave | From Lead Hill Blvd to Douglas Blvd | 23,000 | 67 | 53 | 169 | 534 |
| 72 | Sunrise Ave | From Douglas Blvd to Oak Ridge Dr | 21,600 | 67 | 50 | 159 | 502 |
| 73 | Sunrise Ave | From Cirby Way to Coloma Way | 37,300 | 69 | 87 | 274 | 866 |
| 74 | Taylor Rd | From Roseville Pkwy to North | 15,800 | 66 | 36 | 113 | 358 |
| 75 | Taylor Rd | From Roseville Pkwy to EB I-80 Ramps | 20,900 | 67 | 47 | 150 | 473 |
| 76 | Lead Hill Blvd | From Sunrise Ave to Harding Blvd | 18,100 | 66 | 42 | 133 | 420 |
| 77 | Lead Hill Blvd | From Sunrise Ave to Rocky Ridge Dr | 12,300 | 65 | 29 | 90 | 286 |
| 78 | Rocky Ridge Dr | From Eureka Rd to Roseville Pkwy | 9,300 | 63 | 21 | 65 | 207 |
| 79 | Rocky Ridge Dr | From Eureka Rd to Lead Hill Blvd | 12,600 | 64 | 28 | 88 | 280 |
| 80 | Rocky Ridge Dr | From Lead Hill Blvd to Douglas Blvd | 17,900 | 66 | 40 | 126 | 398 |
| 81 | Rocky Ridge Dr | From Douglas Blvd to Cirby Way | 20,300 | 67 | 45 | 143 | 451 |
| 82 | Cirby Way | From Foothills Blvd to Riverside Ave | 38,700 | 70 | 92 | 290 | 916 |
| 83 | Cirby Way | From Riverside Ave to Sunrise Ave | 30,300 | 69 | 72 | 227 | 717 |
| 84 | Cirby Way | From Sunrise Ave to Rocky Ridge Dr | 22,700 | 67 | 54 | 170 | 537 |
| 85 | Riverside Ave | From Cirby Way to North | 16,600 | 66 | 39 | 124 | 393 |
| 86 | Riverside Ave | From Cirby Way to I-80 WB Ramps | 42,000 | 70 | 99 | 314 | 994 |
| 87 | Riverside Ave | From I-80 EB Ramps to South | 27,200 | 68 | 64 | 203 | 643 |
| 88 | Secret Ravine Pkwy | From Roseville Pkwy to Sierra College Blvd | 13,300 | 65 | 30 | 95 | 301 |

Table 4.6-1 Existing Traffic Noise Levels and Contour Distances

| ID | Roadway | Roadway Segment | ADT | L _{dn} @ 100 ft | Distance to Contours | | |
|-----|---------------------|--|--------|--------------------------------|-------------------------|------------------------|------------------------|
| | | | | | 70 dBA L _{dn} | 65 dBA L _{dn} | 60 dBA L _{dn} |
| 89 | Sierra College Blvd | From Douglas Blvd to Eureka Rd | 31,300 | 69 | 72 | 229 | 725 |
| 90 | Sierra College Blvd | From Douglas Blvd to North | 25,600 | 68 | 59 | 187 | 593 |
| 91 | Baseline Rd | From Fiddymment Rd to West | 11,800 | 64 | 27 | 87 | 274 |
| 92 | Blue Oaks Blvd | From Hayden Parkway to Westbrook Blvd | n/a | n/a | n/a | n/a | n/a |
| 93 | Westbrook Blvd | North of Blue Oaks Blvd | n/a | n/a | n/a | n/a | n/a |
| 94 | Blue Oaks Blvd | West of Westbrook Blvd | n/a | n/a | n/a | n/a | n/a |
| 95 | Santucci Blvd | From Blue Oaks Blvd to Pleasant Grove Blvd | n/a | n/a | n/a | n/a | n/a |
| 96 | Westbrook Blvd | From Blue Oaks Blvd to Pleasant Grove Blvd | n/a | n/a | n/a | n/a | n/a |
| 97 | Pleasant Grove Blvd | From Westbrook Blvd to Santucci Blvd | n/a | n/a | n/a | n/a | n/a |
| 98 | Pleasant Grove Blvd | From Market St to Westbrook Blvd | n/a | n/a | n/a | n/a | n/a |
| 99 | Santucci Blvd | From Pleasant Grove Blvd to Vista Grande | n/a | n/a | n/a | n/a | n/a |
| 100 | Westbrook Blvd | From Pleasant Grove Blvd to Vista Grande | n/a | n/a | n/a | n/a | n/a |
| 101 | Market St | From Pleasant Grove Blvd to Vista Grande | n/a | n/a | n/a | n/a | n/a |
| 102 | Santucci Blvd | From Vista Grande to Baseline Rd | n/a | n/a | n/a | n/a | n/a |
| 103 | Vista Grande | From Santucci Blvd to Westbrook Blvd | n/a | n/a | n/a | n/a | n/a |
| 104 | Vista Grande | From Westbrook Blvd to Market St | n/a | n/a | n/a | n/a | n/a |
| 105 | Westbrook Blvd | From Vista Grande to Baseline Rd | n/a | n/a | n/a | n/a | n/a |
| 106 | Market St | From Vista Grande to Baseline Rd | n/a | n/a | n/a | n/a | n/a |
| 107 | Vista Grande | From Market St to Upland Dr | n/a | n/a | n/a | n/a | n/a |
| 108 | Upland Dr | From Vista Grande to Baseline Rd | n/a | n/a | n/a | n/a | n/a |
| 109 | Upland Dr | From Vista Grande to Pleasant Grove Blvd | n/a | n/a | n/a | n/a | n/a |
| 110 | Baseline Rd | From Santucci Blvd to Westbrook Blvd | n/a | n/a | n/a | n/a | n/a |
| 111 | Baseline Rd | From Westbrook Blvd to Market St | n/a | n/a | n/a | n/a | n/a |
| 112 | Baseline Rd | West of Santucci Blvd | n/a | n/a | n/a | n/a | n/a |

Notes: dB = decibels; L_{dn} = Day-Night Average sound level; n/a = Roadway segments that are not currently existing but were analyzed in the project's traffic impact study for future alternatives. These roadway segments will be added in the future planned areas. Some of these new segments are included under both alternatives, and some are different between alternatives Shown here, because future roadway noise levels will be compared to the existing roadway noise levels, later in this section (Table 4.6-10). All tables use a consistent segment numbering approach for easier referencing. The same segment numbers are used even when the segment is new and does not have any data for the existing condition.

*Volumes are AADT and from Caltrans traffic counts.

Source: Traffic data from Fehr & Peers Associates February 2020, noise modeling conducted by AECOM 2020.

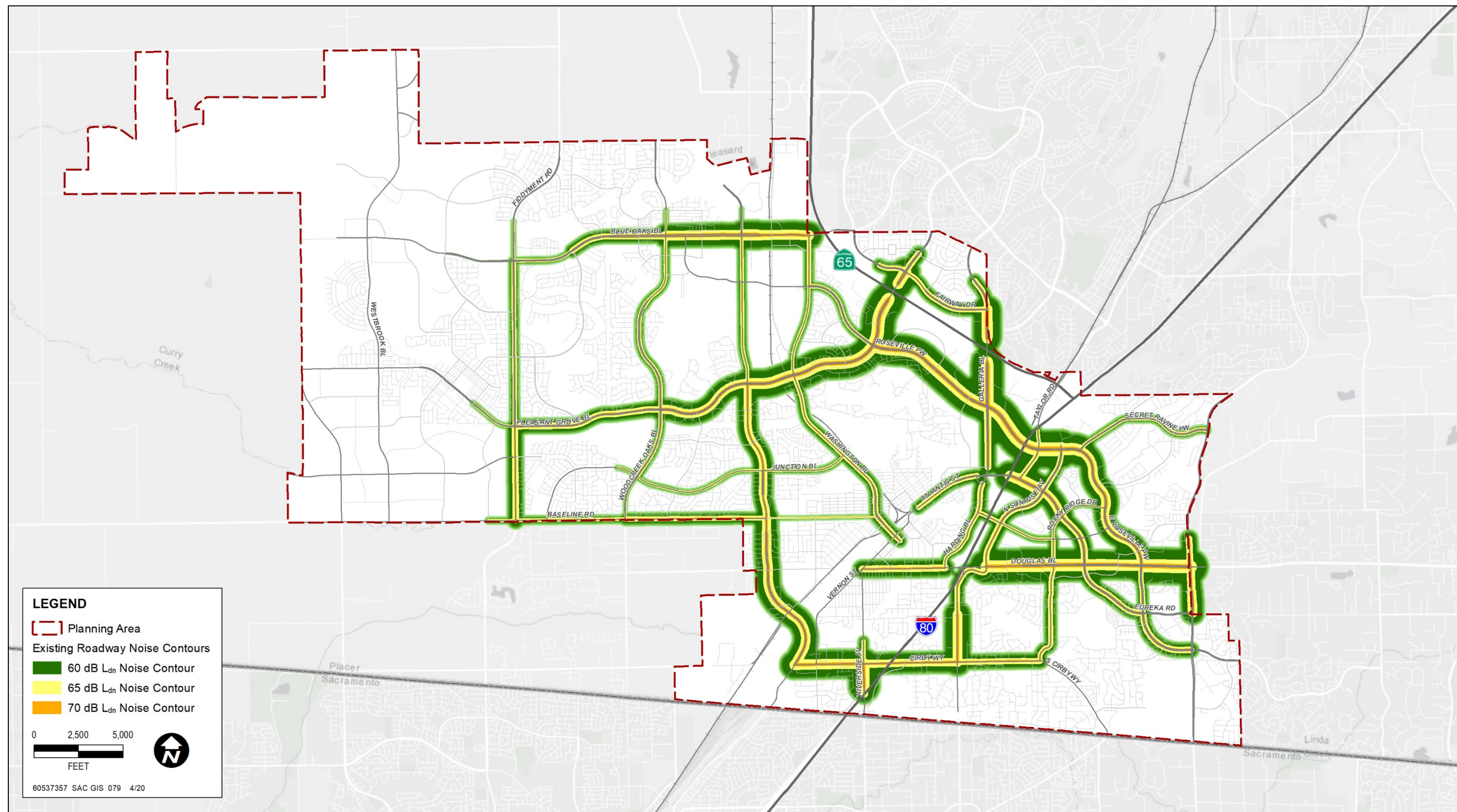


Exhibit 4.6-4a.

Existing Traffic Noise Contours, Local Roadways

This page intentionally left blank

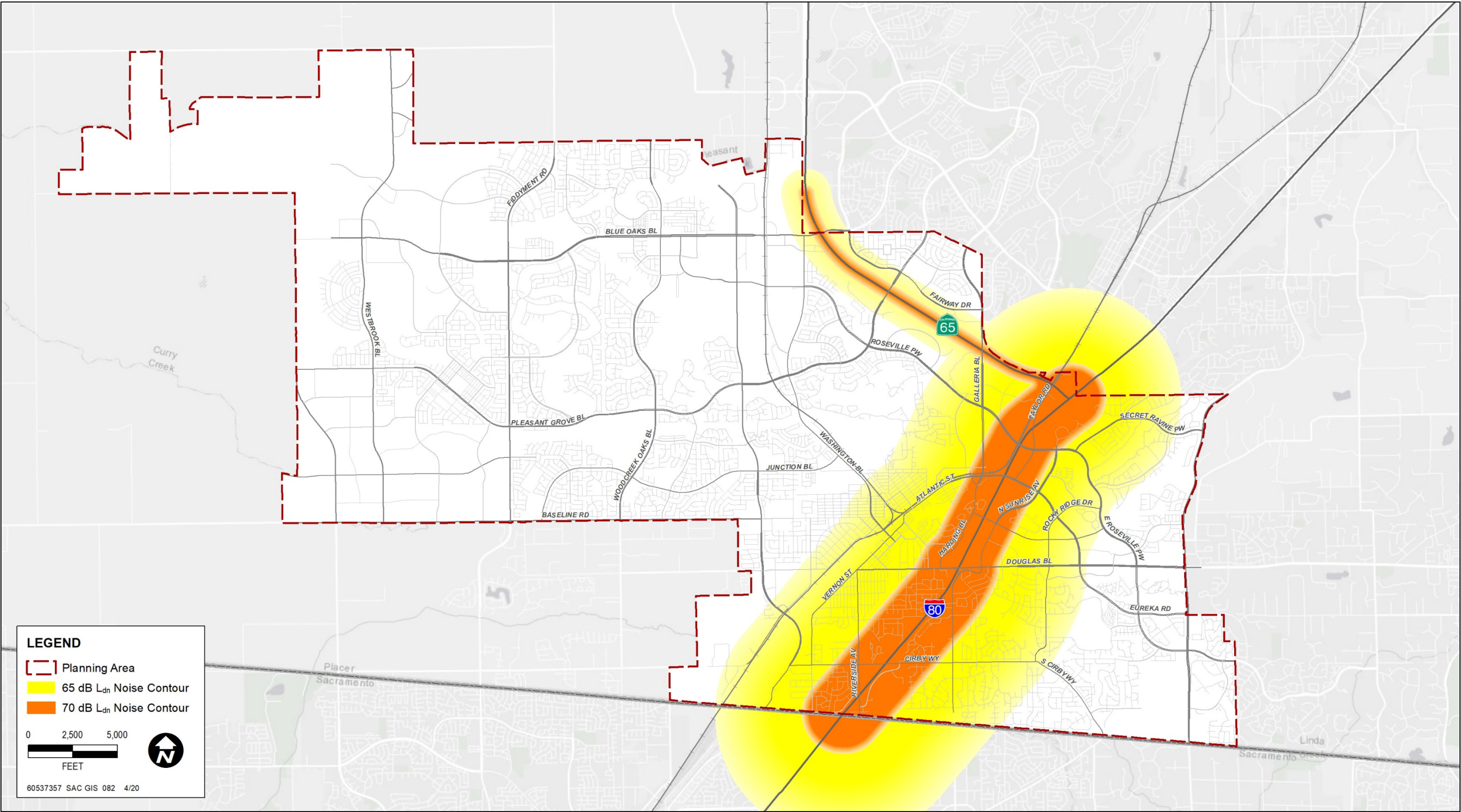


Exhibit 4.6-5b. Existing Highway Traffic Noise Contours

This page intentionally left blank

Railroads

Railroad activity in the Planning Area includes freight and Amtrak operations on the Union Pacific Railroad Company (UPRR) tracks and activity within the UPRR J.R. Davis maintenance yard. The J.R. Davis yard is the largest rail facility on the west coast. Noise levels associated with the maintenance yard include master and group retarder “squeal,” recurring impulsive noises, and train movements. The “squeal” occurs primarily at the south end of the yard and is a result of cars passing through retarders on their path to the classification yard after being pushed over the hump. The recurring impulsive noise generally occurs at the north end of the yard and is a result of freight train cars hitting together. Noise levels associated with railroad line operations are a result of warning horns, at-grade crossing bells, locomotive engine and rail car noise.

Noise contours for the railroad activities are generally reflected on Exhibit 4.6-6. Train noise levels and contour distances were calculated following Federal Transportation Administration guidelines (FTA 2018). According to UPRR, railroad operations within the Roseville area are not anticipated to change substantially in the future (City of Roseville 2016). Therefore, significant modifications to the reflected noise contours are not anticipated.

Aircraft

Aviation noise is addressed through a combination of short-term and continuous site noise measurements of aircraft operations and review of adopted airport land use compatibility policies and noise contours. Several airports operate regionally. These include McClellan Airfield, Sacramento International Airport, and the Lincoln Airport. Occasional overflights from all three airports can be expected. According to Sacramento County Airport staff, the area in the vicinity of McClellan Airfield is subject to frequent large aircraft (over 75,000 pounds) operating under 3,000 feet above ground level. Based on current and historical experience, single event noise occurrences can cause annoyance to residential and other sensitive uses. However, no noise standards are exceeded by the aircraft overflight because the City is located outside of the 60 dB CNEL contour for McClellan Airfield, Sacramento International Airport, and the Lincoln Airport (City of Roseville 2016).

Other Fixed Noise Sources

Commercial and industrial facilities are also a source of noise within Roseville. Mechanical equipment and trucking are the primary sources of noise associated with these facilities. Industrial processes are often recognized as a primary fixed noise source. Significant noise generation can occur even when the best available noise control technology is applied. Noise exposures within industrial facilities are controlled by federal and state employee health and safety regulations (federal Occupational Safety and Health Administration [OSHA] and California Occupational Safety and Health Administration [Cal-OSHA]). Exterior noise levels may, however, exceed locally-acceptable standards. Commercial, recreational, and public service facility activities can also produce noise that affects adjacent sensitive land uses. These noise sources can be continuous and may contain tonal components that may be annoying to individuals who live in the nearby vicinity. In addition, noise generation from fixed noise sources may vary based on climatic conditions, time of day, and existing ambient noise levels.

From a land use planning perspective, fixed-source noise control issues focus upon two goals: to prevent the introduction of new noise-producing uses in noise-sensitive areas and to prevent encroachment of noise-sensitive uses upon existing noise-producing facilities. The first goal can be achieved by applying noise level performance standards to proposed new noise-producing uses. The second goal can be met by requiring that new noise-

sensitive uses in near proximity to existing noise-producing facilities include mitigation measures to reduce noise exposure for the new noise-sensitive use.

Fixed noise sources that are typically of concern include, but are not limited to, the following:

- ▶ Air Compressors
- ▶ Blowers
- ▶ Boilers
- ▶ Conveyor Systems
- ▶ Cooling Towers/Evaporative Condensers
- ▶ Cutting Equipment
- ▶ Drill Rigs
- ▶ Emergency Generators
- ▶ Fans
- ▶ Gas or Diesel Motors
- ▶ Generators
- ▶ Grinders
- ▶ Heavy Equipment
- ▶ Heating, ventilation, and air conditioning (HVAC) Systems
- ▶ Lift Stations
- ▶ Outdoor Speakers
- ▶ Pile Drivers
- ▶ Pump Stations
- ▶ Steam Turbines
- ▶ Steam Valves
- ▶ Transformers
- ▶ Welders

These noise sources may be found in all kinds of industrial facilities, trucking operations, tire shops, auto maintenance shops, metal fabricating shops, shopping centers, drive-up windows, car washes, loading docks, public works projects, batch plants, bottling and canning plants, recycling centers, electric generating stations, race tracks, landfills, sand and gravel operations, and athletic fields. There are numerous fixed noise sources that are dispersed throughout the City.

Other Stationary and Area Noise Sources

The following provides descriptions of other stationary and area noise sources in the Planning Area and, in some cases, noise level data associated with operations. The information is intended to be representative of the noise sources and noise levels associated with such uses.

Landscape and Building Maintenance Activities

Landscape maintenance activities include the use of leaf blowers, power tools, and gasoline-powered lawn mowers, and could result in intermittent noise levels of approximately 88 dB at 6 feet. Based on an equipment noise level of 88 dB, the use of such equipment, assuming a noise attenuation rate of 6 dB per doubling of distance from the source, would result in exterior noise levels of approximately 70 dB at 50 feet. If these activities occur during noise-sensitive hours, such as early in the morning, this results in compatibility issues for nearby noise-sensitive uses.

Mechanical Equipment

The operation of mechanical equipment (e.g., pumps, generators; heating, ventilation, and cooling systems) could result in intermittent noise levels of approximately 90 dB at 3 feet (EPA 1971). Based on this equipment noise level, the operation of such equipment, assuming a noise attenuation rate of 6 dB per doubling of distance from the source, may result in exterior noise levels of approximately 60 dB at 95 feet. These types of equipment are typically shielded from direct exposure (e.g., housed on rooftops, in equipment rooms, or in exterior enclosures), which can help to avoid noise compatibility issues.

Garbage Collection Activities

Garbage collection activities (e.g., emptying large refuse dumpsters, possible multiple times per week, and the shaking of containers with a hydraulic lift), could result in instantaneous maximum noise levels of approximately 89 dB L_{max} at 50 feet. Such activities are anticipated to be very brief, intermittent, and would occur during daytime hours, which are less noise-sensitive times of day. Garbage collection activities are infrequent, and therefore would not be expected to exceed daily noise standards. Noises would typically emanate from public rights-of-way, which would normally be separated from outdoor gathering spaces associated with residential uses. Noise associated with garbage collection would not be expected to create single-event noise that would be substantially disruptive to daily activities or cause sleep disturbance.

Parking Lots

Parking lots and parking structures include noise sources such as vehicles entering/exiting the lot, alarms/radios, and doors slamming. According to the FHWA, parking lots with a maximum hourly traffic volume of approximately 1,000 vehicles per hour either entering or exiting the lot could result in a peak hour and daily noise levels of approximately 56 dB L_{eq} and 63 dB L_{dn} at 50 feet.

Commercial, Office, and Industrial Activities

Commercial, office, and industrial noise sources include loading dock activities, air circulation systems, delivery areas, and the operation of trash compactors, air compressors, and public address systems (i.e., amplification and speakers used in drive-through retail establishments or sporting events). Such activities could result in intermittent noise levels of approximately up to 91 dB L_{max} at 50 feet (EPA 1971) and high single-event noise levels from backup alarms from delivery trucks during the more noise-sensitive hours of the day.

Other Residential, School, and Recreation Activities and Events

Noise sources typical of residential, school, recreation, and event uses could include voices and amplified music/speaker systems. Such sources could result in noise levels of approximately 60–75 dB L_{eq} at 50 feet.

Agricultural Activities

Agricultural activities within the Planning Area and its immediate surroundings involve the use of various types of heavy-duty equipment. Agricultural operations involve crop and orchard operations, which can occur during noise sensitive times of the day and involve substantial noise levels. The operation of heavy-duty equipment associated with agricultural activities typically results in noise levels of approximately 75 dB L_{eq} at 50 feet (EPA 1971). The closest distances between proposed noise-sensitive land uses and agricultural land uses would be approximately 50 to 200 feet in several locations. Based on the above noise levels and a typical noise-attenuation

rate of 6.0 dB per doubling of distance, exterior noise levels at noise-sensitive receptors approximately 50 to 200 feet from agricultural activities could exceed 75 and 63 dB L_{eq} , respectively. It is important to note that the closest noise-sensitive receptors would not be exposed to this noise level for extended periods, given the mobile nature of agricultural activities (e.g., disking, plowing, harvesting). If, for instance, residential land uses were exposed to 75 dB L_{eq} for one entire hour during the daytime, and ambient noise levels were 50 dB L_{eq} during the rest of the daytime hours and 45 dB L_{eq} during the nighttime hours, the 24-hour noise level would be 62 dB L_{dn} .

Ambient Noise Level Measurements

A community noise survey was conducted to document noise exposure in areas with noise-sensitive land uses. Noise measurement sites were selected to be representative of noise-sensitive area. The community noise survey was conducted at 19 locations including nine long-term (24-hour) and 10 short-term (10 to 20-minutes) measurements⁵. Traffic on local roadways, SR 65 and I-80, distant commercial and industrial activities, and neighborhood activities are the controlling factors for background noise levels in most of the Planning Area. Long-term ambient noise level measurements were conducted at residential uses to record day-night statistical noise level trends. Short-term ambient noise level measurements were conducted to record typical daytime noise levels at daytime use noise-sensitive uses in the Planning Area.

Measured noise levels are summarized in Table 4.6-2, to provide an indication of ambient noise levels in Roseville. Noise measurement sites are shown in Exhibit 4.6-7. The L_{eq} values presented in Table 4.6-2 represent the average measured noise levels during the measured time periods. L_{max} values show the maximum noise levels observed during the measured time periods. These measurements were completed from October 1–3, 2019. The community noise survey results indicate that typical noise levels in noise-sensitive areas range from 48 dB to 68 dB L_{dn} . The noise survey data will be compared to future anticipated conditions under buildout of the General Plan at the potential locations of noise-sensitive receptors and noise-generating land uses in the Planning Area for the impact analysis.

⁵ Noise level measurements were completed using Larson Davis Laboratories (LDL) Model 820, 824 and 831 precision integrating sound level meters. The meters were calibrated prior to the measurements using an LDL Model (CAL 200) acoustical calibrator. The equipment used complies with all pertinent requirements of the American National Standards Institute for Class 1 sound level meters (ANSI S1.4).

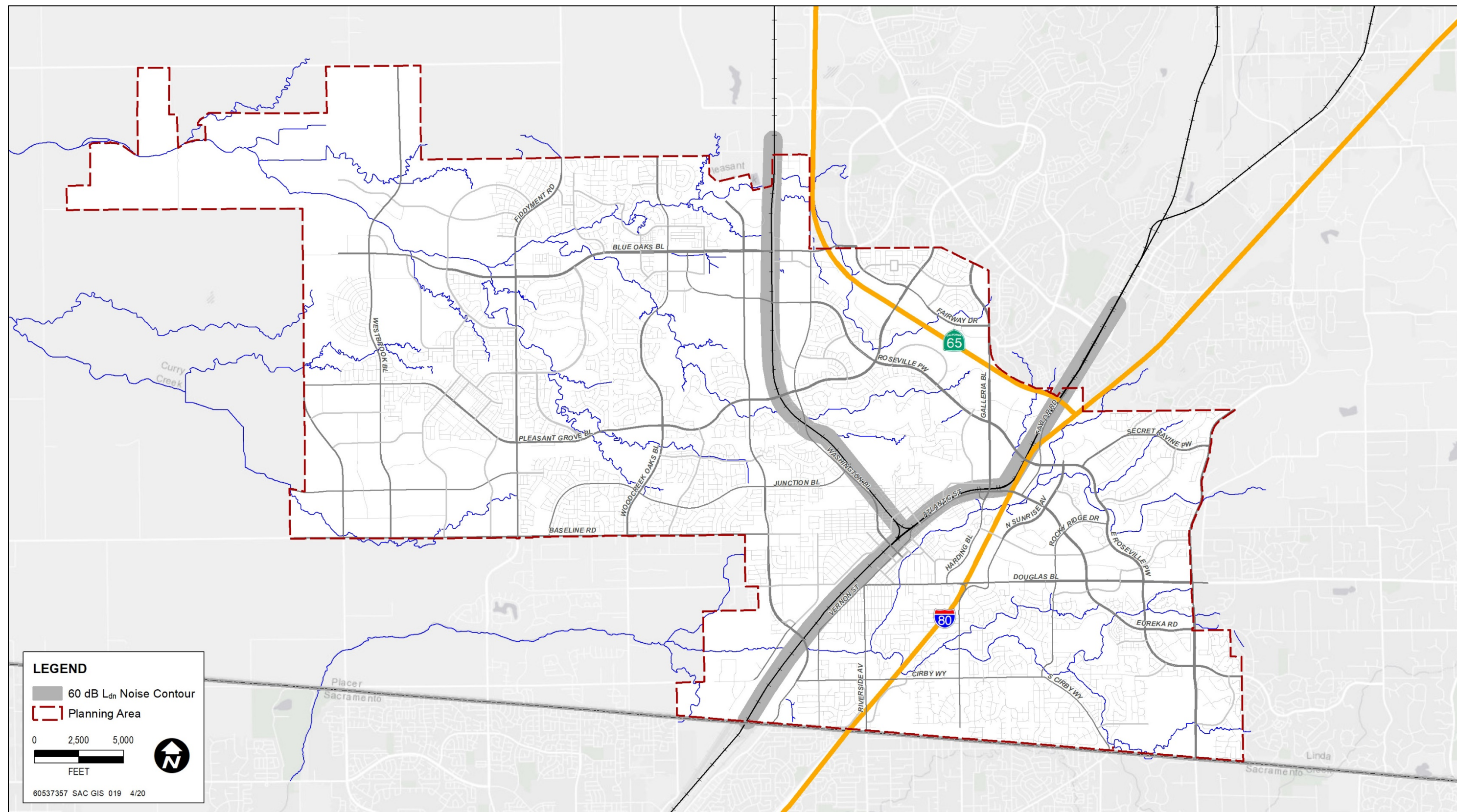


Exhibit 4.6-6.

Existing Railroad Noise Contours

This page intentionally left blank

| Table 4.6-2 Existing Ambient Noise Levels | | | | | | | | | | | | | | |
|---|---|----------------------------|----------------------------|------------|----------|--------------------------------|-------------------------------|------------------------------|------------------------------|----------------------------|------------------|-----------------|-----------------|------------------------------|
| Measurement Site ¹ | Address | Date | | Start Time | Duration | Sound Level (dBA) ² | | | | | | | | L _{dn} ³ |
| | | | | | | Daytime (7 a.m.–10 p.m.) | | | | Nighttime (10 p.m.–7 a.m.) | | | | |
| | | From | To | | | L _{eq} ⁴ | L _{max} ⁵ | L ₅₀ ⁶ | L ₉₀ ⁷ | L _{eq} | L _{max} | L ₅₀ | L ₉₀ | |
| LT-01 | 1625 Santa Clara Drive, Play Ground of Santa Clara Apartments | Tuesday, October 1, 2019 | Wednesday, October 2, 2019 | 16:00 | 24 Hour | 60.3 | 79.9 | 57.8 | 53.6 | 57.8 | 70.4 | 54.4 | 51.5 | 64.7 |
| LT-02 | Near residence at 3585 Annabelle Avenue | Tuesday, October 1, 2019 | Saturday, October 2, 2019 | 17:00 | 24 Hour | 49.0 | 66.3 | 42.4 | 40.1 | 46.0 | 57.1 | 42.6 | 40.3 | 53.0 |
| LT-03 | Restaurant Assets and Design at 218 Estates Drive | Tuesday, October 1, 2019 | Saturday, October 2, 2019 | 19:00 | 24 Hour | 61.5 | 79.6 | 55.7 | 51.6 | 61.5 | 79.6 | 55.7 | 51.6 | 67.6 |
| LT-04 | Miner's Ravine Trail by John Adams Academy Parking Lot | Tuesday, October 1, 2019 | Wednesday, October 2, 2019 | 19:00 | 24 Hour | 58.3 | 71.1 | 56.7 | 53.3 | 57.0 | 67.7 | 55.2 | 52.1 | 63.6 |
| LT-05 | Near David R Jonson Memorial Pool by 105 E Street | Tuesday, October 1, 2019 | Wednesday, October 2, 2019 | 19:00 | 24 Hour | 65.8 | 83.0 | 61.5 | 50.2 | 58.8 | 77.7 | 50.5 | 46.8 | 67.1 |
| LT-06 | Hilltop Circle seating area at Roseville Refuse Collection | Thursday, October 3, 2019 | Tuesday, January 24, 1900 | 10:03 | 24 Hour | 53.2 | 66.4 | 51.4 | 49.0 | 52.6 | 68.2 | 51.1 | 48.8 | 59.1 |
| LT-07 | North of Shasta Street by Ferris Spanger Elementary School | Thursday, October 3, 2019 | Friday, October 4, 2019 | 11:00 | 24 Hour | 54.5 | 72.5 | 48.8 | 43.9 | 48.6 | 64.8 | 45.1 | 43.1 | 56.5 |
| LT-08 | Kaseberg - Kingswood by 1210 Pleasant Grove Boulevard | Thursday, October 3, 2019 | Friday, October 4, 2019 | 12:00 | 24 Hour | 52.3 | 68.9 | 45.5 | 42.8 | 53.6 | 68.6 | 40.8 | 38.3 | 59.9 |
| LT-09 | By Fiddymment Field, By the Stream Northwest of Blue Oaks Boulevard and Hayden Parkway Intersection | Thursday, October 3, 2019 | Friday, October 4, 2019 | 12:27 | 20 Hour | 47.0 | 63.9 | 41.6 | 38.9 | 39.5 | 34.1 | 25.7 | 24.5 | 48.1 |
| ST-01 | Northeast corner of South Cirby Way and Rocky Ridge Drive | Wednesday, October 2, 2019 | | 13:00 | 0:15 | 57.4 | 70.0 | 55.7 | 51.2 | -- | -- | -- | -- | -- |
| ST-02 | South of Douglas Boulevard, by 2240 Douglas Boulevard | Wednesday, October 2, 2019 | | 13:25 | 0:17 | 60.4 | 70.2 | 59.2 | 54.6 | -- | -- | -- | -- | -- |
| ST-03 | Miner's Ravine Trail by Parking Lot north of Orvietto Drive | Wednesday, October 2, 2019 | | 13:59 | 0:15 | 51.0 | 64.2 | 48.9 | 43.6 | -- | -- | -- | -- | -- |
| ST-04 | Eastern boundary of Roseville Water Treatment Plant by 9260 Oak Leaf Way | Wednesday, October 2, 2019 | | 14:34 | 0:15 | 47.6 | 61.8 | 40.8 | 36.2 | -- | -- | -- | -- | -- |
| ST-05 | Weber Park, Main Street | Wednesday, October 2, 2019 | | 15:15 | 0:15 | 54.5 | 68.7 | 51.1 | 46.1 | -- | -- | -- | -- | -- |
| ST-06 | Trail by 1112 Caragh Street east of Woodcreek Oaks Boulevard by Challenge High School | Wednesday, October 2, 2019 | | 15:51 | 0:15 | 55.9 | 68.1 | 53.8 | 45.5 | -- | -- | -- | -- | -- |
| ST-07 | By Substation on Fiddymment Road | Wednesday, October 2, 2019 | | 16:39 | 0:15 | 67.3 | 80.0 | 65.5 | 53.6 | -- | -- | -- | -- | -- |
| ST-08 | Westpark, east of Durango Way by 4000 Wyman Way | Thursday, October 3, 2019 | | 13:02 | 0:20 | 55.0 | 70.2 | 46.8 | 39.9 | -- | -- | -- | -- | -- |
| ST-09 | Middle of Sierra Pines Golf Course to the west of Del Webb Boulevard | Thursday, October 3, 2019 | | 13:59 | 0:16 | 48.6 | 62.7 | 47.1 | 41.9 | -- | -- | -- | -- | -- |
| ST-10 | Along SR-65, corner of Parking Lot at 516 Gibson Drive | Thursday, October 3, 2019 | | 15:05 | 0:10 | 65.3 | 83.0 | 63.3 | 61.3 | -- | -- | -- | -- | -- |

¹ Measurement locations are shown in Exhibit 4.6-7.

² dBA (A-weighted decibels): The weighted sound level measurement scale specifically adjusted to human hearing.

³ L_{dn} (day night noise level): The 24-hour L_{eq} with a 10-dBA “penalty” for noise events that occur during the noise-sensitive hours between 10 p.m. and 7 a.m.

⁴ L_{eq} (equivalent noise level): The energy mean (average) noise level.

⁵ L_{max} (maximum noise level): The maximum instantaneous noise level during a specific period of time.

⁶ L₅₀: The noise level for 50 percent of the measured time period

⁷ L₉₀: The noise level for 90 percent of the measured time period

Source: Measurements collected by AECOM October 1-3, 2019

This page intentionally left blank

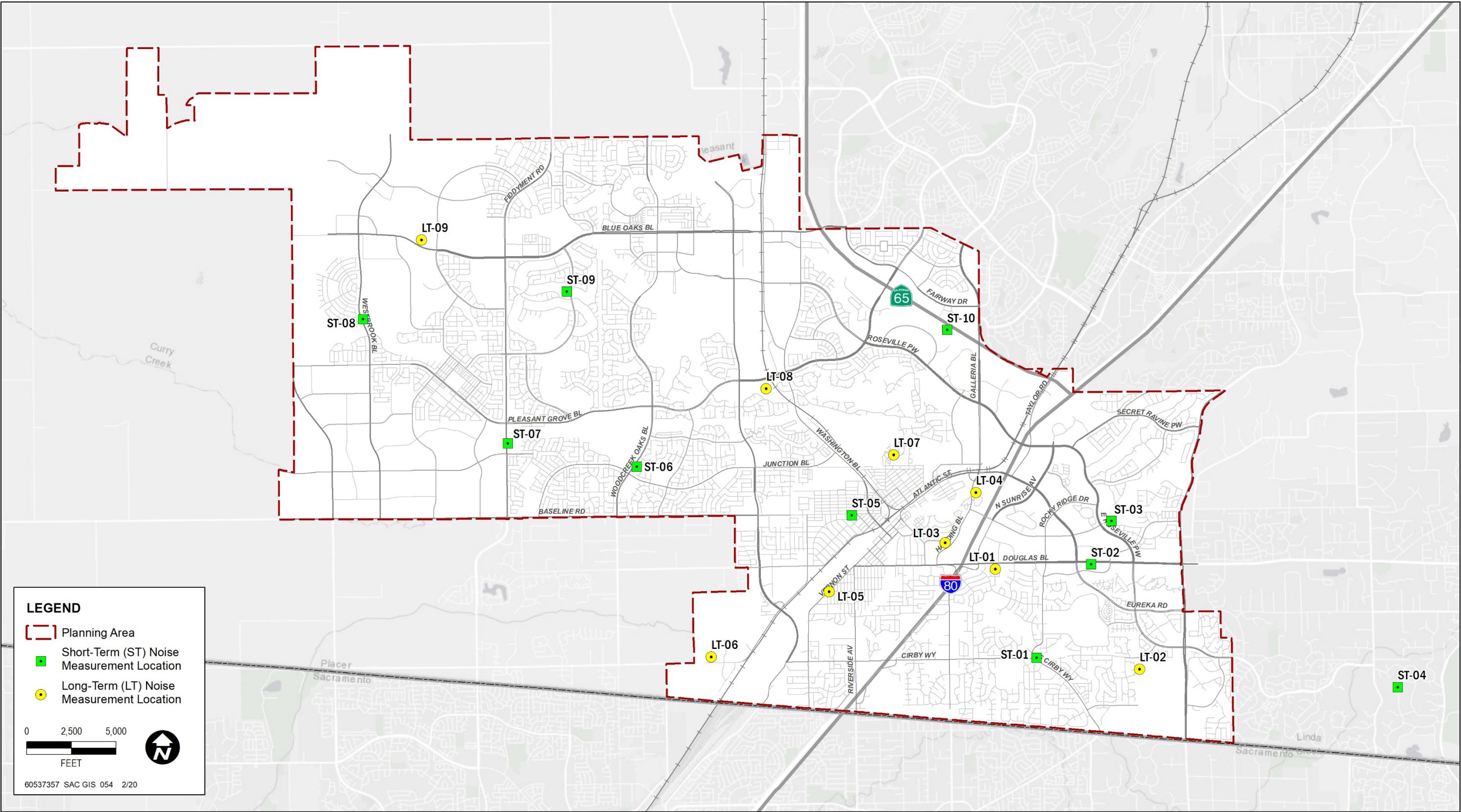


Exhibit 4.6-7. Noise Measurement Sites

This page intentionally left blank

4.6.3 REGULATORY FRAMEWORK

Various agencies have established noise guidelines and standards to protect citizens from potential hearing damage and other adverse physiological and social effects associated with noise and vibration. Following is a discussion of federal, State, and local noise regulations and guidelines. This information is intended to provide the regulatory context against which existing and future noise conditions can be compared.

4.6.3.1 FEDERAL

Although not directly applicable to many projects, the research that supported the development of federal community noise standards is broadly applicable in understanding human response to different noise levels and is summarized below for the reader's edification.

Below is a list of federal agencies with noise exposure criteria.

- ▶ U.S. Environmental Protection Agency (EPA): Noise standards to protect public health and welfare
- ▶ Housing and Urban Development (HUD): Noise standards for federally funded housing projects
- ▶ Federal Aviation Administration (FAA): Noise standards for aircraft noise
- ▶ Federal Highway Administration (FHWA): Noise standards for federally funded highway projects
- ▶ Federal Transit Administration (FTA): Noise standards for federally funded transit projects
- ▶ Federal Railroad Administration (FRA): Noise standards for federally funded rail projects

U.S. Environmental Protection Agency Noise Control Act (Public Law 92-574)

The federal Noise Control Act of 1972 (Public Law 92-574) established a requirement that all federal agencies administer their programs to promote an environment free of noise that would jeopardize public health or welfare.⁶ Although the EPA was given a major role in disseminating information to the public and coordinating federal agencies, each federal agency retains authority to adopt noise regulations pertaining to agency programs.⁷

In 1974, in response to the requirements of the federal Noise Control Act, the EPA identified indoor and outdoor noise level limits to protect public health and welfare (communication disruption, sleep disturbance, and hearing damage). Outdoor and indoor noise exposure limits of 55 dB L_{dn} and 45 dB L_{dn} , respectively, are identified as desirable to protect against speech interference and sleep disturbance for residential, educational, and healthcare areas. The sound-level criterion identified to protect against hearing damage in commercial and industrial areas is 70 dB 24-hour L_{eq} (both outdoors and indoors).

6 The U.S. Environmental Protection Agency (EPA) was given the responsibility for providing information to the public regarding identifiable effects of noise on public health and welfare, publishing information on the levels of environmental noise that will protect the public health and welfare with an adequate margin of safety, coordinating federal research and activities related to noise control, and establishing federal noise emission standards for selected products distributed in interstate commerce. The Noise Control Act also directed that all federal agencies comply with applicable federal, State, interstate, and local noise control regulations.

7 The EPA can, however, require other federal agencies to justify their noise regulations in terms of the Noise Control Act policy requirements.

U.S. Department of Housing and Urban Development Noise Abatement and Control (24 CFR Part 51, Subpart B)

The U.S. Department of Housing and Urban Development (HUD) has established guidelines for evaluating noise impacts on residential projects seeking financial support under various grant programs (HUD 2013), as summarized below:

- ▶ **Acceptable ≤ 65 dB.** Sites are generally considered acceptable for residential use if they are exposed to outdoor noise levels of 65 dB L_{dn} or less.
- ▶ **Normally Unacceptable 65–75 dB.** Sites are considered “normally unacceptable” if they are exposed to outdoor noise levels of 65–75 dB L_{dn} .
- ▶ **Unacceptable > 75 dB.** Sites are considered “unacceptable” if they are exposed to outdoor noise levels above 75 dB L_{dn} .

The HUD goal for the interior noise levels in residences is 45 dB L_{dn} or less.

Federal Aviation Administration Airport Noise Compatibility Planning (14 CFR Part 159)

14 CFR Part 150, “Airport Noise Compatibility Planning” prescribes the procedures, standards, and methodology to be applied to airport noise compatibility planning activities. Noise levels below 65 dB L_{dn} are normally considered to be acceptable for noise-sensitive land uses.

Federal Highway Administration Procedures for Abatement of Highway Traffic Noise and Construction Noise Regulations (23 CFR 772)

FHWA regulations (23 CFR 772) specify procedures for evaluating noise impacts associated with federally funded highway projects and determining whether these impacts are sufficient to justify funding noise abatement. The FHWA noise abatement criteria are based on worst hourly L_{eq} sound levels, not 24-hour average values (e.g., L_{dn} or CNEL). The worst-hour L_{eq} criteria for residential, educational, and healthcare facilities are 67 dB outdoors and 52 dB indoors. The worst-hour L_{eq} criterion for commercial and industrial areas is 72 dB (outdoors).

Federal Transit Administration Transit Noise and Vibration Impact Assessment (FTA Report No. 0123)

Federal Transit Administration (FTA) procedures for the evaluation of noise from transit projects are specified in the document entitled, “Transit Noise and Vibration Impact Assessment” (FTA, 2018). The FTA Noise Impact Criteria address the following categories:

- ▶ **Category 1:** Buildings or parks, where quiet is an essential element of their purpose.
- ▶ **Category 2:** Residences and buildings where people normally sleep. This includes residences, hospitals, and hotels where nighttime sensitivity is assumed to be of utmost importance.
- ▶ **Category 3:** Institutional land uses with primarily daytime and evening use. This category includes schools, libraries, churches, and active parks.

The FTA noise impact threshold is a sliding scale based on existing noise exposure and land use of sensitive receivers. The basic concept of the FTA noise impact criteria is that more project noise is allowed in areas where

existing noise is higher. However, in areas where existing noise exposure is higher, the allowable increase above the existing noise exposure decreases. For example, in an area with an existing noise level of 55 dBA, the allowable increase in noise level is 3 dBA, resulting in a total future noise impact threshold of 58 dBA. For an area with an existing noise level of 60 dBA, the allowable increase in noise level is only 2 dBA, resulting in a total future noise impact threshold of 62 dBA.

The FTA defines two levels of noise impact: moderate and severe. Mitigation is recommended for all severe noise impacts. The FTA noise impact criteria are shown graphically in Exhibit 4.6-8 for the different categories of land use, along with an example of how the criteria are applied. The two graphs on the left are for non-residential land uses where $L_{eq}(h)$ represents the noise exposure metric, and the top right graph is for residential land uses where L_{dn} represents the noise exposure metric. As shown in Exhibit 4.6-8, the impact threshold is a sliding scale and it typically increases with an increase in existing noise exposure. The existing noise appears on the horizontal axis, and the amount of new noise that the project can create is on the vertical axis. The lower curve (blue) defines the threshold for moderate impact and the upper curve (red) defines the threshold for severe impact.

The sample graph located in the bottom right corner of Exhibit 4.6-8 clarifies the concept of a sliding scale for noise impact. Assume that the existing noise has been measured at 60 dBA L_{dn} . This is the total noise from all existing noise sources over a 24-hour period: traffic, aircraft, lawnmowers, children playing, birds chirping, etc. Starting at 60 dBA on the horizontal axis, follow the vertical line up to where it intersects the moderate and severe impact curves. Then refer to the left axis to see the impact thresholds. An existing noise of 60 dBA L_{dn} gives thresholds of 57.8 dBA L_{dn} for moderate impact and 63.4 dBA L_{dn} for severe impact. Note that the values are measured in tenths of a decibel to avoid confusion from rounding off; in reality, one cannot perceive a tenth of a decibel change in sound level.

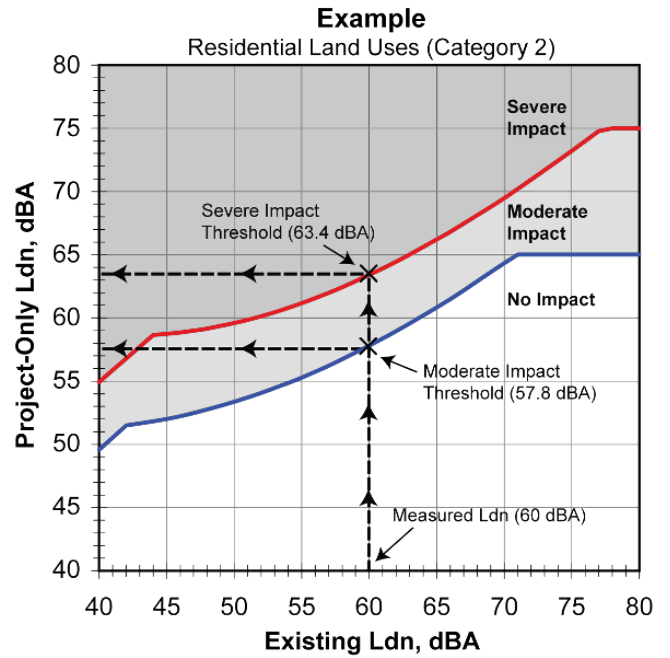
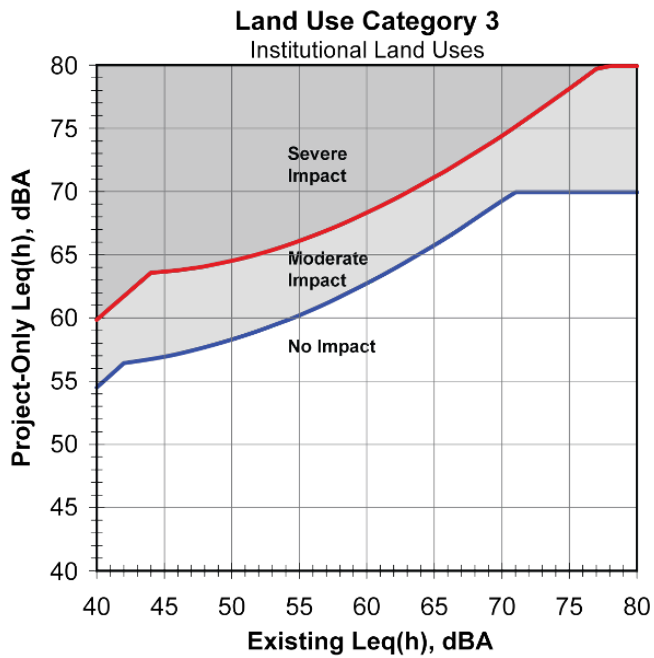
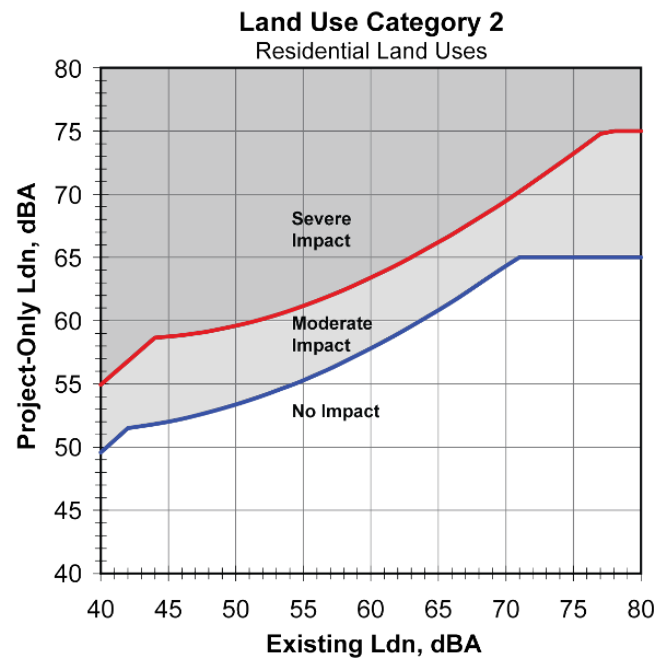
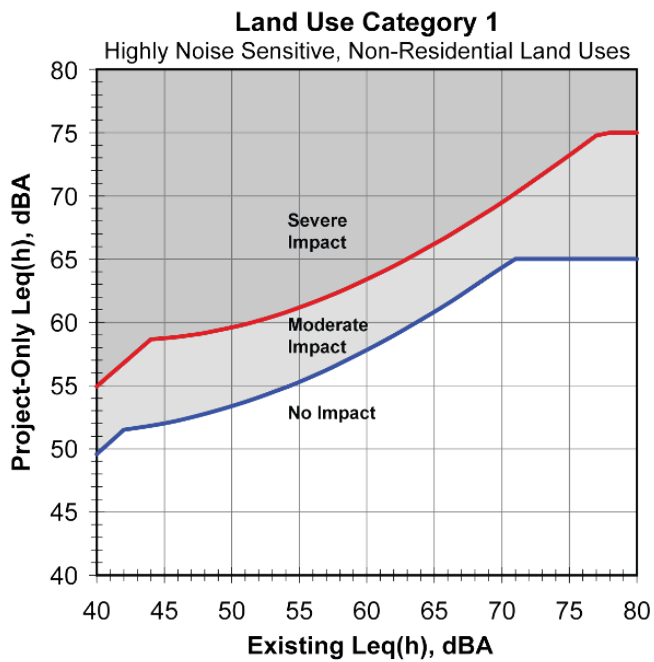
The curves in Exhibit 4.6-8 are defined in terms of project-only noise (on the vertical axes) and the existing noise (on the horizontal axes). The project-only noise is the noise introduced into the environment by the project; it is not the future noise levels with the project. The project-only noise does not include noise from existing noise sources in the area that would not change as a result of the project such as automobile traffic and airplanes.

The L_{dn} noise level descriptor is used to characterize noise exposure for residential areas (Category 2). For other noise sensitive land uses, such as outdoor amphitheaters and school buildings (Categories 1 and 3), the maximum hourly L_{eq} during the facility's operating period is used. Noise impacts are identified based on absolute predicted noise levels and increases in noise associated with the subject project.

FTA Construction Vibration Criteria

The FTA Guidance Manual recommends using local construction noise limits, if possible. The primary concern regarding construction vibration is potential damage to structures. The thresholds for potential damage are much higher than the thresholds for evaluating potential annoyance used to assess impact from operational vibration.

Building damage criteria recommended by FTA are shown in Table 4.6-3. These limits will be used to estimate potential problems that should be addressed during final design. The vibration limits that are shown are the levels at which a risk for damage would exist for each building category, not the level at which damage would occur. These limits should be viewed as criteria to be used during the impact assessment phase, to identify problem locations.



Source: Federal Transit Administration 2018.

Exhibit 4.6-8.

FTA Impact Criteria for Noise

| Table 4.6-3 FTA Construction Vibration Damage Criteria | | |
|---|-------------------|---|
| Building Category | PPV (inch/second) | Approximate RMS Vibration Velocity Level ^a |
| I. Reinforced concrete, steel, or timber (no plaster) | 0.5 | 102 |
| II. Engineered concrete and masonry (no plaster) | 0.3 | 98 |
| III. Non-engineered timber and masonry buildings | 0.2 | 94 |
| IV. Buildings extremely susceptible to vibration damage | 0.12 | 90 |
| Notes: ^a RMS vibration velocity level in VdB relative to 1 micro-inch/second. PPV = peak particle velocity RMS = root-mean-square Source: FTA 2018 | | |

To avoid temporary annoyance to building occupants during construction or construction interference with vibration-sensitive equipment inside special-use buildings, such as that from a magnetic resonance imaging machine, FTA recommends comparing the project construction-related VdB to the criteria shown in Table 4.6-4 for frequent, occasional, and infrequent events. FTA defines frequent events as more than 70 events per day, occasional events as 30–70 events per day, and infrequent events as fewer than 30 events per day. It was conservatively assumed that the construction-related, vibration-generating activities under the proposed project would fall under occasional events as defined by FTA. The vibration annoyance criteria for vocational events because of construction are shown in Table 4.6-4 with 75 VdB for land use Category 1 and 78 VdB for land use Category 2.

| Table 4.6-4 FTA Construction Vibration Annoyance Criteria | | | |
|--|---|--------------------------------|--------------------------------|
| Land Use Category | Impact Levels (VdB; relative to 1 micro-inch/second) | | |
| | Frequent Events ^a | Occasional Events ^b | Infrequent Events ^c |
| Category 1: Buildings where vibration would interfere with interior operations | 65 ^d | 65 ^d | 65 ^d |
| Category 2: Residences and buildings where people normally sleep | 72 | 75 | 80 |
| Category 3: Institutional land uses with primarily daytime uses | 75 | 78 | 83 |
| Notes: ^a "Frequent events" is defined as more than 70 vibration events from the same source per day. ^b "Occasional events" is defined as 30 to 70 vibration events from the same source per day. ^c "Infrequent events" is defined as fewer than 30 vibration events from the same source per day. ^d This criterion limit is based on levels that are acceptable for most moderately sensitive equipment, such as optical microscopes. Vibration-sensitive manufacturing or research would require detailed evaluation to define the acceptable vibration levels. Source: FTA 2018 | | | |

Federal Railroad Administration

The Federal Railroad Administration (FRA) noise standards are the same as those specified by the FTA.

4.6.3.2 STATE

State of California General Plan Guidelines, Government Code Section 65302 et seq.

In 1971, the State required cities and counties to include noise elements in their general plans (Government Code Section 65302 et seq.). The State of California General Plan Guidelines (Office of Planning and Research 2017) identify guidelines for the noise elements of local general plans, including a sound level/land-use compatibility chart. The noise element guidelines identify the “normally acceptable” range of noise exposure for low-density residential uses as less than 60 dB L_{dn} , and the “conditionally acceptable” range as 55–70 dB L_{dn} . The “normally acceptable” range for high-density residential uses is identified as below 65 dB L_{dn} , and the “conditionally acceptable” range is identified as 60–70 dB L_{dn} . For educational and medical facilities, levels below 70 dB L_{dn} are considered “normally acceptable,” and levels of 60–70 dB L_{dn} are considered “conditionally acceptable.” For office and commercial land uses, levels below 70 dB L_{dn} are considered “normally acceptable,” and levels of 67.5–77.5 dB L_{dn} are considered “conditionally acceptable.” Overlapping noise level ranges are intended to indicate that local conditions (existing sound levels and community attitudes toward dominant sound sources) should be considered in evaluating land use compatibility at specific locations.

State law intended that noise elements guide policy makers in making land use determinations and in preparing noise ordinances that would limit exposure of their populations to excessive noise levels. In 1984, State noise element provisions were revised to “recognize” guidelines prepared by the Office of Noise Control of the California Department of Health Services and to analyze and quantify, “to the extent practicable, as determined by the legislative body,” noise from the following sources: highways and freeways; primary arterials and major local streets; passenger and freight on-line railroad operations and ground rapid transit systems; commercial, general aviation, heliport, helistop and military airport operations, aircraft overflights, jet engine test stands, and other ground facilities and maintenance functions related to airport operation; local industrial plants, including, but not limited to, railroad classification yards; and other ground stationary noise sources identified by local agencies as contributing to the community noise environment. As noted in the draft update to the General Plan Guidelines, the Office of Planning and Research notes that the Department of Health Services Office of Noise Control no longer exists, and the guidelines have been incorporated into the General Plan Guidelines for Noise Elements (OPR 2017).

Also, a part of the draft General Plan Guidelines is a discussion regarding the balance between environmental noise and other planning objectives, including recognition that developed infill locations may experience higher levels of noise, but are often desirable places to live and work for the very reason that they are active. Moreover, there are design strategies that can reduce adverse exposure to noise even in areas with relatively higher ambient noise levels (OPR 2017).

California Noise Insulation Standards, California Code of Regulations Part 2, Title 24

Part 2, Title 24 of the California Code of Regulations “California Noise Insulation Standards” establishes minimum noise insulation standards to protect persons within new hotels, motels, dormitories, long-term care

facilities, apartment houses, and dwellings other than single-family residences. Under this regulation, interior noise levels attributable to exterior noise sources should not exceed 45 dB L_{dn} in any habitable room.⁸

Division of Aeronautics Noise Standards, California Code of Regulations Title 21, Chapter 5000

Title 21, Chapter 5000 of the California Code of Regulations identifies noise compatibility standards for airport operations. Section 5014 of the Code states that the standard for the acceptable level of aircraft noise for persons living in the vicinity of airports is established to be 65 dB CNEL. Residences, schools, hospitals, or places of worship exposed to aircraft noise levels exceeding 65 dB CNEL are deemed to be in a noise impacted area. Airports operating within a noise impacted area require a variance, as prescribed in Article 5 of Title 21, Chapter 5000 of the California Code of Regulations.

California Department of Transportation Vibration Criteria

The effects of groundborne vibration include movement of building floors, rattling of windows, shaking of items that sit on shelves or hang on walls, and rumbling sounds. In extreme cases, vibration can damage buildings, although this is not a factor for most projects. Human annoyance from groundborne vibration often occurs when vibration exceeds the threshold of perception by only a small margin. A vibration level that causes annoyance can be well below the damage threshold for normal buildings.

Vibration impacts would be significant if vibration levels would exceed the Caltrans-recommended standard of 0.2 in/sec PPV with respect to the prevention of structural damage for normal buildings or FTA's maximum-acceptable vibration standard of 80 VdB with respect to human response for residential uses (i.e., annoyance) at nearby vibration-sensitive land uses. Table 4.6-5 shows Caltrans' general thresholds for structural responses to vibration levels.

| Table 4.6-5 Structural Responses to Vibration Levels | | |
|--|---------------------------------------|--|
| Structure and Condition | Peak Vibration Threshold (in/sec PPV) | |
| | Transient Sources | Continuous/Frequent Intermittent Sources |
| Extremely fragile historic buildings, ruins, ancient monuments | 0.12 | 0.08 |
| Fragile buildings | 0.2 | 0.1 |
| Historic and some old buildings | 0.5 | 0.25 |
| Older residential structures | 0.5 | 0.3 |
| New residential structures | 1.0 | 0.5 |
| Modern industrial/commercial buildings | 2.0 | 0.5 |
| Notes: in/sec = inches per second; PPV = peak particle velocity Source: Caltrans 2013 | | |

⁸ Where such residences are located in an environment where exterior noise is 60 dB L_{dn} or greater, an acoustical analysis is required to ensure that interior levels do not exceed the 45 dB L_{dn} interior standard.

4.6.3.3 LOCAL

Existing City of Roseville General Plan

The City's existing General Plan (City of Roseville 2016) establishes acceptable noise level criteria for both transportation and non-transportation noise sources, and includes the following goals and policies related to noise.

- ▶ **Noise Goal 1:** Protect City residents from the harmful and annoying effects of exposure to excessive noise.
- ▶ **Noise Goal 2:** Protect the economic base of the City by preventing incompatible land uses from encroaching upon existing or planned noise-producing uses.
- ▶ **Noise -Transportation Noise Sources Policy 1:** Allow the development of new noise-sensitive land uses (which include but are not limited to residential, schools, and hospitals) only in areas exposed to existing or projected levels of noise from transportation noise sources which satisfy the levels specified in Table IX-1 [Table 4.6-6 of this EIR]. Noise mitigation measures may be required to reduce noise in outdoor activity areas and interior spaces to the levels specified in Table IX-1 [Table 4.6-6 of this EIR].

Recognizing that in increasingly urban areas it is difficult to maintain suburban noise standards, and in order to facilitate the City's goals to encourage reinvestment and economic development in the Riverside and Downtown Specific Plan areas, the City may elect to allow new noise-sensitive land uses on a case by case basis in proximity to transportation sources. Noise mitigation, including an acoustical analysis, would be required to reduce interior space noise levels to the standards specified in Table IX-1 [Table 4.6-6 of this EIR]. Exterior noise levels would require mitigation to the extent feasible using building orientation, construction and design features; however ultimately, noise levels may exceed the noise standards identified in Table IX-1 [Table 4.6-6 of this EIR].

- ▶ **Noise -Transportation Noise Sources Policy 2:** Require new roadway improvement projects to be mitigated so as not to exceed the noise levels specified in Table IX-1 [Table 4.6-6 of this EIR] at outdoor activity areas or interior spaces of existing noise-sensitive land uses.
- ▶ **Noise -Transportation Noise Sources Policy 3:** Evaluate new transportation projects, such as light and heavy rail, using the standards contained in Table IX-1 [Table 4.6-6 of this EIR]. However, noise from these projects may be allowed to exceed the standards contained in Table IX-1 [Table 4.6-6 of this EIR] if the City Council finds that there are special overriding circumstances.
- ▶ **Noise -Transportation Noise Sources Policy 4:** Require an acoustical analysis where:
 - a. Noise sensitive land uses are proposed in areas exposed to existing or projected noise levels exceeding the levels specified in Table IX-1 [Table 4.6-6 of this EIR];
 - b. Proposed transportation noise source projects are likely to produce noise levels exceeding the levels specified in Table IX-1 [Table 4.6-6 of this EIR] at existing or planned noise-sensitive uses.

An acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be considered in the project design.

- **Noise -Transportation Noise Sources Policy 5:** Work in cooperation with Caltrans and the Union Pacific Transportation Company to maintain noise level standards for both new and existing projects in compliance with Table IX-1 [Table 4.6-6 of this EIR].

| Table 4.6-6 Maximum Allowable Noise Exposure Transportation Noise Sources [Existing General Plan Table IX-1] | | | |
|---|-------------------------------------|----------------------------|------------------------------------|
| Land Use | Outdoor Activity Areas ¹ | Interior Spaces | |
| | L _{dn} /CNEL, dBA | L _{dn} /CNEL, dBA | L _{eq} , dBA ² |
| Residential | 60 ³ | 45 | - |
| Transient Lodging | 60 ³ | 45 | - |
| Hospitals, Nursing Homes | 60 ³ | 45 | - |
| Theaters, Auditoriums, Music Halls | - | - | 35 |
| Churches, Meeting Halls | 60 ³ | - | 40 |
| Office Buildings | 65 | - | 45 |
| Schools, Libraries, Museums | - | - | 45 |
| Playground, Neighborhood Parks | 70 | - | - |

¹ Outdoor activity areas for residential developments are considered to be the back yard patios of decks of single family dwelling, and the patios or common areas where people generally congregate for multi-family development. Outdoor activity areas for non-residential developments are considered to be those common areas where people generally congregate, including pedestrian plazas, seating areas and outside lunch facilities. Where the location of outdoor activity areas is unknown, the exterior noise level standard shall be applied to the property line of the receiving land use.

² As determined for a typical worst-case hour during periods of use.

³ Where it is not possible to reduce noise in outdoor activity areas to 60 dBA L_{dn}/CNEL or less using a practical application of the best-available noise reduction measures, an exterior noise level of up to 75 dBA L_{dn}/CNEL may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.

Note: Where a proposed use is not specifically listed on this table, the use shall comply with the noise exposure standards for the nearest similar use as determined by the Planning Division. Commercial and industrial uses have not been listed because such uses are not considered to be particularly sensitive to noise exposure.

Source: Table IX-1 of the City of Roseville General Plan Noise Element 2016

- **Noise - Fixed Noise Sources Policy 6:** Allow the development of new noise-sensitive uses (which include, but are not limited to, residential, school, and hospitals) only where the noise level due to fixed (non-transportation) noise sources satisfies the noise level standards of Table IX-3 [Table 4.6-8 of this EIR]. Noise mitigation may be required to meet Table IX-3 [Table 4.6-8 of this EIR] performance standards.

Recognizing that in increasingly urban areas it is difficult to maintain suburban noise standards, and in order to facilitate the City's goals to encourage reinvestment and economic development in the Riverside and Downtown Specific Plan areas, the City may elect to allow new noise-sensitive land uses on a case by case basis in a mixed-use environment. Noise levels would require mitigation to the extent feasible using building orientation, construction and design features; however ultimately, noise levels may exceed noise standards identified in Table IX-1 [Table 4.6-6 of this EIR].

- **Noise - Fixed Noise Sources Policy 7:** Require proposed fixed noise sources adjacent to noise-sensitive uses to be mitigated so as not to exceed the noise level performance standards of Table IX-3 [Table 4.6-8 of this EIR].

Table 4.6-7 Requirements for an Acoustical Analysis [Existing General Plan Table IX-2]

An acoustical analysis prepared pursuant to the Noise Element shall:

- A. Be the responsibility of the applicant.
- B. Be prepared by a qualified person experienced in the fields of environmental noise assessment and architectural acoustics.
- C. Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions and the predominant noise sources.
- D. Estimate existing and projected cumulative (20 years) noise in terms of L_{dn} /CNEL and/or standards of Table IX-3 and compare those levels to the adopted policies of the Noise Element. Noise prediction methodology must be consistent with the methods identified in the document entitled Existing Noise Environment (See Appendix).
- E. Recommend appropriate mitigation to achieve compliance with the adopted policies and standards of the Noise Element. Where the noise source in question consists of intermittent single events, the report must address the effects of maximum noise levels in sleeping rooms in terms of possible sleep disturbance.
- F. Estimate noise exposure after the prescribed mitigation measures have been implemented.
- G. Describe a post-project assessment program which could be used to evaluate the effectiveness of the proposed mitigation measures.

Source: Table IX-2 City of Roseville General Plan Noise Element 2016.

Table 4.6-8 Performance Standards for Non-Transportation Noise Sources or Projects Affected by Non-Transportation Noise Sources (As Measured at the Property Line of Noise-Sensitive Uses) [Existing General Plan Table IX-3]

| Noise Level Descriptor | Daytime (7 a.m. to 10 p.m.) | Nighttime (10 p.m. to 7 a.m.) |
|------------------------|-----------------------------|-------------------------------|
| Hourly L_{eq} , dBA | 50 | 45 |
| Maximum level, dBA | 70 | 65 |

1 For municipal power plants consisting primarily of broadband, steady state noise sources, the hourly (L_{eq}) noise standard may be increased up to 10 dB(A), but not exceed 55 dB(A) Hourly L_{eq} dB.

Each of the noise levels specified above should be lowered by five dB for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises. Such noises are generally considered by residents to be particularly annoying and are a primary source of noise complaints. These noise level standards do not apply to residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwellings).

No standards have been included for interior noise levels. Standard construction practices should, with exterior noise levels identified, result in acceptable interior noise levels.

Source: Table IX-3 City of Roseville General Plan Noise Element 2016.

► **Noise - Fixed Noise Sources Policy 8:** Require an acoustical analysis where:

Noise-sensitive land uses are proposed in areas where existing or anticipated future fixed noise sources may

- a. Proposed non-residential or other fixed noise sources are likely to produce noise levels exceeding the performance standards of Table IX-3 [Table 4.6-8 of this EIR] at existing or planned noise-sensitive uses.

An acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be considered during project design.

- ▶ **Noise - General Policy 9:** Where noise mitigation measures are required to achieve the standards of Tables IX-1 and IX-3 [Tables 4.6-6 and 4.6-8 of this EIR], the emphasis of such measures should be placed on site planning and project design. These measures may include, but are not limited to, building orientation, setbacks, landscaping, and building construction practices. The use of noise barriers, such as soundwalls, should be considered as a means of achieving the noise standards only after all other practical design-related noise mitigation measures have been integrated into the project.
- ▶ **Noise - General Policy 10:** Regulate construction-related noise to reduce impacts on adjacent uses consistent with the City's Noise Ordinance.

Existing City of Roseville General Plan Implementation Measures

1. Maximum Allowable Noise Exposure for Transportation Sources (Ongoing)

The City shall use the noise level standards contained in Table IX-1 [Table 4.6-6 of this EIR] for reviewing new development of noise-sensitive uses exposed to transportation noise sources.

These standards are also to be used for evaluating new proposed transportation noise sources and the impacts from the noise sources upon nearby noise-sensitive uses.

Where a noise-sensitive land use is proposed near an existing or future transportation noise source, such as a highway, arterial, airport, or railway line, noise measurements will be performed to determine whether existing and/or future noise levels due to that source will exceed the standards of Table IX-1 [Table 4.6-6 of this EIR] at the outdoor activity areas of the proposed use. Similarly, where a highway, airport, railroad line or other transportation noise source is proposed near existing or future noise-sensitive uses, a noise analysis will be prepared to ensure that the noise produced by that source will not exceed the standards of Table IX-1 [Table 4.6-6 of this EIR] at the outdoor activity areas of noise-sensitive uses.

2. Development Review Process (Ongoing)

Continue the City's existing development review process in accordance with the requirements contained in such documents as the Noise Ordinance, Zoning Ordinance, Uniform Building Code (including Chapter 35), State Noise Insulation Standards (Title 24), Community Design Guidelines, the specific plans and their design guidelines, the California Environmental Quality Act, and other statutes.

Acoustical analysis, where required, shall be included in the environmental review for projects. Such analysis shall include identification of noise impacts and potential mitigation measures. Where feasible, mitigation should focus on site planning and project design solutions rather than the creation of noise barriers. All analyses shall include an assessment of potential construction noise impacts.

Develop and employ procedures to ensure that the adopted noise mitigation measures identified pursuant to acoustical analyses are implemented in the project and building permit processes. Develop and employ procedures to monitor compliance with the standards of the Noise Element after completion of projects where noise mitigation measures have been required. (Policies 1 through 10)

3. Noise Level Contour Maps (Ongoing)

To generally evaluate the potential for noise conflicts associated with new development and projects, refer to the official Roseville Noise Level Contour Maps maintained by the Planning Division. Noise level contours have been prepared for existing and future fixed noise sources and for existing and future transportation-related noise sources within the City of Roseville.

The contour maps show generalized locations of the noise contours associated with the various noise sources. The contour maps can be used as a tool for evaluating the potential for a proposed noise-sensitive land use to be exposed to noise levels that may exceed the City of Roseville Noise Element standards. Because local topography, vegetation, or intervening structures may significantly affect noise exposures at a particular location, the noise contours should be considered generalized and not site-specific. (Policies 1, 2, 3, 6 and 7)

4. Noise Ordinance (Ongoing)

Continue to implement the City's Noise Ordinance to ensure compliance with the goals, policies, and standards contained in this element. (Policies 1, 2, 3, 6, 7 and 10)

5. California Vehicle Code (Existing)

Continue to enforce the California Vehicle Code sections relating to adequate mufflers and modified exhaust systems. (Policies 1, 2 and 10)

6. Requirements for an Acoustical Analysis (Proposed)

Require that all acoustical analyses utilize a consistent format and be prepared in accordance with Table IX-2 [Table 4.6-7 of this EIR]. (Policies 4 and 8)

7. Interagency Cooperation (Ongoing)

Work in cooperation with Caltrans and the Union Pacific Railroad to explore mitigation solutions for noise impacts resulting from existing and proposed highway and railroad facilities. Efforts should focus not only on impacts to new development projects, but also on pursuing solutions to reduce impacts on existing development exposed to "unacceptable" noise levels. (Policy 5)

8. Noise Level Performance Standards (Ongoing)

The City shall use the Noise Level Performance Standards contained in Table IX-3 [Table 4.6-8 of this EIR] for reviewing new development of noise-sensitive uses exposed to fixed noise sources. These standards are also to be used for evaluating potential impacts of proposed new fixed noise sources upon nearby noise-sensitive uses.

Where a noise-sensitive land use is proposed near a fixed noise source, such as an industrial facility, noise measurements will be performed to determine whether existing and/or future noise levels due to that source will exceed the standards of IX-3 [Table 4.6-8 of this EIR] within the property line of the proposed use. Similarly, where a fixed noise-producing use such as an industrial facility is proposed near an existing or future noise-sensitive use, a noise analysis will be prepared to ensure that the noise produced

by that use will not exceed the standards of Table IX-3 [Table 4.6-8 of this EIR] within the property line of the noise-sensitive use. (Policies 6, 7 and 8)

City of Roseville Municipal Code – Noise Ordinance

The City of Roseville Noise Ordinance (Chapter 9.24 of Title 9 in the City Code) was developed as an implementation measure of the existing General Plan Noise Element. The ordinance is designed to prohibit unnecessary, excessive, and annoying sound levels. Key provisions of the ordinance include:

- ▶ Section 9.24.030 provides exemptions for certain activities, including but not limited to: sound sources typically associated with residential uses (e.g., children at play, air conditioning and similar equipment, but not including barking dogs); property maintenance activities between the hours of 8:00 a.m. and 9:00 p.m.; safety, warning and alarm devices designed to protect health, safety and welfare; the normal operation of public and private schools consisting of classes and other school sponsored activities; maintenance (e.g., lawn mowers, edgers, aerators, blowers, etc.) of golf courses, provided such activities take place between the hours of 5:00 a.m. and 9:00 p.m. May through September, and 6:00 a.m. and 9:00 p.m. October through April; and private construction between the hours of 7:00 a.m. and 7:00 p.m. Monday-Friday, and between 8:00 a.m. and 8:00 p.m. on Saturdays and Sundays, provided that all construction equipment is fitted with factory installed muffling devices and maintained in good working order (City of Roseville 2014).
- ▶ Section 9.24.100 establishes specific operational sound level standards by which exposure of sensitive receptors to noise is regulated for area-wide sources, including fixed sources, non-transportation sources, and amplified music. Hourly sound levels are limited to 50 dB L_{eq} in the daytime (7:00 a.m. to 10:00 p.m.) and 45 dB L_{eq} at nighttime (10:00 p.m. to 7:00 a.m.). Hourly sound levels are limited to 70 dB L_{max} in the daytime (7:00 a.m. to 10:00 p.m.) and 65 dB L_{max} at nighttime (10:00 p.m. to 7:00 a.m.). Each of these sound level standards shall be reduced by five dBA for simple tone noises, consisting of speech and music. However, in no case shall the sound level standard be lower than the ambient sound level plus three dBA.
- ▶ 9.24.110 Amplified sound limits for sensitive receptors. In addition to the sound level standards established in Section 9.24.100, it is unlawful for any person at any location to produce amplified music or sound which causes the exterior sound level when measured at the property line of any affected sensitive receptor to exceed C-weighting⁹ level of 75 dBC L_{eq} in the daytime (7:00 a.m. to 10:00 p.m.) and 70 dBC L_{eq} at nighttime (10:00 p.m. to 7:00 a.m.); and 10 dB increase in any one-third octave band¹⁰.
- ▶ 9.24.120 Sound limits for industrial properties. Notwithstanding the provisions of Section 9.24.100, it is unlawful for any person to create any sound, or to allow the creation of any sound, on property with an industrial zoning designation that is owned, leased, occupied or otherwise controlled by such person where an

9 Although the A-Weighted response is used for most applications, C-Weighting is also available on many sound level meters. The C-Weighting levels represents what humans hear when the sound is turned up; we become more sensitive to the lower frequencies. C Weighting is usually used for peak measurements and also in some entertainment noise environments, where the transmission of bass noise can be a problem. C-weighted measurements are expressed as dBC or dB(C).

10 Analyzing a source on a frequency by frequency basis is possible but time consuming. The whole frequency range is divided into sets of frequencies called bands. The audible frequency range can be separated into unequal segments called octaves. Each band covers a specific range of frequencies. For this reason, a scale of octave bands and one-third octave bands has been developed. A band is said to be an octave in width when the upper band frequency is twice the lower band frequency. A third octave is more like a “third of an octave”, i.e. an octave divided by three. A third of an octave is a frequency band that is three times smaller than an octave band, so that an octave band logically comprises three third octave bands.

industrial land use shares a common property line with a sensitive receptor or is separated from a sensitive receptor by a roadway, which causes the exterior sound level when measured at the property line of any affected sensitive receptor to exceed the ambient sound level by seven dBA, or exceed the sound level standards as set forth in Section 9.24.100 by seven dBA, whichever is greater.

- ▶ 9.24.130 Sound limits for events on public property. Notwithstanding the provisions of Section 9.24.100, sound sources associated with outside activities on public property (e.g. athletic events, sporting events, fairs, and entertainment events) between the hours of 8:00 a.m. and 10:30 p.m., Sunday through Thursday, and between the hours of 8:00 a.m. and 11:00 p.m. on Fridays, Saturdays, and city-recognized holidays, shall not exceed 80 dBA, L_{\max} at the property line of the property on which the event is being held.
- ▶ Section 9.24.140 exempts City operations and activities from the provisions of Chapter 9.24.

Construction noise is not considered a “fixed noise source” and therefore Noise Ordinance Section 9.24.100 does not apply to project generated construction noise. Further, Noise Ordinance Section 9.24.030 exempts private construction from noise regulation during certain hours and Section 9.24.140 provides a full exemption for all City operations and activities from Noise Ordinance regulation provided all construction equipment is fitted with factory installed muffling devices and maintained in good working order.

- ▶ Section 9.24.190 prohibits excessive railroad and train noise. It is unlawful for any person to operate or sound or cause to be operated or sounded, in the operation of any railroad train, between the hours of 10:00 p.m. of one day and 7:00 a.m. of the next day, a train horn or train whistle which creates a noise in excess of 89 dB at any place or point 300 feet or more distant from the source of such sound.

Adopted Specific Plans and Mitigation Measures

Currently, the City has adopted 14 Specific Plans. A Specific Plan is a comprehensive planning and zoning document that implements the General Plan by providing development and conservation standards for a defined geographic location within the Planning Area. Each Specific Plan has developed guidelines for site, architectural, landscaping, lighting, roadway networks, pedestrian/bicycle paths, open space corridors, parks, and other aspects of design. Each adopted Specific Plan included an EIR, which evaluated potential impacts related to noise and vibration. Where appropriate, mitigation measures were adopted to reduce noise exposure, and these measures are required to be implemented in the respective Specific Plan Areas. Adopted mitigation measures included implementation of site-specific measures to reduce construction noise and control commercial noise, and to design buildings in compliance with interior noise-level standards based on project-specific acoustical analyses. Copies of the adopted Specific Plans and their associated EIRs are available upon request from the City of Roseville Development Services Department, Planning Division.

City of Roseville Community Design Guidelines

The Community Design Guidelines were adopted to implement the goals and policies of the Community Form and Community Design components of the General Plan. The Community Design Guidelines are intended to provide design professionals, property owners, commissioners, staff, and residents with a clear and common understanding of the City’s expectations for the planning, design, and review of development proposals in Roseville. All projects will be reviewed against the design and technical guidelines in the Community Design Guidelines, some of which are strategies to reduce noise exposure.

- ▶ CC-6 Buildings should be placed on project sites to create a transition to surrounding uses and enhance community character. Noise attenuation, when required, should be provided through a combination of sound barriers, landscaping, and setbacks.
- ▶ CC-54 (and OI-47) Utilities and mechanical equipment should be screened from public view. Ground-mounted HVAC units should be located away from activity areas and screened from public view through landscaping and/or screen walls. Public utility infrastructure and other utility components should be oriented away from public view to the extent possible and screened with evergreen shrubs to the extent allowed by the utilities. Ground or wall mounted equipment should be located out of public view to the extent possible and screened or placed in an enclosure to the extent allowed by the utility companies. Roof mounted equipment, including but not limited to air conditioners, fans, vents, antennas, and microwave dishes shall be setback from the roof edge, or placed behind a parapet or in a well so that they are not visible to motorists or pedestrians on the adjacent streets.
- ▶ CC-57 (and OI-50, MF-44, CR-38) Landscaping shall be used extensively throughout the project to achieve multiple objectives. Objectives to be achieved through landscaping may include: Providing a visual and noise buffer.
- ▶ OI-3 (and MF-3) Buildings should be placed on project sites to create a street presence and enhance community (neighborhood) character. When necessary, setbacks should be used to provide sound attenuation by creating space for the placement of sound barriers.

4.6.4 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

4.6.4.1 METHODOLOGY

Noise conditions were identified for new noise-sensitive developments located within areas with the potential to be affected by substantial existing or future mobile noise sources (e.g., aircraft, automobile or truck traffic, railroad lines) and stationary noise sources (e.g., construction activities, commercial and industrial facilities, recreational activities).

Existing physical conditions, which constitute the baseline for purposes of determining whether potential impacts are significant, were compared to future anticipated conditions under buildout of the General Plan. Land uses consistent with buildout of the General Plan and data obtained during on-site noise monitoring were used to determine the potential locations of noise-sensitive receptors and noise-generating land uses in the Planning Area, as discussed above under the “Ambient Noise Level Measurements.” Noise-sensitive land uses and major noise sources were identified based on existing documentation (e.g., equipment noise levels and attenuation rates) and site reconnaissance data. Baseline ambient noise levels were based, in part, on the noise surveys. Predictions from traffic noise modeling, and stationary-source noise levels were based on manufacturers’ specifications.

The methodology used for this analysis was consistent with approaches recommended by the Federal Transit Administration (FTA), the California Department of Transportation (Caltrans), and the City of Roseville. Noise modeling was conducted using the Federal Highway Administration’s (FHWA) traffic noise prediction model (FHWA-RD-77-108) and the FTA’s Transit Noise and Vibration Impact Assessment Guidance Manual (2018). Stationary-source noise levels were obtained from manufacturer specifications and industry-standard technical reports. Traffic data from the traffic impact analysis prepared for buildout of the General Plan were used to model existing and future traffic noise levels. Detailed noise analytical information is provided in Appendix C.

Construction Noise

To assess the potential short-term noise impacts from construction, sensitive receptors and their relative levels of exposure were identified. Construction noise was predicted using the Transit Noise and Vibration Impact Assessment methodology for construction noise prediction (FTA 2018). The noise emission levels referenced, and usage factors are based on FHWA's Roadway Construction Noise Model (FHA 2006). Noise levels of specific construction equipment and resultant noise levels at the locations of sensitive receptors were calculated.

Groundborne vibration impacts were assessed based on FTA methodology for construction (e.g., vibration levels produced by specific construction equipment operations and the distance of sensitive receptors from a given source), and transportation vibration sources (FTA 2018). Please see above under the heading, "Federal Transit Administration Transit Noise and Vibration Impact Assessment (FTA Report No. 0123)," for more detail.

Traffic Noise

Noise impacts were also evaluated by comparing traffic noise generation associated with buildout of the General Plan to existing conditions. The FHWA Highway Traffic Noise Prediction Model (FHWA-RD-77-108) was used to predict traffic noise levels under existing conditions and under the Constrained and Unconstrained scenarios, each of which have different assumed vehicular transportation networks. The Constrained scenario includes regional roadway projects that are based on the Sacramento Area Council of Governments Metropolitan Transportation Plan/Sustainable Communities Strategy and are reasonably expected to be implemented. The Unconstrained scenario includes a number of additional regional roadway improvements, as described in Section 4.3, Transportation. The contribution of buildout of the General Plan to traffic noise levels along area roadways was determined by comparing the cumulative condition modeled noise levels at 100 feet from the centerline of each roadway to existing conditions.

Table 4.6-1 lists the estimated distances to the 60 dBA, 65 dBA and 70 dBA L_{dn} traffic noise contours under existing conditions. Table 4.6-10 lists predicted distances to the 60 dBA, 65 dBA and 70 dBA L_{dn} traffic noise contours with buildout of the Constrained and Unconstrained scenarios. These contour distances identify portions of the Planning Area that could be subject to noise impacts. Table 4.6-10 compares projected future traffic noise levels with buildout of the Constrained and Unconstrained scenarios. Exhibit 4.6-9 and Exhibit 4.6-10 illustrate the predicted 60 dBA, 65 dBA, and 70 dBA L_{dn} noise contours for the Constrained and Unconstrained scenarios.¹¹ Noise estimates accounted for different vehicle speeds, but not the effects of existing walls, berms, or other intervening structures that may exist along certain street segments.

Stationary Noise

Potential long-term (operational) noise impacts from stationary non-transportation sources and other area noise sources (e.g., HVAC, landscape, parking lot, commercial and industrial activities, school, and recreation activities and events, agricultural activities) were assessed based on existing documentation (equipment noise levels) and site reconnaissance data.

¹¹ The 60-dB contours are not shown for the freeways since this would obscure many local roadway contours. Refer to the data tables for more detail.

4.6.4.2 THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines, a noise impact is considered significant if implementation of the proposed project would cause any of the following:

- ▶ 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. The definition of what is “excessive” or “substantial” noise is defined in the City’s General Plan and Noise Ordinance, as described in the Regulatory Framework section. (*Policies 1, 2, 3, 4, and 5 for Transportation Noise Sources, and Policies 6, 7, and 8 for Non-Transportation Noise Sources*);
- ▶ Generation of excessive groundborne vibration or groundborne noise levels (*Table 4.6-3 for Building Damage and Table 4.6-4 for Annoyance*);
- ▶ 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.

4.6.4.3 ISSUES NOT DISCUSSED FURTHER

The Planning Area does not intersect with any military bases, special use airspaces, or low-level flight paths, and is not located in safety zones or noise contours associated with airfields or airports that are a concern for land use compatibility planning. The Planning Area is not located within 2 miles of a public or private airstrip. McClellan Airfield is located more than 5 miles south of the Planning Area, Lincoln Airport is located more than 7 miles north of the Planning Area, and Sacramento International Airport is located more than 15 miles west of the Planning Area. No noise standards are exceeded by the aircraft overflight because the City is located outside of the 60 dB CNEL contour for McClellan Airfield, Sacramento International Airport, and the Lincoln Airport; therefore, exposure to excessive noise levels from aircraft noise is not discussed further in this EIR.

4.6.4.4 Impact Analysis

IMPACT 4.6-1 *Potential for Substantial Temporary, Short-Term Exposure to Construction Noise. Short-term construction source noise levels could exceed the applicable City standards at nearby noise-sensitive receptors. In addition, if construction activities were to occur during more noise-sensitive hours, construction source noise levels could also result in annoyance and/or sleep disruption to occupants of existing and proposed noise-sensitive land uses and create a substantial temporary increase in ambient noise levels. The proposed General Plan Update includes policies and implementation measures to reduce construction noise levels. The City cannot demonstrate at this time that the implementation of these policies and implementation measures would avoid temporary construction noise impacts in all instances. The impact is considered significant.*

Residences and businesses located adjacent to areas of construction activity would be affected by construction noise during buildout of the General Plan. Construction noise impacts result when construction activities occur during noise-sensitive times of the day (early morning, evening, or nighttime hours), the construction occurs in areas immediately adjoining noise sensitive land uses, and when construction durations last over extended periods of time.

Noise generating construction activities related to development within the Planning Area would include demolition activities, site grading and excavation, building erection, paving, and landscaping. The highest construction noise levels are typically generated during grading and excavation. Relatively lower noise levels typically occur during building construction.

Large pieces of earth-moving equipment, such as graders, excavators, and dozers, generate maximum noise levels of 85 dBA to 90 dBA at a distance of 50 feet (refer to Table 4.6-9 below) (EPA 1971:11). Typical hourly average construction-generated noise levels are approximately 80 dBA to 85 dBA measured at a distance of 50 feet from the site during busy construction periods.

| Table 4.6-9 Typical Construction Equipment Noise Levels | | |
|--|--------------------------------|--|
| Type of Equipment | Noise Level in dB at 50 feet | |
| | Without Feasible Noise Control | With Feasible Noise Control ¹ |
| Dozer or Tractor | 80 | 75 |
| Excavator | 88 | 80 |
| Compactor | 82 | 75 |
| Front-end Loader | 79 | 75 |
| Backhoe | 85 | 75 |
| Grader | 85 | 75 |
| Crane | 83 | 75 |
| Generator | 78 | 75 |
| Truck | 91 | 75 |
| Pile Driver | 101 | - |
| Note: dB = decibel ¹ Feasible noise control includes the use of intake mufflers, exhaust mufflers, and engine shrouds in accordance with manufacturer's specifications. Sources: EPA 1971; FTA 2018 | | |

Pile-driving could occur at some development sites, particularly within the Downtown Area, where multi-story construction is anticipated to occur. This type of construction activity could produce very high noise levels of approximately 105 decibels (dB) at 50 feet. Noise levels would attenuate at a rate of approximately 6 dBA per doubling of distance between the noise source and receptor. Intervening structures would provide additional shielding from the noise source.

Construction in portions of the Planning Area with certain rock formations (particularly the Mehrten Formation) presents difficult challenges during the excavation process due to extreme hardness. Excavator-mounted rock drills are required to break up larger areas for construction, while specialized trenching equipment equipped with saw blades can be used to cut foundation and utility trenches for smaller projects. Rock drills would expose receptors to maximum noise levels of 85 dBA L_{max} and hourly noise levels of 81 dBA L_{eq} at 50 feet. Blasting may also occur during the excavation process. Blasting events occur for a short duration but would expose receptors to maximum noise levels of 94 dBA L_{max} at 50 feet.

The General Plan accommodates development of existing developed properties, as well as development on vacant or mostly vacant parcels throughout the Planning Area. The City anticipates development of the western portion of the Planning Area, in addition to focused infill development. Some infill development opportunities would

involve properties that are near existing noise-sensitive uses, such as residences and schools, as well as properties that may be developed in phases, with noise-sensitive residential uses included in earlier phases. In these cases, there could be temporary construction activity in areas directly adjacent to existing or planned noise-sensitive uses and the worst-case noise exposure estimates provided above may occur. However, the majority of construction would be limited to daytime hours, because the Noise Ordinance only exempts construction-generated noise that occurs during the hours of 7 a.m. to 7 p.m. on weekdays and 8 a.m. to 8 p.m. on weekends. This is outside of the recognized sleep hours for residents, and is also outside of evening and early morning hours and time periods when residents are most sensitive to noise.

The following policy related to short-term construction noise would be revised as a part of the proposed General Plan Update:

- **Policy N1.9: Construction-related noise that is consistent with the City's Noise Ordinance is exempt from the noise standards outlined in this Element.** ~~Regulate construction-related noise to reduce impacts on adjacent uses consistent with the City's Noise Ordinance.~~

The existing policy refers the reader to the Noise Ordinance, while this change directly states what the Noise Ordinance provides regarding construction noise. This change provides additional clarity for this existing policy, and does not change the meaning or implementation of the policy. Therefore, the revision would not result in any adverse environmental impact.

Conclusion

Buildout of the General Plan will involve both temporary and short-term sources of noise associated with construction activities. Construction is a necessary activity in developing environments. While actions can be taken to reduce the noise impacts of construction on existing sensitive receptors, in some instances, construction activities may exceed the City's noise standards. However, because construction noise cannot be avoided and is a necessary part of development, the City of Roseville Noise Ordinance exempts construction-generated noise that occurs during the hours of 7 a.m. to 7 p.m. on weekdays and 8 a.m. to 8 p.m. on weekends, because this is outside of the recognized sleep hours for residents, and is also outside of evening and early morning hours and time periods when residents are most sensitive to noise. Thus, the majority of construction is limited to daytime hours, or it is in violation of the City's Noise Regulations. These regulations are monitored and enforced by the City's Engineering and Building Inspection staff, as part of the City's existing permitting processes.

Existing General Plan Noise Goal 1 and Implementation Measures related to the Development Review Process, Noise Ordinance, and California Vehicle Code (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Policy N1.9 listed above, ensure that the impact of construction noise is reduced to the extent practicable. However, there may be instances where sensitive receptors are temporarily exposed to noise levels that exceed the City's acceptable noise level standards due to construction activities. This impact is considered **significant**.

Mitigation Measure

No feasible mitigation measures are available.

Significance after Mitigation

While there may be site-specific or project-specific circumstances that would allow the application of additional measures to reduce noise, these cannot be effectively evaluated or applied at the program level. Whether and to what degree construction noise affects sensitive receptors depends on myriad factors, including existing topography; the type, nature, and duration of construction; and orientation of doors, windows, and activity areas associated with the sensitive receptors. No reasonable and feasible program-level measures are available to ensure all construction noise is below the City's noise standards. The impact is **significant and unavoidable**.

IMPACT 4.6-2 **Potential for Long-Term Noise Exposure.** *Existing and planned noise-sensitive land uses in the Planning Area could occur in areas that either are currently adversely affected by transportation and non-transportation noise sources or will be in the future. This could expose noise-sensitive uses to noise levels in excess of the existing General Plan noise policies or the proposed modified General Plan Update policies. Buildout of the General Plan would also permanently and substantially increase existing ambient noise levels in certain locations. The General Plan establishes the City's standards for land use and noise compatibility and strategies for addressing conflicts. While the policy approach would reduce adverse noise exposure impacts, the City cannot demonstrate that potentially significant impacts would be avoided in every case. The impact is considered **significant**.*

Buildout of the General Plan has the potential to expose existing and future noise-sensitive uses to a variety of noise sources, including traffic noise, railroad noise, and other fixed and non-transportation noise. Noise-sensitive uses include residences, schools, hospitals, parks, hotels, places of worship, libraries, and similar uses where there is an expectation of quiet. The following analysis examines each noise source and discusses the potential for environmental impacts.

Transportation Noise

Buildout of the General Plan would generate and attract vehicular traffic, which would increase traffic noise levels along existing and future roadways, and could generate noise which exceeds the existing General Plan's exterior noise standard for noise-sensitive uses of 60 dBA L_{dn} /CNEL for outdoor activity areas. As illustrated in Table 4.6-10, traffic associated with buildout of the General Plan and regional growth is expected to increase noise levels along City streets and regional thoroughfares throughout the Planning Area under both the Constrained and Unconstrained Alternatives. The traffic noise level increase is substantial in some areas compared to existing conditions. However, the noise levels presented in Table 4.6-10 do not account for intervening buildings, sound walls, topography, and other factors which provide noise attenuation. Therefore, the table presents a worst-case analysis.

Future noise-sensitive uses constructed as part of General Plan buildout could be exposed to noise in excess of the existing General Plan's noise standard, if they are constructed within 100 feet of the centerline of most of the roadways listed in Table 4.6-10. However, all of the City's remaining unbuilt areas are within Specific Plans. Each of the City's Specific Plans have involved preparation of an EIR, which evaluated noise and included appropriate setbacks, screening, or adoption and incorporation of other mitigation into the Specific Plan to ensure that noise volumes would be consistent with General Plan policy.

Existing noise-sensitive uses are located along major roadways which will experience increased traffic volumes and noise as part of General Plan buildout. There are many roadways where increased traffic volumes would result in a perceptible increase in noise level (by at least 3 dB) and multiple roadways (Blue Oaks Boulevard, Fiddymment Road, Foothill Boulevard, Pleasant Grove Boulevard, and Baseline Road) where the increase over existing conditions is anticipated to be clearly noticeable (by at least 5 dB). In Table 4.6-10, noise increases of 3 dB or greater are shown in **bold** text.

The predicted traffic noise levels shown in Table 4.6-10 represent conservative potential noise exposure, including the assumption that all intervening surfaces between the transportation noise source and the noise receptor are hard surfaces, such as concrete and asphalt. In reality, noise levels will vary, because the calculations used to estimate the noise contours do not assume natural or artificial shielding or reflection from existing or proposed structures. Actual noise levels will vary from day to day, depending on factors, such as local traffic volumes and speed, shielding from existing and proposed structures, variations in attenuation rates resulting from changes in surface parameters, and meteorological conditions. Furthermore, the noise levels from these roadways and the noise exposure of the associated land uses were analyzed as part of the City's Specific Plan process, as described above, and appropriate screening and other mitigation strategies were incorporated to shield uses from cumulative traffic noise.

Landscape and Building Maintenance Activities

Buildout of the General Plan, including infill development in areas adjacent to existing or planned noise-sensitive uses, is anticipated to require the operation of landscape maintenance and other property maintenance equipment. Landscape maintenance activities include the use of leaf blowers, power tools, and gasoline-powered lawn mowers, which could result in intermittent noise levels of approximately 88.3 dB at 6.5 feet. The use of such equipment, assuming a noise attenuation rate of 6 dB per doubling of distance from the source, would result in exterior noise levels of approximately 70.1 dB at a distance of 50 feet.

Although such activities would likely occur during daytime hours, the exact hours and locations are unknown at this time. Such activities are anticipated to be intermittent and would occur during the daytime, which is a less noise-sensitive time of day. Furthermore, these noise sources are typical and expected within urban and residential environments.

Depending on the location and extent of the use of this equipment, this has the potential to exceed the existing General Plan non-transportation standards of 45 dB L_{eq} nighttime, 50 dBA L_{eq} daytime, 65 dBA L_{max} nighttime, and 70 dBA L_{max} daytime. The use of such equipment would not be frequent enough or of such long duration that applicable hourly standards would be exceeded for adjacent noise-sensitive land uses, but it is possible that maximum single-event standards could potentially be exceeded.

Table 4.6-10 Proposed General Plan Update 60 dBA, 65 dBA, and 70 dBA L_{dn} Traffic Noise Contours

| ID | Roadway | Segment | Existing | | | | Buildout of the General Plan, Constrained Road Network | | | | Increase dBA | Buildout of the General Plan, Unconstrained Road Network | | | | Increase dBA |
|----|---------------------|--|---|-------------------|-----------|-----------|---|-------------------|--------|-----------|-----------------|---|-------------------|-----------|-----------|-----------------|
| | | | Noise Level (L _{dn} , dBA) @ 100 Feet | Contour Distances | | | Noise Level (L _{dn} , dBA) @ 100 Feet | Contour Distances | | | | Noise Level (L _{dn} , dBA) @ 100 Feet | Contour Distances | | | |
| | | | | 70 dBA | 65 dBA | 60 dBA | | 70 dBA | 65 dBA | 60 dBA | | | 70 dBA | 65 dBA | 60 dBA | |
| 1 | Blue Oaks Blvd | From Fiddymment Rd to the west | 57 | 5 | 16 | 51 | 68 | 63 | 199 | 631 | 11 | 68 | 71 | 223 | 707 | 11 |
| 2 | Blue Oaks Blvd | From Fiddymment Rd to Del Webb Blvd | 64 | 26 | 82 | 259 | 70 | 97 | 306 | 968 | 6 | 70 | 103 | 324 | 1025 | 6 |
| 3 | Blue Oaks Blvd | From Del Webb Blvd to Woodcreek Oaks Blvd | 67 | 46 | 146 | 460 | 71 | 116 | 366 | 1159 | 4 | 71 | 118 | 373 | 1179 | 4 |
| 4 | Blue Oaks Blvd | From Woodcreek Oaks Blvd to Foothills Blvd | 69 | 74 | 235 | 742 | 71 | 141 | 444 | 1405 | 3 | 72 | 144 | 454 | 1436 | 3 |
| 5 | Blue Oaks Blvd | From Foothills Blvd to Washington Blvd | 69 | 89 | 281 | 887 | 72 | 154 | 489 | 1545 | 2 | 72 | 157 | 495 | 1565 | 2 |
| 6 | Fiddymment Rd | From Blue Oaks to the north | 63 | 18 | 58 | 183 | 69 | 74 | 235 | 745 | 6 | 69 | 74 | 233 | 736 | 6 |
| 7 | Fiddymment Rd | From Blue Oaks Blvd to Pleasant Grove Blvd | 65 | 35 | 110 | 347 | 69 | 75 | 236 | 747 | 3 | 69 | 73 | 229 | 725 | 3 |
| 8 | Fiddymment Rd | From Pleasant Grove Blvd to Baseline Rd | 67 | 56 | 177 | 561 | 71 | 119 | 376 | 1189 | 3 | 71 | 117 | 369 | 1165 | 3 |
| 9 | Woodcreek Oaks Blvd | From Blue Oaks Blvd to the north | 63 | 22 | 70 | 222 | 66 | 41 | 131 | 414 | 3 | 66 | 38 | 120 | 379 | 2 |
| 10 | Woodcreek Oaks Blvd | From Blue Oaks Blvd to Pleasant Grove Blvd | 65 | 32 | 102 | 324 | 68 | 58 | 182 | 577 | 3 | 67 | 55 | 175 | 553 | 2 |
| 11 | Woodcreek Oaks Blvd | From Pleasant Grove Blvd to Junction Blvd | 65 | 32 | 102 | 321 | 68 | 70 | 223 | 705 | 3 | 68 | 68 | 214 | 676 | 3 |
| 12 | Woodcreek Oaks Blvd | From Junction Blvd to Baseline Rd | 62 | 16 | 52 | 163 | 65 | 33 | 105 | 332 | 3 | 65 | 31 | 97 | 308 | 3 |
| 13 | Foothills Blvd | From Blue Oaks Blvd to the north | 62 | 17 | 54 | 171 | 69 | 78 | 246 | 777 | 7 | 68 | 59 | 187 | 590 | 5 |
| 14 | Foothills Blvd | From Blue Oaks Blvd to Pleasant Grove Blvd | 65 | 35 | 110 | 349 | 69 | 71 | 226 | 713 | 3 | 68 | 70 | 221 | 697 | 3 |
| 15 | Foothills Blvd | From Pleasant Grove Blvd to Junction Blvd | 68 | 69 | 217 | 686 | 70 | 96 | 304 | 962 | 1 | 70 | 93 | 295 | 934 | 1 |
| 16 | Foothills Blvd | From Junction Blvd to Main St | 68 | 65 | 207 | 654 | 70 | 96 | 304 | 962 | 2 | 70 | 93 | 293 | 925 | 2 |
| 17 | Foothills Blvd | From Baseline Rd to Vineyard | 69 | 80 | 252 | 795 | 70 | 110 | 349 | 1103 | 1 | 70 | 109 | 346 | 1094 | 1 |
| 18 | Foothills Blvd | From Vineyard to Cirby Way | 69 | 81 | 255 | 807 | 70 | 102 | 324 | 1023 | 1 | 70 | 104 | 329 | 1039 | 1 |
| 19 | Washington Blvd | From Blue Oaks Blvd to Roseville Pkwy | 66 | 38 | 121 | 382 | 69 | 82 | 260 | 822 | 3 | 69 | 82 | 259 | 817 | 3 |

Table 4.6-10 Proposed General Plan Update 60 dBA, 65 dBA, and 70 dBA L_{dn} Traffic Noise Contours

| ID | Roadway | Segment | Existing | | | | Buildout of the General Plan, Constrained Road Network | | | | Increase dBA | Buildout of the General Plan, Unconstrained Road Network | | | | Increase dBA |
|----|---------------------|--|---|-------------------|-----------|-----------|---|-------------------|--------|-----------|-----------------|---|-------------------|-----------|-----------|-----------------|
| | | | Noise Level (L _{dn} , dBA) @ 100 Feet | Contour Distances | | | Noise Level (L _{dn} , dBA) @ 100 Feet | Contour Distances | | | | Noise Level (L _{dn} , dBA) @ 100 Feet | Contour Distances | | | |
| | | | | 70 dBA | 65 dBA | 60 dBA | | 70 dBA | 65 dBA | 60 dBA | | | 70 dBA | 65 dBA | 60 dBA | |
| 20 | Washington Blvd | From Roseville Pkwy to Pleasant Grove Blvd | 65 | 30 | 96 | 303 | 67 | 54 | 169 | 536 | 2 | 67 | 55 | 173 | 548 | 3 |
| 21 | Washington Blvd | From Pleasant Grove Blvd to Junction Blvd | 66 | 40 | 128 | 403 | 68 | 63 | 199 | 630 | 2 | 68 | 61 | 194 | 614 | 2 |
| 22 | Washington Blvd | From Junction Blvd to Main St | 66 | 43 | 136 | 429 | 69 | 73 | 230 | 727 | 2 | 69 | 72 | 227 | 717 | 2 |
| 23 | Washington Blvd | From Main St to Oak St | 67 | 46 | 146 | 460 | 69 | 79 | 251 | 794 | 2 | 69 | 78 | 245 | 775 | 2 |
| 24 | Pleasant Grove Blvd | From Fiddymment Rd to the west | 63 | 22 | 68 | 216 | 68 | 66 | 210 | 664 | 5 | 68 | 66 | 208 | 658 | 5 |
| 25 | Pleasant Grove Blvd | From Fiddymment Rd to Woodcreek Oaks Blvd | 67 | 50 | 159 | 504 | 69 | 82 | 258 | 815 | 2 | 69 | 82 | 260 | 824 | 2 |
| 26 | Pleasant Grove Blvd | From Woodcreek Oaks Blvd to Foothills Blvd | 69 | 71 | 225 | 710 | 71 | 116 | 368 | 1164 | 2 | 71 | 116 | 367 | 1160 | 2 |
| 27 | Pleasant Grove Blvd | From Foothills Blvd to Washington Blvd | 70 | 90 | 283 | 895 | 71 | 119 | 376 | 1189 | 1 | 71 | 119 | 377 | 1194 | 1 |
| 28 | Pleasant Grove Blvd | From Washington Blvd to Roseville Pkwy | 70 | 98 | 310 | 981 | 71 | 129 | 407 | 1286 | 1 | 71 | 127 | 401 | 1269 | 1 |
| 29 | Pleasant Grove Blvd | From Roseville Pkwy to SR65 SB Ramps | 70 | 105 | 332 | 1051 | 72 | 148 | 467 | 1477 | 1 | 72 | 148 | 467 | 1475 | 1 |
| 30 | Pleasant Grove Blvd | From Fairway Dr to SR 65 NB Ramps | 70 | 91 | 288 | 910 | 71 | 115 | 364 | 1149 | 1 | 71 | 117 | 369 | 1168 | 1 |
| 31 | Pleasant Grove Blvd | From Fairway Dr to the north | 67 | 50 | 159 | 502 | 68 | 65 | 206 | 651 | 1 | 68 | 64 | 202 | 639 | 1 |
| 32 | Junction Blvd | From Woodcreek Oaks Blvd to the west | 63 | 22 | 69 | 217 | 68 | 61 | 192 | 606 | 4 | 68 | 61 | 192 | 606 | 4 |
| 33 | Junction Blvd | From Woodcreek Oaks Blvd to Foothills Blvd | 64 | 24 | 76 | 241 | 66 | 44 | 139 | 439 | 3 | 66 | 44 | 141 | 444 | 3 |
| 34 | Junction Blvd | From Foothills Blvd to Washington Blvd | 64 | 28 | 88 | 279 | 67 | 56 | 176 | 557 | 3 | 67 | 56 | 176 | 557 | 3 |
| 35 | Baseline Rd | From Fiddymment Rd to the west | 65 | 31 | 98 | 309 | 70 | 101 | 320 | 1010 | 5 | 70 | 97 | 308 | 974 | 5 |
| 36 | Baseline Rd | From Fiddymment Rd to Junction Blvd | 65 | 33 | 103 | 327 | 71 | 115 | 363 | 1149 | 5 | 71 | 114 | 362 | 1144 | 5 |

Table 4.6-10 Proposed General Plan Update 60 dBA, 65 dBA, and 70 dBA L_{dn} Traffic Noise Contours

| ID | Roadway | Segment | Existing | | | | Buildout of the General Plan, Constrained Road Network | | | | Increase dBA | Buildout of the General Plan, Unconstrained Road Network | | | | Increase dBA |
|----|-------------------|---|---|-------------------|-----------|-----------|---|-------------------|-----------|-----------|-----------------|---|-------------------|-----------|-----------|-----------------|
| | | | Noise Level (L _{dn} , dBA) @ 100 Feet | Contour Distances | | | Noise Level (L _{dn} , dBA) @ 100 Feet | Contour Distances | | | | Noise Level (L _{dn} , dBA) @ 100 Feet | Contour Distances | | | |
| | | | | 70 dBA | 65 dBA | 60 dBA | | 70 dBA | 65 dBA | 60 dBA | | | 70 dBA | 65 dBA | 60 dBA | |
| 37 | Baseline Rd | From Junction Blvd to Woodcreek Oaks Blvd | 65 | 33 | 104 | 330 | 68 | 71 | 223 | 707 | 3 | 68 | 71 | 223 | 707 | 3 |
| 38 | Baseline Rd | From Woodcreek Oaks Blvd to Foothills Blvd | 66 | 44 | 139 | 440 | 69 | 76 | 242 | 764 | 2 | 69 | 77 | 243 | 767 | 2 |
| 39 | Main St | From Foothills Blvd to Washington Blvd | 63 | 20 | 62 | 196 | 64 | 28 | 88 | 278 | 2 | 64 | 27 | 84 | 267 | 1 |
| 40 | Roseville Pkwy | From Washington Blvd to Pleasant Grove Blvd | 65 | 31 | 97 | 308 | 69 | 83 | 261 | 827 | 4 | 69 | 81 | 256 | 811 | 4 |
| 41 | Roseville Pkwy | From Pleasant Grove Blvd to Galleria Blvd | 70 | 99 | 312 | 985 | 72 | 166 | 525 | 1660 | 2 | 72 | 165 | 523 | 1653 | 2 |
| 42 | Roseville Pkwy | From Galleria Blvd to Taylor Rd | 70 | 108 | 342 | 1080 | 71 | 139 | 440 | 1393 | 1 | 71 | 139 | 438 | 1386 | 1 |
| 43 | Roseville Pkwy | From Taylor Rd to Sunrise Ave | 71 | 116 | 368 | 1164 | 72 | 142 | 449 | 1420 | 1 | 72 | 142 | 450 | 1422 | 1 |
| 44 | Roseville Pkwy | From Sunrise Blvd to Secret Ravine | 70 | 98 | 309 | 978 | 72 | 144 | 455 | 1438 | 2 | 72 | 141 | 447 | 1413 | 2 |
| 45 | Roseville Pkwy | From Secret Ravine to Rocky Ridge Dr | 69 | 79 | 250 | 790 | 70 | 111 | 350 | 1105 | 1 | 70 | 109 | 344 | 1089 | 1 |
| 46 | Roseville Pkwy | From Rocky Ridge Dr to Douglas Blvd | 68 | 69 | 218 | 689 | 70 | 100 | 317 | 1003 | 2 | 70 | 98 | 310 | 981 | 2 |
| 47 | Roseville Pkwy | From Douglas Blvd to Eureka Rd | 66 | 38 | 120 | 380 | 68 | 61 | 194 | 614 | 2 | 68 | 60 | 188 | 596 | 2 |
| 48 | Roseville Pkwy | From Eureka Rd to Sierra College Blvd | 67 | 49 | 154 | 487 | 68 | 63 | 198 | 627 | 1 | 68 | 61 | 193 | 612 | 1 |
| 49 | Fairway Dr | From Pleasant Grove Blvd to the northwest | 66 | 43 | 137 | 433 | 68 | 63 | 198 | 626 | 2 | 67 | 56 | 178 | 562 | 1 |
| 50 | Fairway Dr | From Pleasant Grove Blvd to Stanford Ranch Rd | 66 | 44 | 140 | 444 | 68 | 61 | 194 | 614 | 1 | 68 | 60 | 191 | 603 | 1 |
| 51 | Stanford Ranch Rd | From Fairway Dr to the north | 67 | 46 | 145 | 458 | 67 | 47 | 149 | 470 | 0 | 67 | 46 | 145 | 458 | 0 |
| 52 | Stanford Ranch Rd | From Fairway Dr to SR 65 NB Ramps | 70 | 90 | 284 | 898 | 70 | 90 | 284 | 898 | 0 | 70 | 90 | 284 | 898 | 0 |
| 53 | Galleria Blvd | From Roseville Pkwy to SR 65 SB Ramps | 70 | 100 | 317 | 1004 | 71 | 122 | 385 | 1217 | 1 | 71 | 122 | 386 | 1219 | 1 |
| 54 | Galleria Blvd | From Roseville Pkwy to Berry Rd | 67 | 53 | 169 | 535 | 69 | 78 | 246 | 778 | 2 | 69 | 78 | 247 | 780 | 2 |
| 55 | Harding Blvd | From Wills Rd to Lead Hill Blvd | 67 | 51 | 161 | 510 | 69 | 73 | 230 | 728 | 2 | 69 | 73 | 230 | 728 | 2 |

Table 4.6-10 Proposed General Plan Update 60 dBA, 65 dBA, and 70 dBA L_{dn} Traffic Noise Contours

| ID | Roadway | Segment | Existing | | | | Buildout of the General Plan, Constrained Road Network | | | | Increase dBA | Buildout of the General Plan, Unconstrained Road Network | | | | Increase dBA |
|----|----------------|--|---|-------------------|-----------|-----------|---|-------------------|-----------|-----------|-----------------|---|-------------------|-----------|-----------|-----------------|
| | | | Noise Level (L _{dn} , dBA) @ 100 Feet | Contour Distances | | | Noise Level (L _{dn} , dBA) @ 100 Feet | Contour Distances | | | | Noise Level (L _{dn} , dBA) @ 100 Feet | Contour Distances | | | |
| | | | | 70 dBA | 65 dBA | 60 dBA | | 70 dBA | 65 dBA | 60 dBA | | | 70 dBA | 65 dBA | 60 dBA | |
| 56 | Harding Blvd | From Lead Hill Blvd to Estates Dr | 66 | 41 | 130 | 411 | 68 | 66 | 210 | 663 | 2 | 68 | 67 | 211 | 669 | 2 |
| 57 | Harding Blvd | From Douglas Blvd to Estates Dr | 65 | 35 | 112 | 354 | 67 | 56 | 176 | 557 | 2 | 67 | 56 | 177 | 559 | 2 |
| 58 | Vernon St | From Lincoln St to Grant St | 62 | 16 | 51 | 162 | 64 | 24 | 76 | 240 | 2 | 64 | 26 | 81 | 255 | 2 |
| 59 | Atlantic St | From Wills Rd to Yosemite St | 67 | 45 | 142 | 449 | 68 | 64 | 201 | 635 | 2 | 68 | 63 | 199 | 629 | 1 |
| 60 | Eureka Rd | From I-80 EB Ramps to Sunrise Ave | 70 | 94 | 299 | 945 | 72 | 150 | 475 | 1502 | 2 | 72 | 151 | 476 | 1507 | 2 |
| 61 | Eureka Rd | From Sunrise Ave to Rocky Ridge Dr | 69 | 74 | 233 | 738 | 70 | 111 | 351 | 1110 | 2 | 70 | 111 | 350 | 1108 | 2 |
| 62 | Eureka Rd | From Rocky Ridge Dr to Douglas Blvd | 68 | 57 | 179 | 566 | 69 | 77 | 244 | 773 | 1 | 69 | 76 | 239 | 755 | 1 |
| 63 | Eureka Rd | From Douglas Blvd to Roseville Pkwy | 67 | 45 | 143 | 451 | 68 | 68 | 216 | 684 | 2 | 68 | 67 | 211 | 668 | 2 |
| 64 | Douglas Blvd | From Harding Blvd to Vernon | 68 | 62 | 195 | 615 | 69 | 80 | 253 | 800 | 1 | 69 | 79 | 249 | 788 | 1 |
| 65 | Douglas Blvd | From Sunrise Blvd to Rocky Ridge Dr | 70 | 107 | 339 | 1071 | 71 | 121 | 381 | 1206 | 1 | 71 | 117 | 369 | 1166 | 0 |
| 66 | Douglas Blvd | From Rocky Ridge Dr to Eureka Rd | 70 | 100 | 317 | 1002 | 70 | 107 | 339 | 1073 | 0 | 70 | 107 | 338 | 1068 | 0 |
| 67 | Douglas Blvd | From Eureka Rd to Roseville Pkwy | 70 | 91 | 288 | 911 | 71 | 116 | 367 | 1162 | 1 | 71 | 114 | 362 | 1144 | 1 |
| 68 | Douglas Blvd | From Roseville Pkwy to Sierra College Blvd | 70 | 110 | 349 | 1104 | 71 | 133 | 420 | 1328 | 1 | 71 | 131 | 416 | 1315 | 1 |
| 69 | Sunrise Ave | From Roseville Pkwy to Eureka Rd | 66 | 41 | 129 | 409 | 68 | 62 | 195 | 615 | 2 | 68 | 59 | 185 | 585 | 2 |
| 70 | Sunrise Ave | From Eureka Rd to Lead Hill Blvd | 67 | 49 | 155 | 490 | 68 | 67 | 213 | 673 | 1 | 68 | 68 | 216 | 683 | 1 |
| 71 | Sunrise Ave | From Lead Hill Blvd to Douglas Blvd | 67 | 53 | 169 | 534 | 69 | 71 | 224 | 708 | 1 | 69 | 72 | 226 | 715 | 1 |
| 72 | Sunrise Ave | From Douglas Blvd to Oak Ridge Dr | 67 | 50 | 159 | 502 | 68 | 63 | 199 | 629 | 1 | 68 | 65 | 207 | 655 | 1 |
| 73 | Sunrise Ave | From Cirby Way to Coloma Way | 69 | 87 | 274 | 866 | 70 | 98 | 311 | 984 | 1 | 70 | 101 | 321 | 1015 | 1 |
| 74 | Taylor Rd | From Roseville Pkwy to the north | 66 | 36 | 113 | 358 | 68 | 63 | 198 | 625 | 2 | 68 | 64 | 201 | 636 | 3 |
| 75 | Taylor Rd | From Roseville Pkwy to EB I-80 Ramps | 67 | 47 | 150 | 473 | 67 | 47 | 150 | 473 | 0 | 67 | 47 | 150 | 473 | 0 |
| 76 | Lead Hill Blvd | From Sunrise Ave to Harding Blvd | 66 | 42 | 133 | 420 | 68 | 69 | 217 | 687 | 2 | 68 | 69 | 219 | 692 | 2 |
| 77 | Lead Hill Blvd | From Sunrise Ave to Rocky Ridge Dr | 65 | 29 | 90 | 286 | 66 | 42 | 131 | 416 | 2 | 66 | 41 | 129 | 409 | 2 |
| 78 | Rocky Ridge Dr | From Eureka Rd to Roseville Pkwy | 63 | 21 | 65 | 207 | 64 | 23 | 72 | 229 | 0 | 63 | 22 | 70 | 222 | 0 |
| 79 | Rocky Ridge Dr | From Eureka Rd to Lead Hill Blvd | 64 | 28 | 88 | 280 | 64 | 28 | 88 | 280 | 0 | 64 | 28 | 88 | 280 | 0 |
| 80 | Rocky Ridge Dr | From Lead Hill Blvd to Douglas Blvd | 66 | 40 | 126 | 398 | 67 | 56 | 177 | 560 | 1 | 68 | 56 | 178 | 564 | 2 |
| 81 | Rocky Ridge Dr | From Douglas Blvd to Cirby Way | 67 | 45 | 143 | 451 | 67 | 53 | 166 | 526 | 1 | 68 | 60 | 191 | 604 | 1 |
| 82 | Cirby Way | From Foothills Blvd to Riverside Ave | 70 | 92 | 290 | 916 | 70 | 109 | 343 | 1086 | 1 | 70 | 109 | 346 | 1093 | 1 |

Table 4.6-10 Proposed General Plan Update 60 dBA, 65 dBA, and 70 dBA L_{dn} Traffic Noise Contours

| ID | Roadway | Segment | Existing | | | | Buildout of the General Plan, Constrained Road Network | | | | Increase dBA | Buildout of the General Plan, Unconstrained Road Network | | | | Increase dBA |
|-----|---------------------|--|---|-------------------|-----------|-----------|---|-------------------|-----------|-----------|-----------------|---|-------------------|-----------|-----------|-----------------|
| | | | Noise Level (L _{dn} , dBA) @ 100 Feet | Contour Distances | | | Noise Level (L _{dn} , dBA) @ 100 Feet | Contour Distances | | | | Noise Level (L _{dn} , dBA) @ 100 Feet | Contour Distances | | | |
| | | | | 70 dBA | 65 dBA | 60 dBA | | 70 dBA | 65 dBA | 60 dBA | | | 70 dBA | 65 dBA | 60 dBA | |
| 83 | Cirby Way | From Riverside Ave to Sunrise Ave | 69 | 72 | 227 | 717 | 69 | 80 | 252 | 797 | 0 | 69 | 85 | 269 | 849 | 1 |
| 84 | Cirby Way | From Sunrise Ave to Rocky Ridge Dr | 67 | 54 | 170 | 537 | 68 | 67 | 212 | 672 | 1 | 68 | 68 | 216 | 684 | 1 |
| 85 | Riverside Ave | From Cirby Way to North | 66 | 39 | 124 | 393 | 68 | 58 | 183 | 580 | 2 | 68 | 58 | 184 | 582 | 2 |
| 86 | Riverside Ave | From Cirby Way to I-80 WB Ramps | 70 | 99 | 314 | 994 | 70 | 107 | 340 | 1074 | 0 | 70 | 104 | 330 | 1043 | 0 |
| 87 | Riverside Ave | From I-80 EB Ramps to the south | 68 | 64 | 203 | 643 | 69 | 85 | 269 | 849 | 1 | 69 | 85 | 269 | 852 | 1 |
| 88 | Secret Ravine Pkwy | From Roseville Pkwy to Sierra College Blvd | 65 | 30 | 95 | 301 | 66 | 42 | 132 | 419 | 1 | 66 | 41 | 129 | 408 | 1 |
| 89 | Sierra College Blvd | From Douglas Blvd to Eureka Rd | 69 | 72 | 229 | 725 | 70 | 93 | 293 | 926 | 1 | 70 | 92 | 292 | 924 | 1 |
| 90 | Sierra College Blvd | From Douglas Blvd to the north | 68 | 59 | 187 | 593 | 69 | 86 | 272 | 861 | 2 | 69 | 86 | 273 | 864 | 2 |
| 91 | Baseline Rd | From Fiddymment Rd to the west | 64 | 27 | 87 | 274 | 70 | 90 | 283 | 896 | 5 | 69 | 86 | 273 | 864 | 5 |
| 92 | Blue Oaks Blvd | From Hayden Parkway to Westbrook Blvd | n/a | n/a | n/a | n/a | 68 | 67 | 211 | 668 | n/a | 69 | 79 | 249 | 787 | n/a |
| 93 | Westbrook Blvd | North of Blue Oaks | n/a | n/a | n/a | n/a | 68 | 57 | 179 | 565 | n/a | 67 | 53 | 169 | 534 | n/a |
| 94 | Blue Oaks Blvd | West of Westbrook Blvd | n/a | n/a | n/a | n/a | 64 | 23 | 73 | 229 | n/a | 67 | 46 | 147 | 464 | n/a |
| 95 | Santucci Blvd | From Blue Oaks Blvd to Pleasant Grove Blvd | n/a | n/a | n/a | n/a | 67 | 50 | 157 | 498 | n/a | 66 | 44 | 140 | 443 | n/a |
| 96 | Westbrook Blvd | From Blue Oaks Blvd to Pleasant Grove Blvd | n/a | n/a | n/a | n/a | 68 | 70 | 220 | 696 | n/a | 68 | 61 | 193 | 609 | n/a |
| 97 | Pleasant Grove Blvd | From Westbrook Blvd to Santucci Blvd | n/a | n/a | n/a | n/a | 65 | 30 | 96 | 305 | n/a | 65 | 29 | 92 | 290 | n/a |
| 98 | Pleasant Grove Blvd | From Market St to Westbrook Blvd | n/a | n/a | n/a | n/a | 66 | 41 | 130 | 410 | n/a | 66 | 41 | 128 | 406 | n/a |
| 99 | Santucci Blvd | From Pleasant Grove Blvd to Vista Grande | n/a | n/a | n/a | n/a | 69 | 75 | 239 | 754 | n/a | 68 | 66 | 209 | 662 | n/a |
| 100 | Westbrook Blvd | From Pleasant Grove Blvd to Vista Grande | n/a | n/a | n/a | n/a | 68 | 61 | 193 | 612 | n/a | 67 | 52 | 163 | 517 | n/a |
| 101 | Market St | From Pleasant Grove Blvd to Vista Grande | n/a | n/a | n/a | n/a | 58 | 6 | 19 | 60 | n/a | 58 | 6 | 19 | 60 | n/a |
| 102 | Santucci Blvd | From Vista Grande to Baseline Rd | n/a | n/a | n/a | n/a | 69 | 76 | 240 | 759 | n/a | 68 | 68 | 214 | 677 | n/a |

Table 4.6-10 Proposed General Plan Update 60 dBA, 65 dBA, and 70 dBA L_{dn} Traffic Noise Contours

| ID | Roadway | Segment | Existing | | | | Buildout of the General Plan, Constrained Road Network | | | | Increase dBA | Buildout of the General Plan, Unconstrained Road Network | | | | Increase dBA |
|-----|----------------|--|---|-------------------|-----------|-----------|---|-------------------|-----------|-----------|-----------------|---|-------------------|-----------|-----------|-----------------|
| | | | Noise Level (L _{dn} , dBA) @ 100 Feet | Contour Distances | | | Noise Level (L _{dn} , dBA) @ 100 Feet | Contour Distances | | | | Noise Level (L _{dn} , dBA) @ 100 Feet | Contour Distances | | | |
| | | | | 70 dBA | 65 dBA | 60 dBA | | 70 dBA | 65 dBA | 60 dBA | | | 70 dBA | 65 dBA | 60 dBA | |
| 103 | Vista Grande | From Santucci Blvd to Westbrook Blvd | n/a | n/a | n/a | n/a | 59 | 7 | 23 | 71 | n/a | 59 | 7 | 23 | 71 | n/a |
| 104 | Vista Grande | From Westbrook Blvd to Market St | n/a | n/a | n/a | n/a | 63 | 22 | 70 | 222 | n/a | 64 | 23 | 72 | 227 | n/a |
| 105 | Westbrook Blvd | From Vista Grande to Baseline Rd | n/a | n/a | n/a | n/a | 68 | 68 | 214 | 677 | n/a | 68 | 58 | 185 | 584 | n/a |
| 106 | Market St | From Vista Grande to Baseline Rd | n/a | n/a | n/a | n/a | 61 | 12 | 38 | 120 | n/a | 61 | 12 | 38 | 120 | n/a |
| 107 | Vista Grande | From Market St to Upland Dr | n/a | n/a | n/a | n/a | 64 | 24 | 77 | 244 | n/a | 64 | 25 | 80 | 252 | n/a |
| 108 | Upland Dr | From Vista Grande to Baseline Rd | n/a | n/a | n/a | n/a | 62 | 15 | 46 | 147 | n/a | 62 | 14 | 45 | 142 | n/a |
| 109 | Upland Dr | From Vista Grande to Pleasant Grove Blvd | n/a | n/a | n/a | n/a | 60 | 10 | 31 | 99 | n/a | 60 | 9 | 29 | 91 | n/a |
| 110 | Baseline Rd | From Santucci Blvd to Westbrook Blvd | n/a | n/a | n/a | n/a | 70 | 96 | 305 | 964 | n/a | 69 | 89 | 280 | 887 | n/a |
| 111 | Baseline Rd | From Westbrook Blvd to Market St | n/a | n/a | n/a | n/a | 70 | 103 | 325 | 1029 | n/a | 70 | 98 | 311 | 982 | n/a |
| 112 | Baseline Rd | From West of Santucci Blvd | n/a | n/a | n/a | n/a | 69 | 86 | 271 | 857 | n/a | 70 | 92 | 291 | 919 | n/a |

Notes: dB = decibels; L_{dn} = Day-Night Average sound level; n/a = Roadway segments that are not currently existing but were analyzed in the project's traffic impact study for future alternatives.

All tables use a consistent segment numbering approach for easier referencing. The same segment numbers are used even when the segment is new and does not have any data for the existing condition.

Bold: indicates roadway segment with an increase of +3 or more dBA.

*Volumes are AADT and from Caltrans traffic counts.

Source: Traffic data from Fehr & Peers Associates February 2020, noise modeling conducted by AECOM 2020.

Mechanical Equipment

Buildout of the General Plan, including infill development in areas adjacent to existing or planned noise-sensitive uses, could require operation of mechanical equipment. The operation of mechanical equipment at residential, commercial, office, industrial, institutional, and public facilities is a stationary and area noise source. The operation of mechanical equipment (e.g., pumps, generators; heating, ventilation, and cooling systems) could result in intermittent noise levels of approximately 90 dB at 3 feet (EPA 1971). Based on this equipment noise level, the operation of such equipment, assuming a noise attenuation rate of 6 dB per doubling of distance from the source, may result in exterior noise levels of approximately 50 dB at 300 feet and 60 dB at 95 feet.

The City's existing General Plan non-transportation standards are 45 dB L_{eq} nighttime, 50 dBA L_{eq} daytime, 65 dBA L_{max} nighttime, 70 dBA L_{max} daytime. Although mechanical equipment is typically shielded from direct exposure (e.g., housed on rooftops, in equipment rooms, or in exterior enclosures) as required by the City of Roseville Community Design Guidelines¹², the actual placement of such equipment at future land uses is not known at this time. It is possible that noise levels could exceed the existing General Plan non-transportation standards at existing and proposed noise-sensitive receptors if measures are not taken to reduce such noise exposure.

Solid Waste Collection

Solid waste collection (e.g., emptying large refuse dumpsters, possibly multiple times per week, and the shaking of containers with a hydraulic lift), could result in instantaneous maximum noise levels of approximately 89 dB L_{max} at 50 feet. Such activities are anticipated to be very brief, intermittent, and would occur during daytime hours, which are relatively less noise-sensitive times of day. Noises would typically emanate from public rights-of-way, which would normally be separated from outdoor gathering spaces associated with residential uses. Noise associated with garbage collection would not be expected to create single-event noise that would be substantially disruptive to daily activities or cause sleep disturbance.

Parking Lots

Parking lots and parking structures include noise sources, such as vehicles entering/exiting the lot, alarms/radios, and doors slamming. Neither the size (i.e., capacity) or location of parking lots that could be constructed under the General Plan is known at this time. However, according to the FHWA, parking lots with a maximum hourly traffic volume of approximately 1,000 vehicles per hour either entering or exiting the lot could result in a peak hour and daily noise levels of approximately 56 dB L_{eq} and 63 dB L_{dn} at 50 feet.

12 In new development areas, service, utility, loading areas, roof-mounted equipment, and noise-generating equipment shall be screened, designed, and located to reduce visibility and noise for surrounding properties and pedestrian areas.

<http://roseville.ca.us/common/pages/DisplayFile.aspx?itemId=8836813>

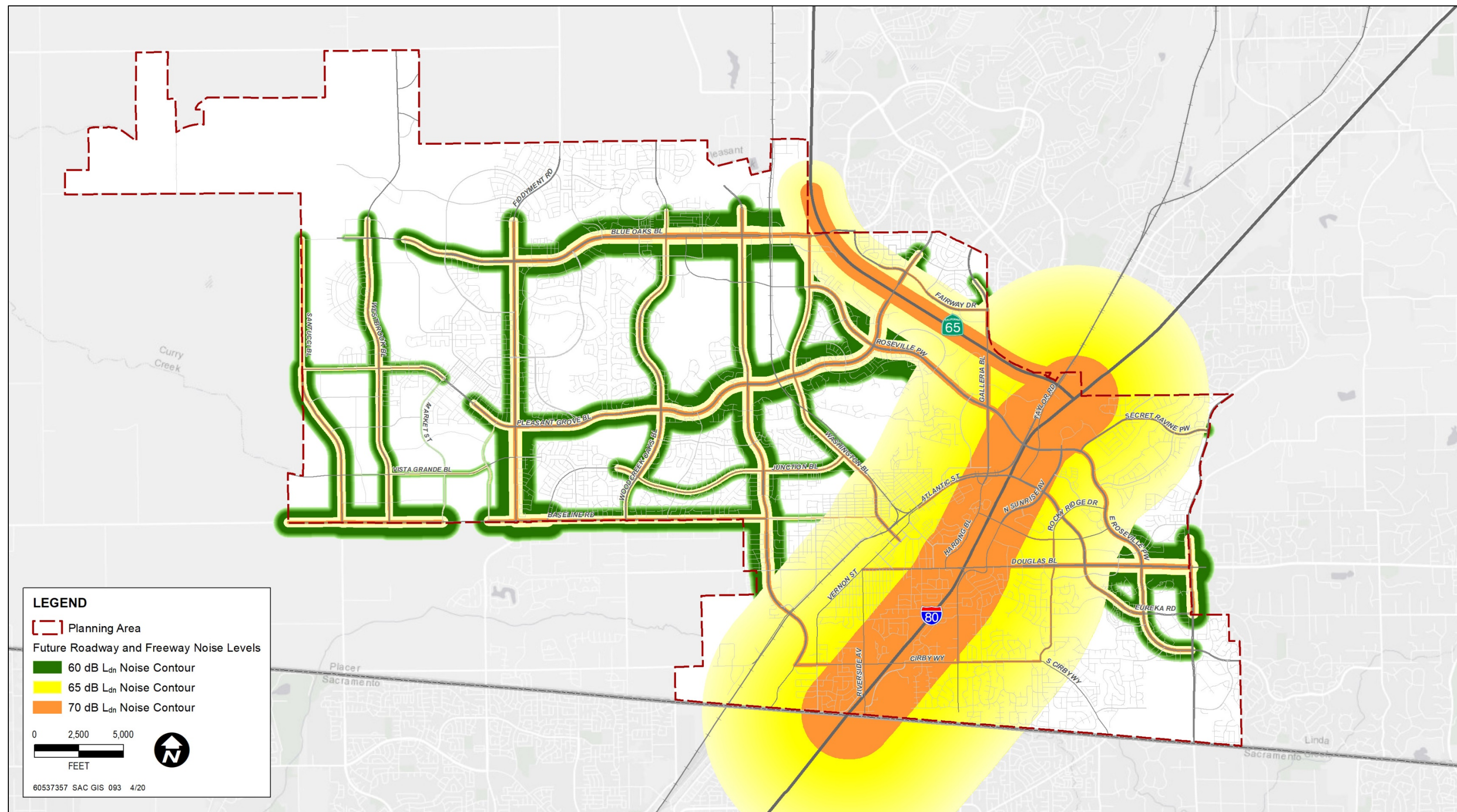


Exhibit 4.6-9

General Plan Buildout Traffic Noise Contours, Constrained Network

This page intentionally left blank

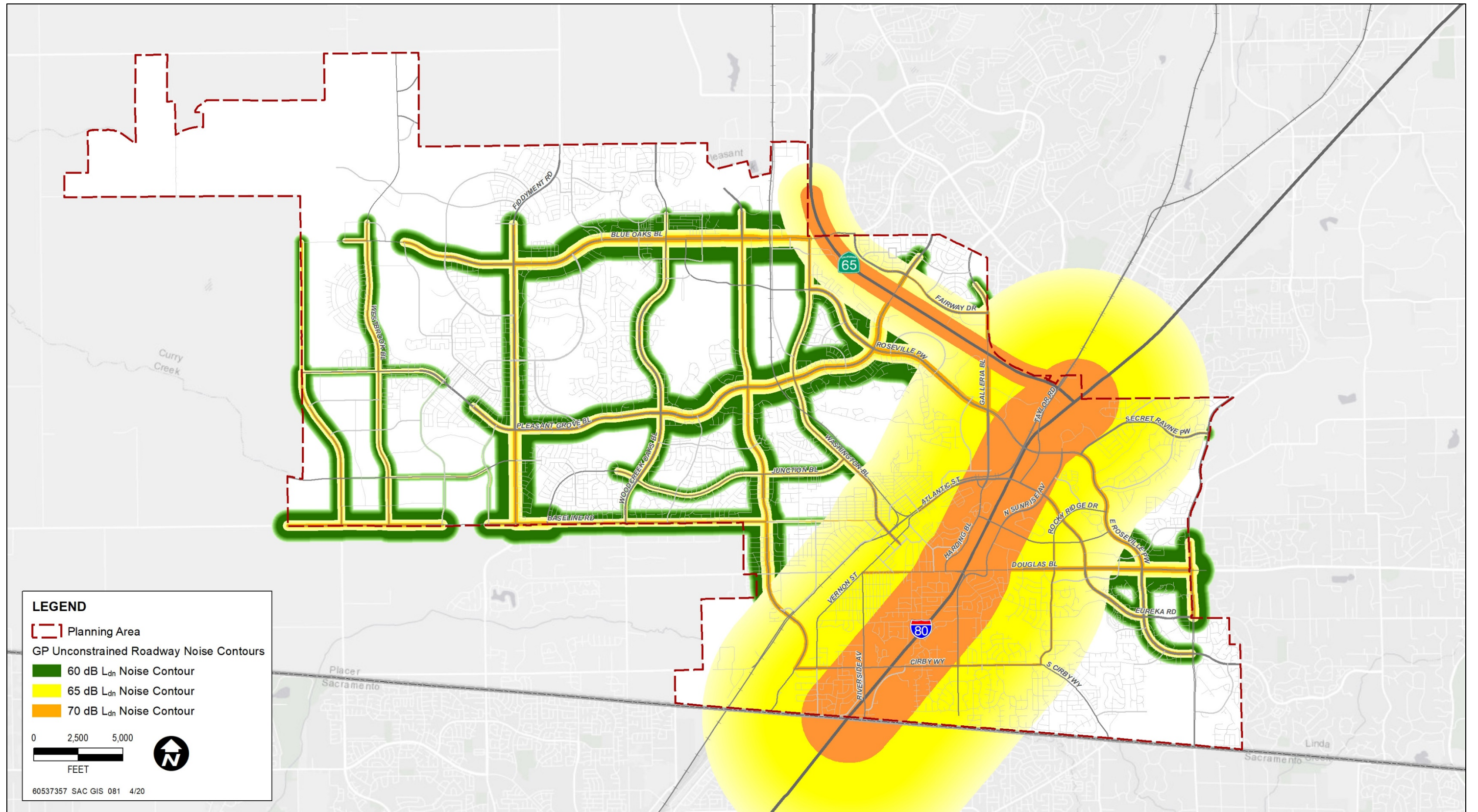


Exhibit 4.6-10

General Plan Buildout Traffic Noise Contours, Unconstrained Network

This page intentionally left blank

Commercial, Office, and Industrial Activities

Commercial, office, and industrial noise sources include loading dock activities, air circulation systems, delivery areas, and operation of trash compactors and air compressors. Such activities could result in intermittent noise levels of approximately 91 dB L_{max} at 50 feet (EPA 1971) and high single-event noise levels from backup alarms from delivery trucks during the more noise-sensitive hours of the day. Neither the exact hours of operation nor the location of such potential noise sources is known at this time. However, commercial, office, and industrial activities could produce noise levels could exceed the existing General Plan non-transportation standards of 45 dB L_{eq} nighttime, 50 dBA L_{eq} daytime, 65 dBA L_{max} nighttime, and 70 dBA L_{max} daytime at existing and proposed noise-sensitive receptors, especially if such activities were to occur during the more noise-sensitive hours (e.g., evening, nighttime, and early morning). In addition, if such activities were to occur during these more noise-sensitive hours, noise levels may result in annoyance and/or sleep disruption to occupants of noise-sensitive uses.

Residential, School, and Recreation Activities and Events

Noise sources typical of residential, school, recreation, and event uses include voices and amplified music/speaker systems. Such sources could result in noise levels of approximately 60–75 dB L_{eq} at 50 feet. Although such activities would likely occur primarily during the daytime hours, neither the hours of operation nor location of such sources are known at this time. It is possible that noise levels could exceed the existing General Plan non-transportation standards of 45 dB L_{eq} nighttime, 50 dBA L_{eq} daytime, 65 dBA L_{max} nighttime, and 70 dBA L_{max} daytime at existing and proposed noise-sensitive receptors, especially if such activities were to occur during the more noise-sensitive hours (e.g., evening, nighttime, and early morning). In addition, if such activities were to occur during these more noise-sensitive hours, noise levels may result in annoyance and/or sleep disruption to occupants of the existing and proposed noise-sensitive land uses.

Proposed General Plan Update Policy Revisions

The proposed General Plan Update includes revisions to the goals and policies of the Noise Element. The revisions restructure and consolidate policy language, resulting in the deletion and replacement of most existing text. Each proposed policy revision is shown below with ~~striketrough~~ for deletions and **bold, underlined** text for additions. Other sections of this EIR list all of the revised policies and follow with an evaluation, this section provides an evaluation after each individual policy.

- **Policy N1.1: The City's exterior noise compatibility standards for uses affected by transportation noise sources are included as Table IX-1. Exterior noise levels shall be mitigated to the extent feasible using site planning, building orientation, and/or other construction techniques or design features. Noise barriers should only be used after other feasible noise reduction strategies are exhausted, and not where they would interrupt existing or future community visual, pedestrian, or bicycle connectivity.**
~~Allow the development of new noise sensitive land uses (which include but are not limited to residential, schools, and hospitals) only in areas exposed to existing or projected levels of noise from transportation noise sources which satisfy the levels specified in Table IX-1. Noise mitigation measures may be required to reduce noise in outdoor activity areas and interior spaces to the levels specified in Table IX-1.~~

~~Recognizing that in increasingly urban areas it is difficult to maintain suburban noise standards, and in order to facilitate the City's goals to encourage reinvestment and economic development in the Riverside and Downtown Specific Plan areas, the City may elect to allow new noise sensitive land uses on a case by case~~

~~basis in proximity to transportation sources. Noise mitigation, including an acoustical analysis, would be required to reduce interior space noise levels to the standards specified in Table IX-1. Exterior noise levels would require mitigation to the extent feasible using building orientation, construction and design features; however ultimately, noise levels may exceed the noise standards identified in Table IX-1.~~

The City's existing Policy 1 (Transportation Noise Sources) addresses both exterior and interior noise. The policy requires all new noise-sensitive land uses exposed to transportation noise to achieve the standards of the General Plan if feasible, but allows noise levels to exceed those standards. A note on existing Table IX-1 (exterior and interior transportation noise standards) establishes a maximum volume of 75 dBA for certain, specified uses.

The proposed General Plan Update separates interior and exterior noise standards into two separate policies: proposed Policy N1.1 and N1.2. Policy N1.1 differs from existing policy in three key ways: the General Plan Update changes the standards in Table IX-1, establishes additional guidance on when those standards may be exceeded, and establishes a maximum acceptable amount of noise for each type of use.

Table IX-1 in the existing General Plan includes a single exterior standard for each category of land use (residential, office, etc.). Instead of providing a single maximum allowable level, the proposed General Plan Update adds four categories to characterize noise levels: (1) Normally Acceptable; (2) Conditionally Acceptable; (3) Normally Unacceptable; and (4) Clearly Unacceptable, with the following definitions:

- ▶ **Normally Acceptable:** Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
- ▶ **Conditionally Acceptable:** New construction or development should be taken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning will normally suffice.
- ▶ **Normally Unacceptable:** New construction or development should generally be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.
- ▶ **Clearly Unacceptable:** New construction or development should generally not be undertaken.

The Normally Acceptable category is equivalent to the existing General Plan noise standard. The Conditionally Acceptable category provides flexibility for locating certain land uses in areas affected by transportation noise when there are noise insulation features included in the project design. The Normally Unacceptable category provides additional flexibility for projects that have provided a detailed noise analysis and where noise insulation features are included in the design, although new development is generally discouraged. The Clearly unacceptable category establishes the maximum allowable amount of noise. While the existing General Plan Table IX-1 expresses the thresholds as a single number, the proposed General Plan Update Table IX-1 expresses the thresholds as a range. Using residential land use as an example, acceptable noise is up to 60 dBA, Conditionally Acceptable noise is 61–65 dBA, Normally Unacceptable noise is 66–70 dBA, and Clearly Unacceptable noise is >70 dBA). Only the maximum is displayed in Table 4.6-11, the comparison table below, in order to allow easy comparison of the existing noise thresholds and the proposed thresholds. Noise which is Clearly Unacceptable is not listed in the comparison table below, but is any noise level louder than the Normally Unacceptable threshold.

| Table 4.6-11 Comparison of Existing and Proposed Thresholds | | | | |
|---|--|--|---------------------------------|------------------------------|
| Land Use | Existing Threshold (L_{dn}/CNEL, dBA) | Proposed Thresholds, Maximum (L_{dn}/CNEL, dBA) | | |
| | | Normally Acceptable | Conditionally Acceptable | Normally Unacceptable |
| Residential | 60 ² | 60 | 65 | 70 |
| Lodging | 60 ² | 60 | 65 | 75 |
| Hospitals, Nursing Homes¹ | 60 ² | 65 | -- | 75 |
| Churches, Meeting Halls¹ | 60 ² | 65 | -- | 75 |
| Office Buildings | 65 | 65 | 70 | 75 |
| Playground, Neighborhood Parks | 70 | 65 | 70 | 75 |
| Schools, Libraries¹ | No standard | 65 | -- | 75 |
| Auditoriums, Concert Halls, Amphitheaters | No standard | -- | 65 | -- |
| Sports Arenas, Outdoor Spectator Sports | No standard | -- | 70 | -- |
| Golf Courses, Stables, Water Recreation, Cemeteries | No standard | 70 | -- | 75 |
| Notes: 1 The proposed General Plan Update merges these into a single category, and uses the terms Assisted Living and Places of Worship in lieu of Nursing Homes and Churches. 2 For these uses, existing General Plan Table IX-1 establishes a maximum standard of 75 dBA. | | | | |

Though in some cases the proposed General Plan Update applies all four categories to each type of land use, in most cases it does not. Except for concert halls and sports arenas (unique uses requiring individual noise evaluation), all other land uses include a Normally Acceptable and Normally Unacceptable standard. This ensures the General Plan establishes both the targeted noise standard and a maximum allowable noise volume.

As shown in Table 4.6-11, the City's noise standard for residential, lodging, and office uses will remain unchanged, the standard for hospitals, assisted living facilities, places of worship, and meeting halls (community assembly) will increase from 60 dBA to 65 dBA, the standard for playgrounds and neighborhood parks (parks) will decrease from 70 dBA to 65 dBA, and new standards for other types of uses will be established. As shown in Exhibit 4.6-2 of this EIR, 65 dBA is the volume of typical human speech at 3 feet. As ambient noise volumes increase above this amount, people generally have to begin raising their voices and may find it more difficult to hear. Therefore, 65 dBA is an appropriate standard for outdoor spaces where people are expected to gather and converse. This describes the use of outdoor spaces in parks and community assembly uses. Therefore, the proposed General Plan Update establishes a 65 dBA exterior standard for both of these use types. Because the proposed noise standard is appropriate for the use types, changing the noise standard for these uses will not result in any significant adverse environmental impacts.

Overall, the proposed changes to the City's noise standards will result in less community exposure to noise, because standards are being established for uses which previously had no exterior standard, a maximum allowable noise standard is being applied where previously no maximum was stated, and in some cases the maximum standard is a lower volume than the existing standard. Therefore, the proposed policy changes will not result in any significant adverse environmental impacts.

Policy N1.2: The City's interior noise compatibility standards for uses affected by transportation noise sources are 45 dBA L_{dn} for noise-sensitive uses such as residences, lodging, hospitals, assisted living facilities, and other places where people normally sleep. For noise-sensitive uses where people do not sleep, such as offices, schools, and uses with similar noise sensitivity, noise levels should be no greater than 45 dBA L_{eq} . Proposed projects should incorporate noise reduction strategies, if necessary, to achieve these interior noise levels.

As stated above, the proposed General Plan Update separates interior and exterior noise standards into two separate policies, where they are currently combined in one policy. Proposed policy N1.2 establishes acceptable noise for interior environments. Policy N1.2 is new because an existing policy has been separated into two policies, but the regulating language and noise standards remain the same as the existing policy. Therefore, proposed Policy N1.2 will not result in any significant adverse environmental impacts.

- ▶ **Policy N1.3: The City's exterior noise compatibility standards for uses affected by non-transportation-related noise are defined within the City's Noise Ordinance, and should be applied consistent with the Noise Ordinance.**
- ▶ ~~Noise — Fixed Noise Sources Policy 6: Allow the development of new noise sensitive uses (which include, but are not limited to, residential, school, and hospitals) only where the noise level due to fixed (non-transportation) noise sources satisfies the noise level standards of Table IX-3. Noise mitigation may be required to meet Table IX-3 performance standards. Recognizing that in increasingly urban areas it is difficult to maintain suburban noise standards, and in order to facilitate the City's goals to encourage reinvestment and economic development in the Riverside and Downtown Specific Plan areas, the City may elect to allow new noise sensitive land uses on a case by case basis in a mixed-use environment. Noise levels would require mitigation to the extent feasible using building orientation, construction and design features; however ultimately, noise levels may exceed noise standards identified in Table IX-1.~~
- ▶ ~~Noise — Fixed Noise Sources Policy 7: Require proposed fixed noise sources adjacent to noise sensitive uses to be mitigated so as not to exceed the noise level performance standards of Table IX-3.~~

Existing Policy 6 and Policy 7 address fixed, or non-transportation, noise sources. The policies reference Table IX-3, which identifies the noise standards. However, the policy language and noise standards simply repeat regulatory language which already exists within the City's Noise Ordinance. Therefore, the proposed General Plan Update deletes Policies 6 and 7 and replaces them with Policy N1.3, which requires consistency with the City's Noise Ordinance. The language regarding encouraging reinvestment and economic development has been moved to proposed Policy N1.6, discussed later in this analysis. The policy revisions will not result in any significant adverse environmental impacts.

- ▶ **Policy N1.4: The City will require new transportation improvement projects to be designed to limit noise impacts consistent with the standards contained in Table IX-1, to the extent feasible, through the use of appropriate attenuation techniques.** ~~Require new roadway improvement projects to be mitigated so as not to exceed the noise levels specified in Table IX-1 at outdoor activity areas or interior spaces of existing noise sensitive land uses.~~
- ▶ ~~Noise — Transportation Noise Sources Policy 3: Evaluate new transportation projects, such as light and heavy rail, using the standards contained in Table IX-1. However, noise from these projects may be allowed~~

~~to exceed the standards contained in Table IX-1 if the City Council finds that there are special overriding circumstances.~~

Existing Policy 2 addresses roadway projects and Policy 3 addresses other types of transportation projects, but both require consistency with the same standards (existing Table IX-1). The proposed General Plan Update consolidates these in one policy (Policy N1.4). The table notes of existing Table IX-1 provide for noise volumes to exceed the standard, provided all feasible measures to reduce noise have been applied. Proposed N1.4 adds this language directly into the policy. The proposed revisions consolidate and clarify existing policy, but do not change the manner in which transportation project noise is regulated. Therefore, the policy revisions will not result in any significant adverse environmental impacts.

- ▶ **Policy N1.5: If existing noise levels exceed the noise compatibility standards in Table IX-1 or Policy N1.2, then feasible methods of reducing noise to levels consistent with standards should be considered, but are not required. However, if existing noise levels exceed noise compatibility standards and a project results in a significant increase in noise (as defined below), then feasible methods of reducing noise to avoid a significant noise increase should be applied. In no case should a project result in a Clearly Unacceptable noise level according to Table IX-1.**
 - **Where existing exterior noise is less than 60 dB, a 5 dBA increase in noise is significant.**
 - **Where existing exterior noise is between 60 and 65 dBA, a 3 dB increase in noise is significant.**
 - **Where existing exterior noise is greater than 65 dB, a 1.5 dBA increase in noise is significant.**

Existing General Plan policies establish noise standards for a variety of conditions, but does not provide direction or guidelines for cases where the existing noise environment already exceeds the standards. Proposed policy N1.5 provides this direction. The proposed policy states that projects affected by noise should attempt to mitigate noise to within the standard, and that projects which generate noise must mitigate any substantial increase in noise. The addition of this policy will reduce community exposure to noise by providing direction and standards in cases where the existing noise environment exceeds standards.

- ▶ **Policy N1.6: In order to facilitate reinvestment and economic development, if noise mitigation is found to be infeasible or in conflict with other City policies regarding community design, the City may elect to allow noise levels that exceed the noise standards identified in Table IX-1, although in no case should application of this policy result in a Clearly Unacceptable noise level according to Table IX-1.**

The existing General Plan noise policies establish standards for noise and allows those standards to be exceeded, but contain little policy language which guides the decision-making process in such cases. In addition to adding noise categories to provide this missing guidance (e.g. Conditionally Acceptable), this proposed General Plan Update includes new Policy N1.6. The proposed policy establishes that noise standards may be exceeded if noise reduction strategies are infeasible or conflict with other community design policies. Existing policy already allows noise standards to be exceeded. Adding policy which better guides this decision-making process does not result in any environmental impacts.

- ▶ **Policy N1.7: The City will** work in cooperation with Caltrans and the Union Pacific **Railroad** to maintain noise level standards for both new and existing projects in compliance with Table IX-1.

These are minor additions of language to properly identify the organizations affected by the policy; the change has no impact.

- **Policy N1.8: Public events, such as school sporting events, community festivals, and similar community and temporary events, and noise associated with emergency vehicles, alarms, or signals are exempt from the noise standards outlined in this Element.**

The City's Noise Ordinance exempts the activities listed above in new Policy N1.8. This new policy is proposed in order to ensure the General Plan noise standards are not improperly applied to these exempted activities. This policy has no environmental impacts, because the activities are already exempted.

► ~~**Noise—Transportation Noise Sources Policy 4: Require an acoustical analysis where:**~~

- a. ~~Noise sensitive land uses are proposed in areas exposed to existing or projected noise levels exceeding the levels specified in Table IX-1;~~
- b. ~~Proposed transportation noise source projects are likely to produce noise levels exceeding the levels specified in Table IX-1 at existing or planned noise sensitive uses.~~

~~An acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be considered in the project design.~~

► ~~**Noise—Fixed Noise Sources Policy 8: Require an acoustical analysis where:**~~

~~Noise sensitive land uses are proposed in areas where existing or anticipated future fixed noise sources may~~

- a. ~~Proposed non-residential or other fixed noise sources are likely to produce noise levels exceeding the performance standards of Table IX-3 at existing or planned noise sensitive uses.~~

~~An acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be considered during project design.~~

Table IX-2 Requirements for an Acoustical Analysis

An acoustical analysis prepared pursuant to the Noise Element shall:

- A. ~~Be the responsibility of the applicant.~~
- B. ~~Be prepared by a qualified person experienced in the fields of environmental noise assessment and architectural acoustics.~~
- C. ~~Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions and the predominant noise sources.~~
- D. ~~Estimate existing and projected cumulative (20 years) noise in terms of L_{dn} /CNEL and/or standards of Table IX-3 and compare those levels to the adopted policies of the Noise Element. Noise prediction methodology must be consistent with the methods identified in the document entitled Existing Noise Environment (See Appendix).~~
- E. ~~Recommend appropriate mitigation to achieve compliance with the adopted policies and standards of the Noise Element. Where the noise source in question consists of intermittent single events, the report must address the effects of maximum noise levels in sleeping rooms in terms of possible sleep disturbance.~~
- F. ~~Estimate noise exposure after the prescribed mitigation measures have been implemented.~~
- G. ~~Describe a post-project assessment program which could be used to evaluate the effectiveness of the proposed mitigation measures.~~

The General Plan Update includes the deletion of Existing Policies 4 and 8, which define the requirements for an acoustical analysis. These policies are replaced by the Normally Unacceptable noise category, which is defined as the noise level at which a detailed acoustical analysis is required before uses can be permitted. The proposed General Plan Update also includes the deletion of Noise Element Table IX-2, Requirements for an Acoustical Analysis. The minimum elements of a noise analysis vary depending on the nature of the project, its setting, and the potential impacts, hence the “minimum elements” listed in the existing table are not appropriate for all projects. The deletion of this table does not eliminate the requirement to prepare a noise analysis. Instead, this ensures that each noise analysis will be required to develop and justify an appropriate methodology pursuant to CEQA, and in a manner that demonstrates consistency with General Plan policy. This material has been added to the Implementation Measures Appendix of the General Plan. Therefore, the policy revisions will not result in any significant adverse environmental impacts.

- ▶ ~~**Noise—General Policy 9:** Where noise mitigation measures are required to achieve the standards of Tables IX-1 and IX-3, the emphasis of such measures should be placed on site planning and project design. These measures may include, but are not limited to, building orientation, setbacks, landscaping, and building construction practices. The use of noise barriers, such as soundwalls, should be considered as a means of achieving the noise standards only after all other practical design-related noise mitigation measures have been integrated into the project.~~

Existing General Plan Policy 9 directs the focus of noise mitigation to be on site planning and design, and lists potential strategies to reduce noise. The City’s Community Design Guidelines and Specific Plans already contain this language. Therefore, the proposed General Plan Update deletes this policy, and instead adds a similar policy providing guidance for cases where noise reduction strategies may conflict with community design policies (Policy N1.6, discussed previously). Soundwalls, discussed in this existing Policy 9, are an example of noise reduction strategies which may be inappropriate due to other policy related to site planning and project design. The deletion of this policy will not result in any significant adverse environmental impacts, because the relevant language already exists in other adopted City planning documents.

Conclusion

The City anticipates an increase in vehicular traffic along City streets and regional thoroughfares, which could expose existing or planned sensitive uses to unacceptable levels of transportation noise. However, these roadways and the associated land uses were examined as part of the City’s Specific Plan environmental review process, and appropriate screening and other mitigation strategies were adopted and incorporated into the Specific Plans to shield uses from cumulative traffic noise.

Buildout of the General Plan would accommodate a variety of land uses, including residential; commercial, office, and industrial; open space and recreation; and institutional and public facilities (e.g., electrical substations, wastewater conveyance facilities, and schools). The long-term operation of these uses could result in stationary and area noise from, but not limited to: landscape and building maintenance activities (e.g., hand tools, power tools, lawn and garden equipment); voices; amplified music; mechanical equipment (e.g., pumps, generators heating, ventilation, and cooling systems); loading dock activities; parking lots; garbage collection; and other noise sources. New non-residential construction is subject to the City’s discretionary review, and will be required to incorporate feasible mitigation to reduce effects on existing noise-sensitive land uses, such as operating at less noise-sensitive parts of the day, buffering, sound insulation, and other strategies. Specific areas in the city that

could be exposed to future noise levels that exceed the General Plan noise standards include locations near commercial/employment uses along heavily traveled roadways (e.g., I-80, SR 65, Douglas Boulevard, Roseville Parkway, and Blue Oaks Boulevard) and near existing and future industrial operations with outdoor operations, large-scale commercial uses that accommodate frequent heavy-duty truck trips, and other noise-generating uses.

The existing General Plan Noise Goal 1 and implementation measures related to the Maximum Allowable Noise Exposure for Transportation Sources, Development Review Process, Noise Level Contour Maps, Noise Ordinance, California Vehicle Code, Interagency Cooperation, and Noise Level Performance Standards (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Policies N1.1, N1.2, N1.3, N1.4, N1.5, N1.6, N1.7, and N1.8, listed above, would reduce the potential for noise exposure impacts. As discussed, revisions to the City's noise policies do not result in increased noise impacts, and may actually result in decreased exposure to unacceptable noise levels. Application of the City's Community Design Guidelines would further reduce potential noise exposure. An example is the requirement to screen noise-generating equipment from the line of sight from surrounding properties.

Although these policies and implementation measures are designed to avoid substantial disturbances to noise-sensitive receptors, the City anticipates that, despite implementation of feasible noise reduction strategies, noise-sensitive uses could be exposed to noise in exceedance of the City's standards.

The City cannot demonstrate at this time that policies and implementation measures in the existing General Plan and the proposed General Plan Update would reduce the impacts of each project that could be developed under the General Plan to a less-than-significant level. The impact is **significant**.

Mitigation Measures

No feasible mitigation measures are available.

Summary after Mitigation

Despite the implementation of goals, policies, and implementation measures in the existing General Plan and the proposed General Plan Update, the City cannot demonstrate that adverse operational noise exposure impacts could be avoided in all cases. There is no additional feasible mitigation available. The impact is **significant and unavoidable**.

IMPACT 4.6-3 *Increases in Vibration Levels. Construction of projects under buildout of the General Plan could cause a temporary, short-term disruptive vibration if it were to occur near sensitive receptors, and future development of new vibration-sensitive land uses could occur within vibration-generating areas (e.g., railroad). The impact is considered less than significant.*

Construction and demolition activities associated with development within the Planning Area have the potential to result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used, the location of construction activities relative to sensitive receptors, and operations/activities involved. Vibration generated by construction equipment spreads through the ground and diminishes in magnitude with increases in distance. The type and density of soil can also affect the transmission of energy. Table 4.6-12 provides vibration levels for typical construction equipment.

| Table 4.6-12 Typical Vibration Levels for Construction Equipment | | | |
|---|-------------|-------------------------|---|
| Equipment | | PPV at 25 Feet (in/sec) | Approximate L _v (VdB) at 25 Feet |
| Pile Driver (Impact) | Upper Range | 1.518 | 112 |
| | Typical | 0.644 | 104 |
| Pile Driver (Sonic) | Upper Range | 0.734 | 105 |
| | Typical | 0.170 | 93 |
| Large Bulldozer | | 0.089 | 87 |
| Drill | | 0.089 | 87 |
| Truck | | 0.076 | 86 |
| Jackhammer | | 0.035 | 79 |
| Small Bulldozer | | 0.003 | 58 |
| Significance Threshold | | 0.2/0.08 ¹ | 80 |
| Notes: in/sec = inches per second; L _v = the velocity level in decibels referenced to 1 microinch per second (1 μin/sec) and based on the root mean square velocity amplitude; VdB = Vibration Decibel, logarithmic velocity unit; PPV = peak particle velocity. | | | |
| ¹ For normal residential buildings and for buildings more susceptible to structural damage, respectively. | | | |
| Sources: Caltrans 2013, FTA 2018 | | | |

The required construction equipment for future projects is not known at this time but could include maximum generation of vibration from trucks and bulldozers. According to the Federal Transit Administration (FTA), which has developed guidance to promote the public welfare and protect property, vibration levels associated with the use of such equipment would be approximately 0.089 in/sec peak particle velocity (PPV) and 87 VdB (referenced to 1 μin/sec and based on the root mean square velocity amplitude) at 25 feet, as shown in Table 4.6-12. Using FTA's recommended procedure for applying a propagation adjustment to these reference levels, predicted worst-case vibration levels would not exceed 0.2 in/sec PPV (Caltrans's recommended standard with respect to the prevention of structural damage for normal buildings), but would exceed 80 VdB (FTA's maximum-acceptable vibration standard with respect to human annoyance for residential uses) within 60 feet of vibration-sensitive receptors. Depending on the nature of future projects, existing vibration-sensitive receptors could be located adjacent to properties that could develop under the General Plan, although instances where occupied homes are this close to construction activities would be rare. In such cases, temporary, short-term vibration levels from project construction sources could exceed FTA's maximum-acceptable vibration standard of 80 VdB with respect to human response for residential uses (i.e., annoyance) at vibration-sensitive land uses. More importantly, if construction activities were to occur during more noise-sensitive hours, vibration from construction sources could annoy and/or disrupt the sleep of occupants of existing and proposed residences and expose persons to excessive groundborne vibration or groundborne noise levels.

Similarly, depending on the nature and location of future projects, new vibration-sensitive receptors could be located near an existing or future vibration-generating land use (e.g., railroad line, industrial facility). Vibration levels from existing or future vibration sources could exceed FTA's maximum-acceptable vibration standard of 80 VdB with respect to human response for residential uses (i.e., annoyance) at vibration-sensitive land uses.

Pile-driving could occur at some development sites, particularly within the Downtown Specific Plan Area, where multi-story construction is anticipated to occur. This type of construction activity could produce high vibration

levels (Table 4.6-12). The General Plan would accommodate development of existing developed properties, as well as development on vacant or mostly vacant parcels throughout the Planning Area.

The City anticipates development on the western side of the Planning Area, in addition to focused infill development in the Downtown Specific Plan, Riverside Gateway Specific Plan, and other mixed-use corridors in the Infill Area. Infill development opportunities under the General Plan could involve properties that are near existing vibration-sensitive uses, such as residences and schools, as well as properties that may be developed in phases, with noise-sensitive residential uses included in earlier phases. In these cases, there could be temporary construction activity in areas directly adjacent to existing or planned noise-sensitive uses.

The following new policy related to vibration would be added as a part of the proposed General Plan Update:

- **Policy N1.10: Include all feasible measures necessary, as a part of proposed development and public infrastructure projects to avoid substantial annoyance for adjacent vibration-sensitive uses, consistent with California Department of Transportation and Federal Transit Agency guidance.**

This new policy would help to reduce exposure of sensitive uses and structures to vibration and would not have any adverse physical environmental effects.

Conclusion

The General Plan anticipates development and, as a necessary outcome of this development, both temporary and long-term sources of vibration. With buildout of the General Plan, existing and planned vibration-sensitive uses could be exposed to temporary construction-related vibration. Implementation of the General Plan would also involve generation of construction vibration which could expose existing and planned vibration-sensitive uses to adverse, temporary construction-related vibration. However, this vibration would be temporary, and the City does not anticipate very large-scale projects with extensive excavation and pile driving that would occur directly adjacent vibration-sensitive uses that would result in substantial disturbance or damage to adjacent structures.

The General Plan also anticipates the potential for vibration-sensitive land uses to be developed in areas with some amount of existing vibration today, such as the Union Pacific Railroad. Policy N1.10 requires all feasible measures necessary, as a part of proposed development and public infrastructure projects, to avoid structural damage to adjacent structures and avoid substantial annoyance for adjacent vibration-sensitive uses, consistent with California Department of Transportation and Federal Transit Agency guidance—guidance that is specifically designed to avoid annoyance to vibration-sensitive uses and structure damage. The impact is **less than significant**.

4.7 GEOLOGY, SOILS, AND PALEONTOLOGICAL RESOURCES

4.7.1 INTRODUCTION

This chapter describes potential impacts related to geology, soils, and paleontological resources in the Planning Area associated with the proposed General Plan Update. To provide context for the impact analysis, this chapter begins with an environmental setting describing the existing soils, geologic, and seismic conditions in the Planning Area. Next, the regulatory framework is described, which informs the selection of the significance thresholds used in the impact analysis. The regulatory framework also includes existing General Plan policies related to the impact analysis of this chapter. The chapter concludes with the applicable significance thresholds, the impacts of the proposed changes to adopted General Plan policies, recommended mitigation measures, and the significance conclusion.

As part of the impact analysis, Notice of Preparation (NOP) comments were reviewed to help guide the analysis, and any comments were integrated into the analysis. No NOP comments related to geology, soils, or paleontological resources were received.

The City of Roseville does not overlie any known deposits of economically valuable mineral resources (Loyd 1995), and the City does not have a Surface Mining and Reclamation Act (SMARA) permit. No mining activities are currently underway nor does the City anticipate that any mining activities will take place in the future. Therefore, mineral resources are not evaluated in this EIR.

4.7.2 ENVIRONMENTAL SETTING

4.7.2.1 REGIONAL GEOLOGY

The Planning Area is located along the eastern margin of the Sacramento Valley and the western margin of the Sierra Nevada foothills. The Sacramento Valley, along with the San Joaquin Valley, comprise the Great Valley geomorphic province. The Great Valley is composed of thousands of feet of sedimentary deposits that have undergone periods of subsidence and uplift over millions of years. During the Jurassic (approximately 206 million years Before Present) and Cretaceous (approximately 144 million years Before Present) periods of the Mesozoic era, the Great Valley existed in the form of an ancient ocean. By the end of the Mesozoic era, the northern portion of the Great Valley began to fill with sediment as tectonic forces caused uplift of the basin. Geologic evidence suggests that the Sacramento Valley and San Joaquin Valley gradually separated into two separate water bodies as uplift and sedimentation continued. By the time of the Miocene epoch (approximately 24 million years Before Present), sediments deposited in the Sacramento Valley were mostly of terrestrial origin. In contrast, the San Joaquin Valley continued to be inundated with water for another 20 million years, as indicated by marine sediments dated to the late Pliocene epoch (approximately 5 million years Before Present). Most of the surface of the Great Valley is covered with Holocene (i.e., 11,700 years Before Present to present day) and Pleistocene (i.e., 2.6 million–11,700 years Before Present) alluvium. This alluvium is composed of sediments from the Sierra Nevada to the east and the Coast Range to the west that were carried by water and deposited on the valley floor.

The Sierra Nevada geomorphic province trends north-northwest from Bakersfield to Lassen Peak, and includes the Sierra Nevada mountain range and a broad belt of western foothills. The Sierra Nevada block is composed of northwest-trending belts of metamorphic, volcanic, and igneous rocks that have undergone intense deformation, faulting, and intrusion. Active faults that mark the eastern edge of the Sierra Nevada have resulted in upthrusting

and tilting of the entire Sierra Nevada block in the last 5 million years—steeply on the eastern edge (adjacent to the Mono Basin), and gently along the western edge (adjacent to the Great Valley). The gently rolling Sierra Nevada foothills are comprised of metamorphosed sedimentary rocks that have been intruded by igneous rocks. The rock formations that make up the western edge of the Sierra Nevada block likely originally formed as a volcanic arc that was later accreted (added) to the western margin of the continent during the Jurassic period.

4.7.2.2 PALEONTOLOGICAL RESOURCES

Exhibit 4.7-1 shows the surficial geologic formations that are exposed in the Planning Area. Recent, Holocene-age alluvium is present along the stream channel of Pleasant Grove Creek, as well as the channels of other smaller streams in the Planning Area. Most of the Planning Area is located within the Pleistocene-age Modesto, Riverbank, and Turlock Lake Formations. The eastern portion of the Planning Area, which is within the Sierra Nevada foothills, is composed primarily of the Mehrten Formation (Gutierrez 2011).

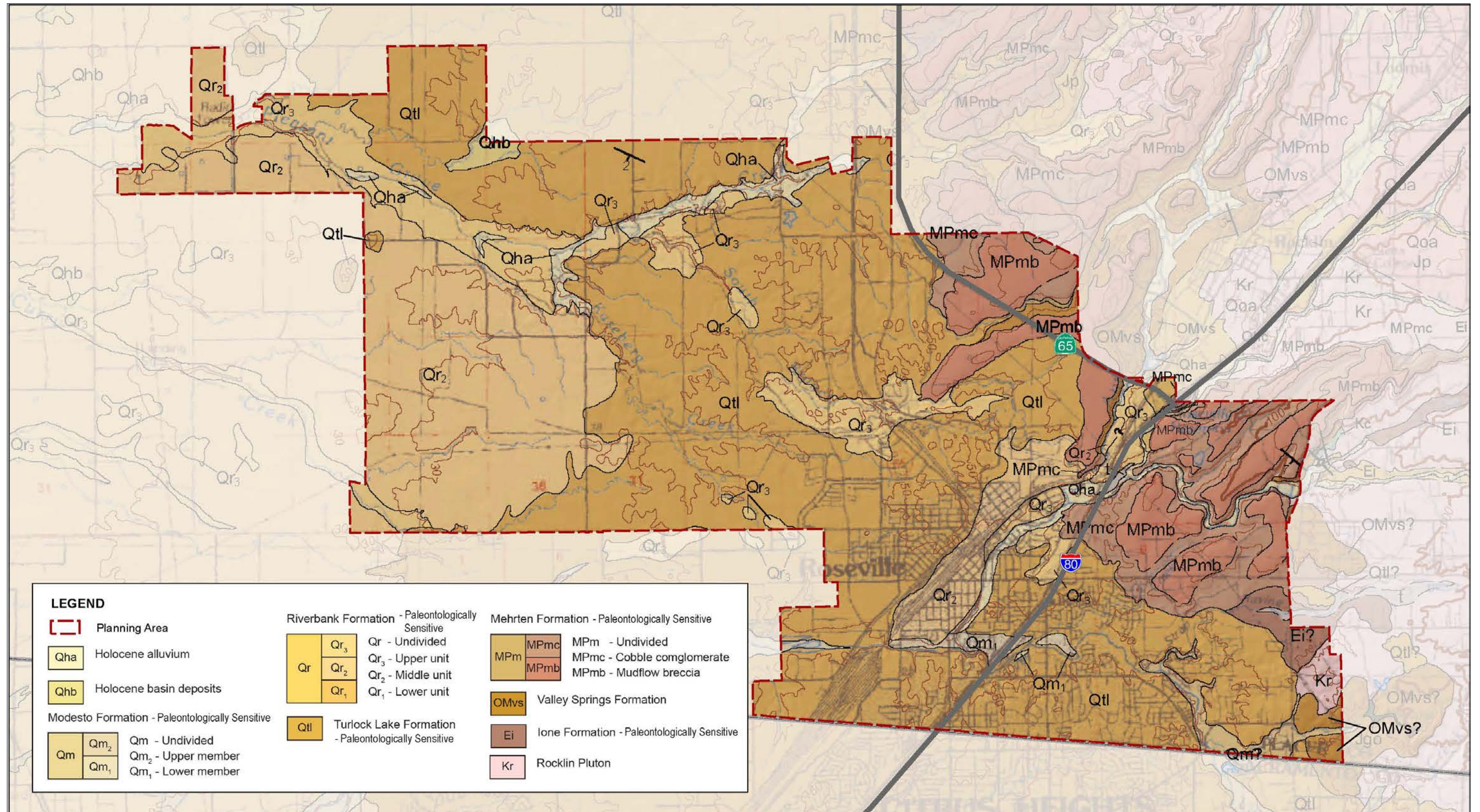
Paleontological Sensitivity Assessment

The potential paleontological sensitivity of a project area can be assessed by identifying the paleontological importance of rock units that are exposed there. A paleontologically sensitive rock formation is one that is rated high for potential paleontological productivity (i.e., the recorded abundance and types of fossil specimens, and the number of previously recorded fossil sites) and is known to have produced unique, scientifically important fossils. Exposures of a specific rock formation at any given project site are most likely to yield fossil remains representing particular species or quantities similar to those previously recorded from the rock formation in other locations. Therefore, the paleontological sensitivity determination of a rock formation is based primarily on the types and numbers of fossils that have been previously recorded from that rock unit.

An individual vertebrate fossil specimen may be considered unique or significant if it is identifiable and well preserved, and it meets one of the following criteria:

- ▶ a type specimen (i.e., the individual from which a species or subspecies has been described);
- ▶ a member of a rare species;
- ▶ a species that is part of a diverse assemblage (i.e., a site where more than one fossil has been discovered) wherein other species are also identifiable, and important information regarding life history of individuals can be drawn;
- ▶ a skeletal element different from, or a specimen more complete than, those now available for its species; or
- ▶ a complete specimen (i.e., all or substantially all of the entire skeleton is present).

The value or importance of different fossil groups varies depending on the age and depositional environment of the rock unit that contains the fossils, their rarity, the extent to which they have already been identified and documented, and the ability to recover similar materials under more controlled conditions (such as for a research project). Marine invertebrates are generally common; the fossil record is well developed and well documented, and they would generally not be considered a unique paleontological resource. Identifiable vertebrate marine and terrestrial fossils are generally considered scientifically important because they are relatively rare.



Source: Gutierrez 2011

Exhibit 4.7-1

Paleontological Sensitivity Map

This page intentionally left blank

In its standard guidelines for assessment and mitigation of adverse impacts on paleontological resources, the Society of Vertebrate Paleontology (SVP 2010) established four categories of sensitivity for paleontological resources: high, low, no, and undetermined. Areas where fossils have been previously found are considered to have a high sensitivity and a high potential to produce fossils. Areas that are not sedimentary in origin and that have not been known to produce fossils in the past typically are considered to have low sensitivity. Areas consisting of high-grade metamorphic rocks (e.g., gneisses and schists) and plutonic igneous rocks (e.g., granites and diorites) are considered to have no sensitivity. Areas that have not had any previous paleontological resource surveys or fossil finds are considered to be of undetermined sensitivity until surveys are performed. After reconnaissance surveys, a qualified paleontologist can determine whether the area of undetermined sensitivity should be categorized as having high, low, or no sensitivity. In keeping with the SVP significance criteria, all vertebrate fossils are generally categorized as being of potentially significant scientific value.

Paleontologically Sensitive Rock Formations in the Planning Area

Table 4.7-1 presents the results of the paleontological sensitivity assessment for the Planning Area based on a review of geologic maps, a literature review, and a records search performed at the University of California, Berkeley Museum of Paleontology (UCMP) on October 21, 2019. As shown, the Planning Area includes several rock formations that are of high paleontological sensitivity:

- ▶ Modesto Formation (Qm2, Qm1)
- ▶ Riverbank Formation (Qr3, Qr2, Qr1)
- ▶ Turlock Lake Formation (Qtl)
- ▶ Mehrten Formation (MPm)
- ▶ Ione Formation (Ei)

REGIONAL SEISMICITY AND FAULT ZONES

Measuring Earthquakes

Earthquakes can be measured in several ways. Earthquakes create certain types of waves with different velocities, which can be recorded on instruments called seismometers. The Richter Scale measures earthquake magnitude by plotting the amplitude (length and width) of the seismic waves, taking into consideration the distance from the seismometer. The scale is logarithmic so that a recording of magnitude 7, for example, indicates a disturbance with ground motion 10 times as large as a recording of magnitude 6. The Moment Magnitude scale is used by geologists to measure the magnitude of an earthquake based on the physical size of the fault rupture and slip displacement, as well as the amount of energy released. The Modified Mercalli scale is used by the public as a subjective measure of earthquake intensity; it does not have a mathematical basis. It was developed as a way of relating the intensity of ground shaking at any particular location to the physical effects that people experience. This scale is composed of 12 increasing levels of intensity that range from imperceptible shaking (Scale I) to catastrophic destruction (Scale XII). Table 4.7-2 provides a description of the Modified Mercalli Intensity (MMI) scale.

| Table 4.7-1 Paleontological Sensitivity Assessment | | | |
|--|---|---|------------------------------------|
| Formation Name and Map Unit Abbreviation | Description | Fossils | Paleontological Sensitivity |
| Holocene Alluvium (Qha) | Alluvium deposited on fans, terraces, or in basins. Sand, gravel, and silt that are poorly to moderately sorted (11,700 years Before Present to Present Day). | Holocene deposits contain only the remains of extant, modern taxa (if any resources are present), which are not considered “unique” paleontological resources. | None |
| Holocene Basin Deposits (Qhb) | Fine grained sediments with horizontal stratification deposited by standing or slow-moving water in topographic lows (11,700 years Before Present to Present Day). | Holocene deposits contain only the remains of extant, modern taxa (if any resources are present), which are not considered “unique” paleontological resources. | None |
| Modesto Formation (Qm ₂ , Qm ₁) | Late Pleistocene tan and light-gray gravelly sand, silt, and clay forming alluvial terraces, alluvial fans, and abandoned channel ridges of major streams and rivers. Qm ₂ = Upper member; composed of unconsolidated, unweathered deposits of gravel, sand, silt, and clay. Terraces are topographically lower than Qm ₁ . The age is estimated to be approximately 12,000 to 26,000 years Before Present. Qm ₁ = Lower member; composed of unconsolidated, slightly weathered deposits of gravel, sand, silt, and clay. Qm ₁ terraces are topographically higher than Qm ₂ . The age is estimated to be approximately 29,000 to 42,000 years Before Present. | Fossil specimens from sediments referable to the Modesto Formation have been reported at a variety of locations throughout the Sacramento and San Joaquin Valleys, including Stockton, Tracy (along the Delta-Mendota Canal), Manteca, Modesto, and Merced. The Tranquility site in Fresno County (UCMP V-4401), has yielded more than 130 Rancholabrean-age fossils of fish, turtles, snakes, birds, moles, gophers, mice, wood rats, voles, jack rabbits, coyote, red fox, grey fox, badger, horse, camel, pronghorn antelope, elk, deer, and bison from sediments referable to the Modesto Formation. | High |
| Riverbank Formation (Qr ₃ , Qr ₂ , Qr ₁) | Pleistocene deposits of weathered reddish gravel, sand, and silt that form higher alluvial fans and terraces of major rivers. In the Sacramento Valley, this formation contains more mafic igneous rock fragments as compared to the San Joaquin Valley, where the Riverbank tends to contain more arkosic alluvium. Qr ₃ = Upper unit, Qr ₂ = Middle unit, Qr ₁ = Lower unit. The upper, middle and lower units of the Riverbank Fm. form terraces that increase in topographic position with age. The age of the Riverbank ranges from approximately 130,000 to 450,000 years Before Present. | Nine recorded vertebrate fossil localities in the Sacramento area, including a Teichert Gravel Pit approximately 6 miles southwest of the project site. Localities have yielded remains of Rancholabrean-age mammoth, bison, camel, coyote, horse, Harlan’s ground sloth, mammoth, antelope, deer, rabbit, woodrat, fish, mole, mice, squirrel, snake, and gophers, dire wolf, frog, Pacific pond turtle, and the family Anatidae (ducks, geese, and swans). There are numerous additional vertebrate fossil localities from the Riverbank Formation and from similar unnamed Rancholabrean-age alluvial sediments in Yolo, San Joaquin, Merced, Stanislaus, Fresno, and Madera Counties. | High |
| Turlock Lake Formation (Qtl) | Pleistocene arkosic alluvium that includes fine sand and silt at the base, grading upward into coarse sand and coarse pebbly sand or gravel. Sediments originated from the Sierra Nevada and have been divided into upper and lower members. The lower member includes gravel and coarse sand that overlies finer, well-sorted sand, silt, and clay of possible lacustrine (lake) origin. The upper unit is found topographically above the lower unit and includes gravel beds and silt and fine sand that may be lacustrine in origin (Marchand and Allwardt | The Fairmead Landfill site in Chowchilla contains Irvingtonian-age fossils that were originally discovered in 1993 during excavation activities for a new Madera County landfill. Since 1993, more than 15,000 fossil specimens from over 35 different species have been recovered from the Fairmead site, including mammoth, ground sloth, giant short-faced bear, saber tooth cat, wolf, deer, camel, horse, antelope, rodents, birds, reptiles, fish, and prehistoric vegetation. Furthermore, excavations for the California Department of Transportation’s Fresno SR 180 West Freeway project uncovered fossil | High |

| Table 4.7-1 Paleontological Sensitivity Assessment | | | |
|--|---|---|-----------------------------|
| Formation Name and Map Unit Abbreviation | Description | Fossils | Paleontological Sensitivity |
| | 1981). The maximum age is estimated to be approximately 780,000 years Before Present. | specimens from a Pleistocene-age camel in sediments of the Turlock Lake Formation in Fresno County. Other specimens of horses, camel, and mammoth from sediments in Fresno County have been interpreted as probably equivalent to the Turlock Lake Formation. Additional vertebrate fossils have also been reported from various locations in the Central Valley from sediments referable to the Turlock Lake Formation. | |
| Mehrten Formation (MPm) | Consists predominantly of very hard, cemented, lehar (volcanic mudflow) deposits with occasional beds of volcanic ash derived from andesitic volcanic sources in the Sierra Nevada. Contains lenticular deposits of weakly to strongly cemented, well rounded, andesitic boulders, cobbles, and gravels in a fine- to medium-grained andesitic sandstone matrix. This formation is Pliocene–Miocene age (approximately 9 million years Before Present). | Several specimens of plant fossils have been recovered from the Mehrten Formation in Granite Bay, Roseville, and Rocklin. Vertebrate mammal and plant fossils have been reported from the Mehrten Formation throughout the Sierra Nevada foothills and the eastern margin of the Central Valley. The closest recorded vertebrate fossil locality within the Mehrten Formation is near Camanche Reservoir, where a specimen of <i>Pliohippus</i> (horse) was recovered. Other vertebrate fossils have been recovered from the Mehrten Formation from over 40 locations in Calaveras, San Joaquin, Stanislaus, Tuolumne, and Merced Counties. | High |
| Valley Springs Formation (OMvs) | Consists of pumice, rhyolitic tuff, sandstone, and conglomerate from volcanic lava flows that occurred in the Sierra Nevada, were washed into streams, and transported downstream to form fluvial deposits. This formation is mid-Miocene age (approximately 24 million years Before Present). | A few isolated plant fossils have been recovered in El Dorado and Calaveras Counties. No vertebrate fossils have been recorded. | Low |
| Ione Formation (Ei) | Occurs as a 200-mile-long series of isolated exposures along the western foothills of the Sierra Nevada, from Oroville south to Friant in Fresno County. Consists of quartzose sandstone, conglomerate, and claystone that is generally soft and deeply eroded. Locally contains beds of kaolinite clay. Formed from fluvial, estuarine, and shallow marine deposits of Eocene age (approximately 35 to 55 million years Before Present). | Numerous large assemblages yielding hundreds of plant fossils have been recovered throughout the Sierra Nevada foothills, particularly from Ione, Iowa Hill, and Camanche Reservoir. Other vertebrate mammal and plant fossils have been recovered from the Ione Formation from over 300 locations in Nevada, Contra Costa, Placer, Amador, Butte, Alameda, Merced, Tuolumne, Sutter, Sierra, Plumas, Calaveras, Kern, and Stanislaus Counties. | High |
| Rocklin Pluton (Kr) | Light gray silicic quartz diorite of Lower Cretaceous age (approximately 145.5 to 99.6 million years Before Present). | Plutonic intrusive rocks were formed from magma that solidified at great depths below the earth's surface; therefore, they do not contain fossils. | None |
| Sources: Dundas et al. 1996, Gutierrez 2011, Jefferson 1991a and 1991b, Kolber 2004, Hansen 2008, Hay 1927, Hilton et al. 2000, Helley and Harwood 1985, Marchand and Allwardt 1981, Paleontology Portal undated, Piper et al. 1939, Sierra College Natural History Museum 2011, UCMP 2019 | | | |

| Table 4.7-2 Modified Mercalli Index | |
|---|--|
| Intensity | Effect |
| I | Not felt. Marginal and long period effects of large earthquakes. |
| II | Felt by persons at rest, on upper floors, or favorably placed. |
| III | Felt indoors. Hanging objects swing. Vibration like passing of light trucks. Duration estimated. May not be recognized as an earthquake. |
| IV | Hanging objects swing. Vibration like passing of heavy trucks; or sensation of a jolt like a heavy ball striking the walls. Standing motor cars rock. Windows, dishes, doors rattle. Glasses clink. Crockery clashes. In the upper range of IV, wooden walls and frame creak. |
| V | Felt outdoors; direction estimated. Sleepers wakened. Liquids disturbed, some spilled. Small unstable objects displaced or upset. Doors swing, close, open. Shutters, pictures move. Pendulum clocks stop, start, change rate. |
| VI | Felt by all. Many frightened and run outdoors. Persons walk unsteadily. Windows, dishes, glassware broken. Knickknacks, books, etc., off shelves. Pictures off walls. Furniture moved or overturned. Weak plaster and masonry cracked. Small bells ring (church, school). Trees, bushes shaken (visibly, or heard to rustle). |
| VII | Difficult to stand. Noticed by drivers of motor cars. Hanging objects quiver. Furniture broken. Damage to masonry D, including cracks. Weak chimneys broken at roof line. Fall of plaster, loose bricks, stones, tiles, cornices (also unbraced parapets and architectural ornaments). Some cracks in masonry C. Waves on ponds; water turbid with mud. Small slides and caving in along sand or gravel banks. Large bells ring. Concrete irrigation ditches damaged. |
| VIII | Steering of motor cars affected. Damage to masonry C; partial collapse. Some damage to masonry B; none to masonry A. Fall of stucco and some masonry walls. Twisting, fall of chimneys, factory stacks, monuments, towers, elevated tanks. Frame houses moved on foundations if not bolted down; loose panel walls thrown out. Decayed piling broken off. Branches broken from trees. Changes in flow or temperature of springs and wells. Cracks in wet ground and on steep slopes. |
| IX | General panic. Masonry D destroyed; masonry C heavily damaged, sometimes with complete collapse; masonry B seriously damaged. (General damage to foundations.) Frame structures, if not bolted, shifted off foundations. Frames racked. Serious damage to reservoirs. Underground pipes broken. Conspicuous cracks in ground. In alluvial areas sand and mud ejected, earthquake fountains, sand craters. |
| X | Most masonry and frame structures destroyed with their foundations. Some well-built wooden structures and bridges destroyed. Serious damage to dams, dikes, embankments. Large landslides. Water thrown on banks of canals, rivers, lakes, etc. Sand and mud shifted horizontally on beaches and flat land. Rails bent slightly. |
| XI | Rails bent greatly. Underground pipelines completely out of service. |
| XII | Damage nearly total. Large rock masses displaced. Lines of sight and level distorted. Objects thrown into the air. |
| <p>Notes: Masonry A: Good workmanship, mortar, and design; reinforced, especially laterally, and bound together by using steel, concrete, etc.; designed to resist lateral forces.</p> <p>Masonry B: Good workmanship and mortar; reinforced, but not designed in detail to resist lateral forces.</p> <p>Masonry C: Ordinary workmanship and mortar; no extreme weaknesses like failing to tie in at corners, but neither reinforced nor designed against horizontal forces.</p> <p>Masonry D: Weak materials, such as adobe; poor mortar; low standards of workmanship; weak horizontally.</p> <p>Source: Wood and Neumann 1931</p> | |

Classifying and Identifying Faults

Geologists have determined that the greatest potential for surface fault rupture and strong seismic ground shaking is from active faults, that is, faults with evidence of activity during the Holocene epoch (the last 11,700 years). Faults classified as “potentially active” (where there is evidence that movement has occurred during the last 1.6 million years), have a lower potential for surface fault rupture and strong seismic ground shaking. Pre-Quaternary faults have exhibited evidence of movement more than 1.6 million years Before Present, and therefore are not considered active. Pre-Quaternary faults are generally not considered to represent a surface fault rupture or strong

seismic ground shaking hazard (unless those faults are influenced by human-caused activity such as construction of a large water-storage reservoir directly over a fault zone).

Roseville is located within an area with relatively low seismic activity. As shown in Exhibit 4.7-2, there are no known fault traces within or adjacent to the Planning Area. The nearest active fault is a portion of the Dunnigan Hills Fault, approximately 30 miles to the west. Other active faults are located south of Lake Oroville, at Lake Tahoe, and in the Coast Ranges, approximately 45–60 miles away.

The Foothills Fault System is approximately 12 miles east of the Planning Area. This fault system includes a number of different faults, including the Bear Mountains Fault Zone. The northern portion of the Bear Mountains Fault Zone and the Maidu Fault (east of Folsom Lake), along with the northern portion of the Deadman Fault (north of Folsom Lake), have exhibited evidence of movement in the last 700,000 to 1.6 million years Before Present (Jennings and Bryant 2010). Therefore, these faults are considered potentially active.

There are several pre-Quaternary faults within 10 miles of the Planning Area (Jennings and Bryant 2010, City of Roseville 2010), which are not considered to be active:

- ▶ Willows Fault Zone, which diagonally transects the Sacramento Valley from northwest to southeast, from Red Bluff to south Sacramento.
- ▶ Volcano Hill Fault, located in Granite Bay and extending northwesterly from Volcano Hill for approximately 1 mile, terminating near Eureka Road.
- ▶ Linda Creek Fault, along a segment of Linda Creek from Roseville to Sacramento County, east of the Planning Area.
- ▶ An unnamed fault extending east–west between Folsom Lake and the city of Rocklin. Segments of this fault are concealed, and are therefore unmapped. However, this unnamed fault could connect to the Bear Mountains Fault Zone, branches of which are located beneath the eastern edge of Folsom Lake.

Potential seismic hazards resulting from an earthquake consist of surface fault rupture, ground shaking, liquefaction, and landslides, each of which are discussed below.

Surface Fault Rupture

Surface rupture is the actual cracking or breaking of the ground surface along a fault during an earthquake. Structures built over an active fault can be torn apart if the ground ruptures. However, surface ground rupture along a fault generally is limited to a linear zone that is only a few yards wide. The Alquist-Priolo Earthquake Fault Zoning Act (Alquist-Priolo Act) (see the “Regulatory Framework” section, below) was created to help reduce the loss of life and property from an earthquake by prohibiting the construction of structures designed for human occupancy across the traces of active faults. The Planning Area is not located within or adjacent to an Alquist-Priolo Earthquake Fault Zone (California Geological Survey [CGS] 2017). The nearest fault zoned under the Alquist-Priolo Act is a portion of the Dunnigan Hills Fault, approximately 30 miles to the west.

Seismic Ground Shaking

Ground shaking—motion that occurs as a result of energy released during faulting—could potentially result in the damage or collapse of buildings and other structures, depending on the magnitude of the earthquake, the location of the epicenter, and the character and duration of the ground motion. Other important factors to be considered are the characteristics of the underlying soil and rock and, where structures exist, the building materials used and the workmanship of the structures.

Ground motions from seismic activity can be estimated using a computer model. The CGS Probabilistic Seismic Hazards Assessment Model (CGS 2008) indicates that a minimum peak horizontal acceleration ranging from 0.14 to 0.16 *g* (where *g* is the percentage of gravity) could be expected. This means there is a 1-in-10 probability that an earthquake will occur within 50 years that would result in a peak horizontal ground acceleration exceeding 0.14 to 0.16 *g* in the Planning Area. This calculation indicates that a low level of seismic ground shaking could occur.

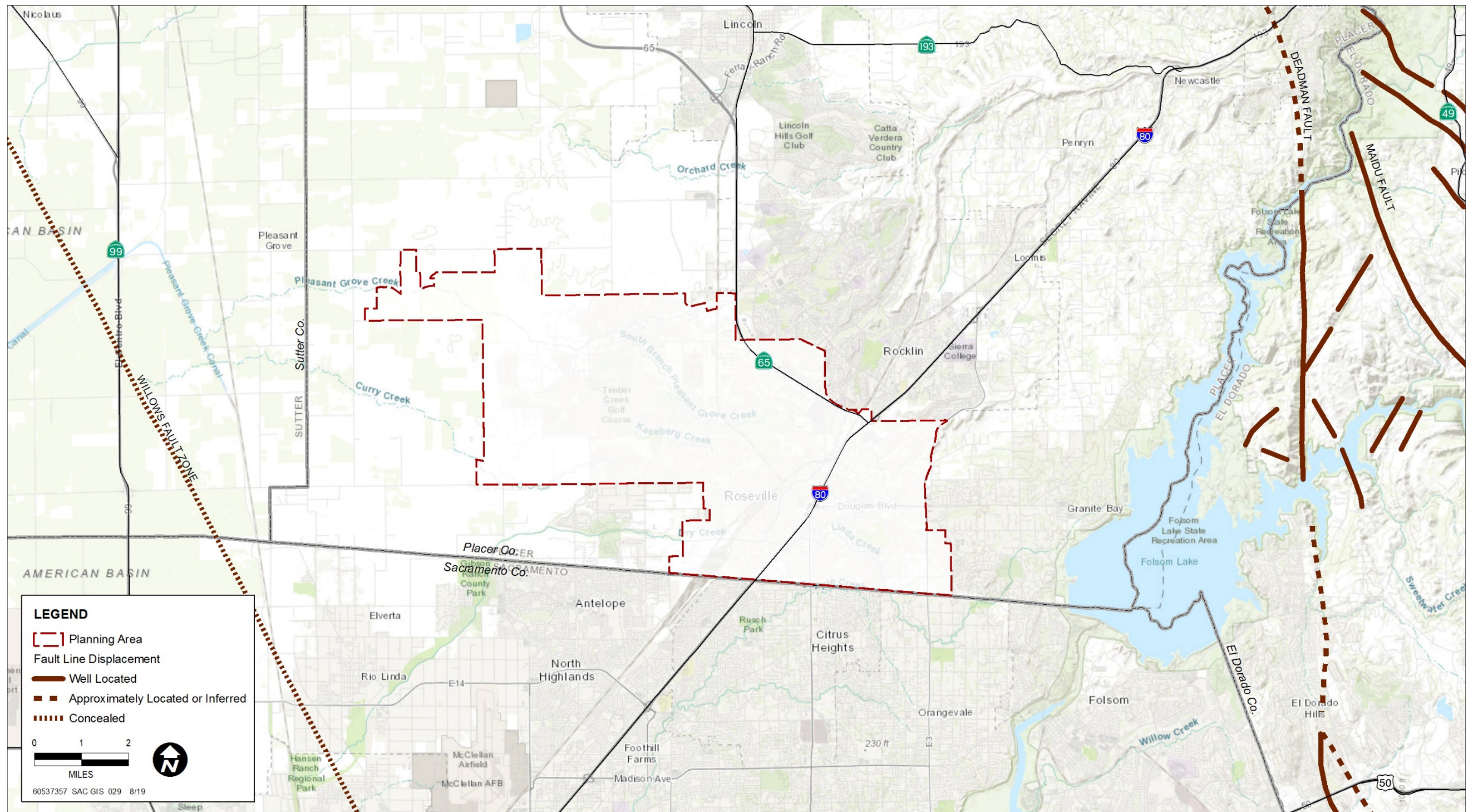
Liquefaction

Soil liquefaction occurs when ground shaking from an earthquake causes a sediment layer saturated with groundwater to lose strength and become fluid, similar to quicksand. The liquefaction potential depends on the type of soil, the level and duration of seismic ground motions, and the depth to groundwater. The locations that are most susceptible to liquefaction-induced damage have loose, water-saturated, granular sediment that is within 40 feet of the ground surface. Liquefaction poses a hazard to engineered structures, such as buildings, bridges, and underground utility pipelines, because the loss of soil strength can result in bearing capacity insufficient to support foundation loads and increased lateral pressure on retaining walls. Groundwater elevations vary from 90 to 140 feet below the ground surface (bgs) throughout most of the Planning Area (California Department of Water Resources [DWR] 2019). Groundwater in the downtown area and inner neighborhoods (southwest of SR 65 and northwest of I-80) ranges from 50 to 90 feet bgs (DWR 2019). Furthermore, the Planning Area is composed of well consolidated to very hard, older Pleistocene- to Eocene-age deposits, and active seismic sources are at least 30 miles away. Therefore, it is unlikely that the Planning Area would be subject to liquefaction in the event of a large magnitude earthquake.

Landslides

Landslide susceptibility is based on various combinations of factors such as rainfall, rock and soil types, slope, vegetation, seismic conditions, and human construction activities. Generally, landslides are expected to occur most often on slopes steeper than 15 percent, in areas with a history of landslides, and in areas underlain by geologic units that are weakly cemented.

The Planning Area slopes upwards to the east, as part of the transition from the Sacramento Valley floor to the Sierra Nevada foothills. The northwestern edge of the Planning Area is at an elevation of approximately 70 feet above mean sea level (amsl), while the eastern portion of the Planning Area is approximately 230 feet amsl. The southeastern portion of the Planning Area, near Secret Ravine, is on a ridgeline that is approximately 400 feet amsl. Most of the new development in the Planning Area is planned for the nearly flat portion of the Sacramento Valley floor in the western and northwestern portions of the Planning Area, north of Baseline Road. The eastern and northeastern portions of the Planning Area, which are within the Sierra Nevada foothills, contain some areas



Source: Jennings and Saucedo 2000

Exhibit 4.7-2

Regional Faults

This page intentionally left blank

where slopes exceed 15 percent. However, the Planning Area does not have a history of landslides, is composed of stable geologic units that are moderately to very strongly cemented, and active seismic sources are at least 30 miles away. Therefore, it is unlikely that landslides would pose a hazard in the Planning Area.

Seismic Seiches

Earthquakes may affect open bodies of water by creating seismic sea waves and seiches. Seismic sea waves (often called “tidal waves”) are caused by abrupt ground movements (usually vertical) on the ocean floor in connection with a major earthquake. Because of the Planning Area’s long distance from the Pacific Ocean, seismic sea waves do not represent a hazard. A seiche is a sloshing of water in an enclosed or restricted water body, such as a basin, river, or lake, which is caused by earthquake motion; the sloshing can occur for a few minutes or several hours. There are no large water bodies in the Planning Area where seiches would represent a hazard. Folsom lake is approximately 3.25 miles east of the Planning Area, and as described above, the seismic hazards in the Sacramento Valley are very low, and therefore the risk of a seismic seiche that would overtop Folsom Lake and result in downstream flooding in the Planning Area is also considered very low.

4.7.2.3 VOLCANIC ACTIVITY

There are several regions of active volcanic activity in northern California. The Clear Lake volcanic field is located approximately 70 miles west of the Planning Area. The field contains lava domes and cinder cones that range in age from approximately 2 million to 10,000 years Before Present. Mount Konocti, with an elevation of 4,305 feet, is the largest volcanic feature. Steam in The Geysers vapor-dominated field, which is located on the southwest margin of the volcanic field, is harnessed by the Calpine Corporation for geothermal power production. The volcanic history of the Clear Lake field is episodic, i.e., long periods of no activity separated by shorter intervals of frequent eruptions. At present, geologists believe the field appears to be in a period of no activity following a volcanically active stretch between 60,000 and 10,000 years Before Present, which averaged 1 eruption every 1,800 years. Because of long pauses in the volcanic activity near Clear Lake, it is currently uncertain what stage of volcanism the region might be undergoing. Intermittent seismic activity and the presence of heat at depth indicate that the system is still active and eruptions may occur in the future. The U.S. Geological Survey (USGS), in cooperation with Calpine, maintains a real-time network of monitoring stations throughout the system that measure seismic activity, ground deformation, and volcanic gases (USGS 2016).

The Lassen Volcanic National Park area is located approximately 120 miles north of the Planning Area. Three episodes of volcanism have occurred in the vicinity of the Lassen volcanic center in the past 1,100 years. These eruptions occurred at Chaos Crags, Cinder Cone, and lastly at Lassen Peak in 1914–1917. An ash plume from the 1915 eruption rose more than 5.5 miles above the peak, and the prevailing winds scattered the ash across Nevada as far as 300 miles to the east (USGS 2001). The prevailing wind direction in that area is towards the east; thus, it is unlikely that the Planning Area would be affected by volcanic activity in the Lassen area.

4.7.2.4 SOILS

The U.S. National Resources Conservation Service (NRCS) provides soils surveys and reports for Placer County, which includes the city of Roseville. Exhibit 4.7-3 shows the soil types in the Planning Area (NRCS 2019).

Soil Properties

Soil properties influence the development of building sites, including the engineering design, construction techniques, and site maintenance. The NRCS soil database provides an indication of the limitations of soils for dwellings without basements, small commercial buildings, and local roads and streets. The rating system indicates the extent to which the soils are limited by the soil features that affect building site development. NRCS soil limitations are based on the soil properties that affect the capacity of the soil to support a load without movement, and on the properties that affect excavation and construction costs. The properties that affect the load-supporting capacity consist of depth to a water table, ponding, flooding, subsidence, linear extensibility (shrink-swell potential), and compressibility. The properties that affect the ease and amount of excavation consist of flooding, depth to a water table, ponding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock fragments.

All of the soils in the Planning Area have some limitations with respect to dwellings, small commercial buildings, and local roads and streets. In general, these limitations are related to a shallow depth to bedrock, low soil bearing strength, and a moderate to high shrink-swell potential. Construction in the Mehrten Formation presents particularly difficult challenges during the excavation process due to its extreme hardness. Excavator-mounted rock hammers are required to break up larger areas for construction, while specialized trenching equipment equipped with saw blades can be used to cut foundation and utility trenches for smaller projects.

Most soils can be categorized into hydrologic soil groups (which apply only to surface soil layers) based on runoff-producing characteristics. Hydrologic soil groups are factored into calculations of erosion and stormwater runoff potential when drainage plans are prepared for new development. Soils are assigned to groups A, B, C, or D. Group D soils have a very slow water infiltration rate and therefore have a very high stormwater runoff potential. Most of the Planning Area soils are assigned to Hydrologic Group D (NRCS 2019) (see Exhibit 4.7-4). Water erosion hazards are particularly high in areas of steeper slopes along streambeds.

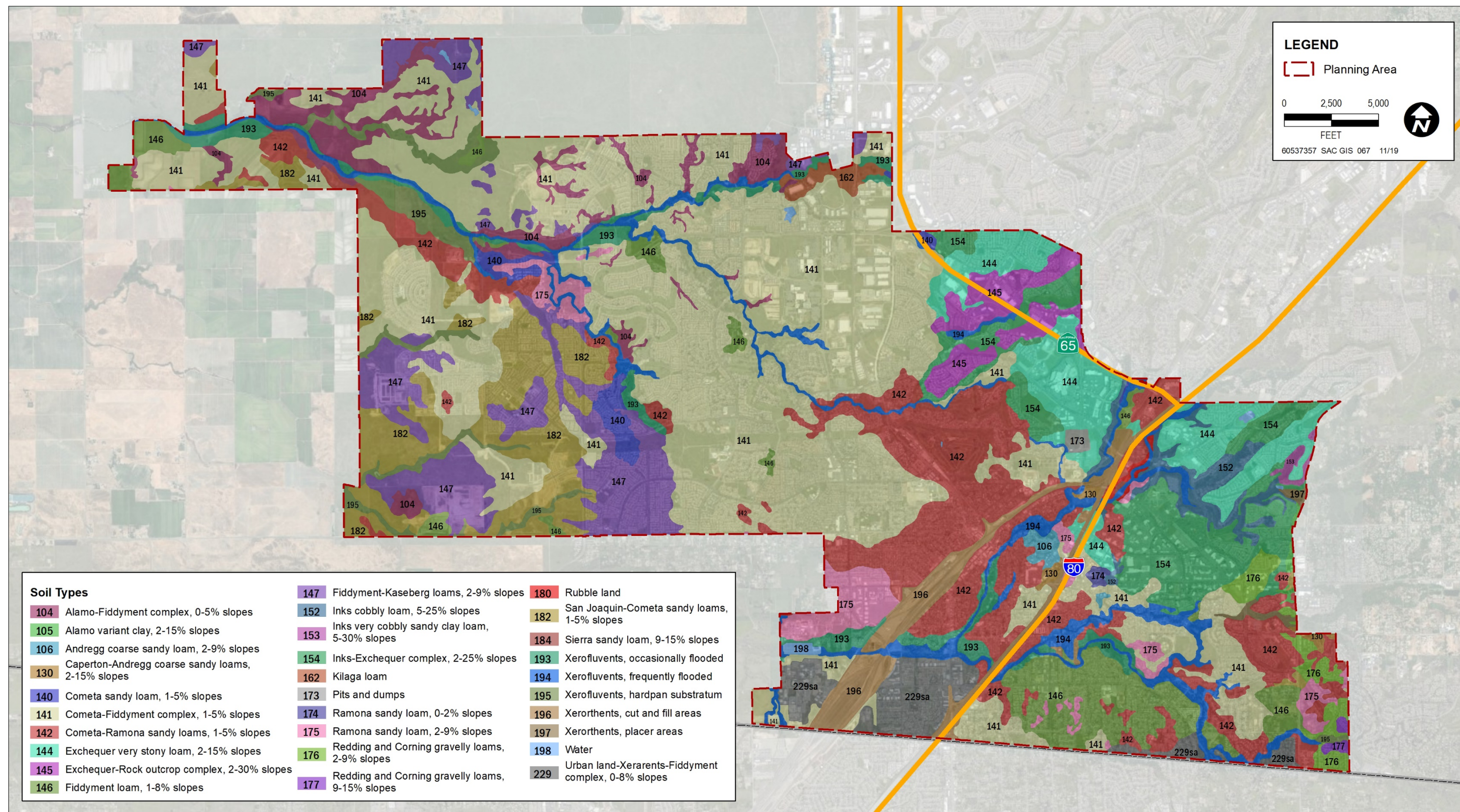
Expansive soils are composed largely of clays, which greatly increase in volume when saturated with water and shrink when dried. Because of this shrink-swell effect, structural foundations may rise during the rainy season and fall during the dry season. If this expansive movement varies beneath different parts of a structure, the foundation may crack and portions of the structure may become distorted. Retaining walls and underground utilities may be damaged for the same reasons. Some of the soils in the Planning Area are rated as moderately to highly expansive (NRCS 2019); these soils are located primarily along streambeds (see Exhibit 4.7-5). Proper foundation design and soil treatment can generally eliminate the problems caused by expansive soils.

4.7.3 REGULATORY FRAMEWORK

4.7.3.1 FEDERAL

Earthquake Hazards Reduction Act, Public Law 95–124

In October 1977, the U.S. Congress passed the Earthquake Hazards Reduction Act 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 reduction program. To accomplish this goal, the act established the National Earthquake

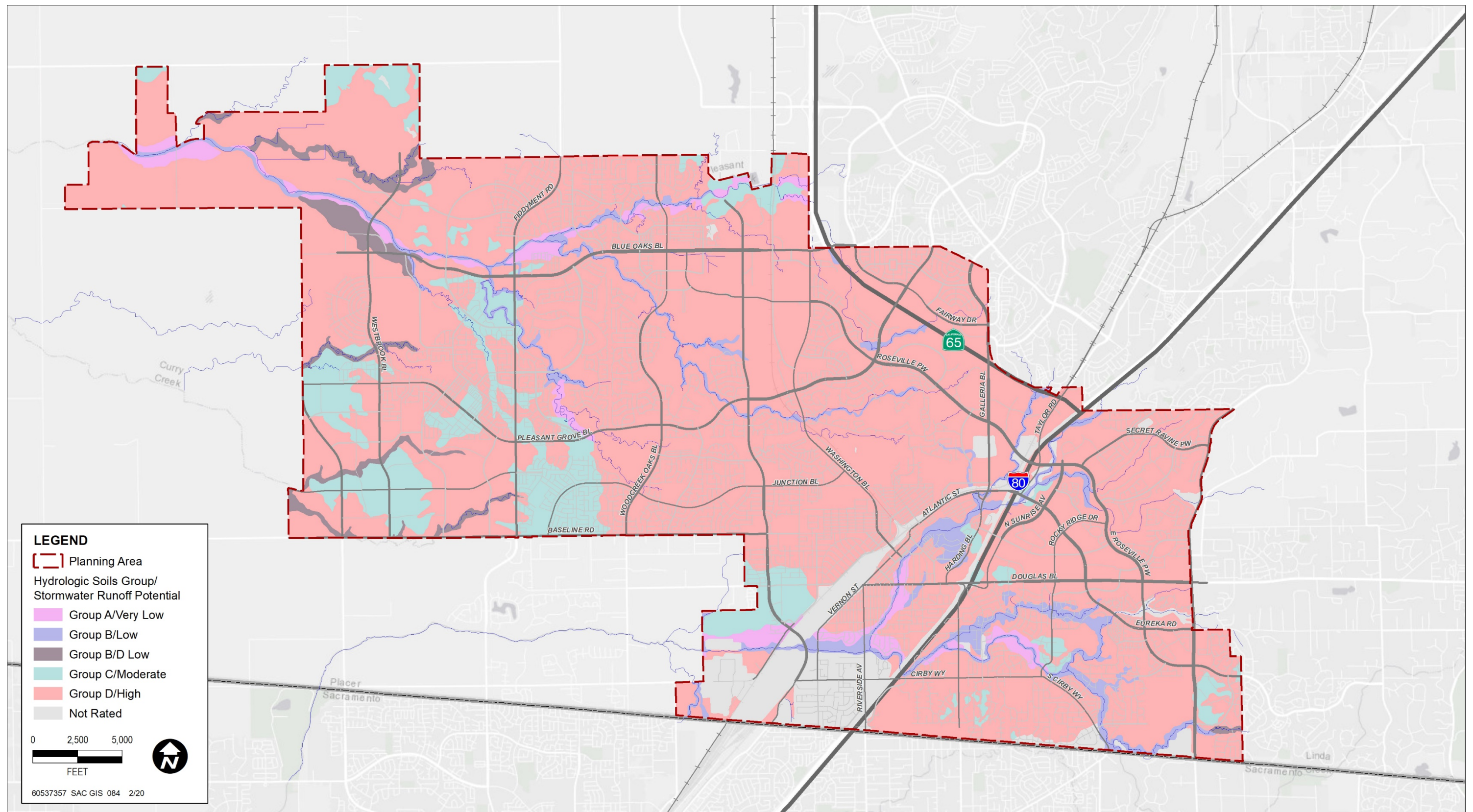


Source: NRCS 2019

Exhibit 4.7-3.

Soil Types

This page intentionally left blank

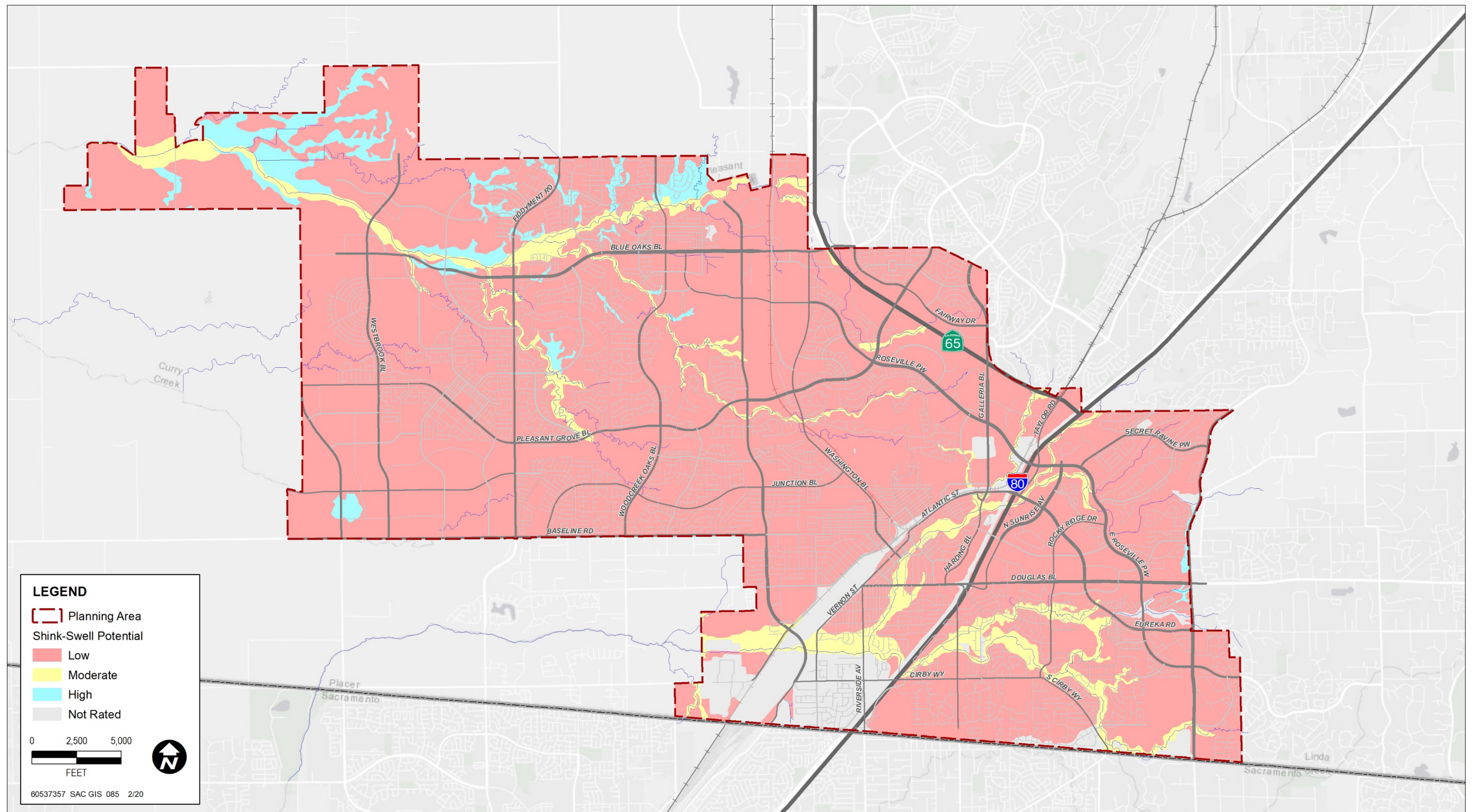


Source: NRCS 2019

Exhibit 4.7-4.

Stormwater Runoff Potential

This page intentionally left blank



Source: NRCS 2019

Exhibit 4.7-5.

Shrink Swell Potential

This page intentionally left blank

Hazards Reduction Program. This program was substantially amended in November 1990 by the National Earthquake Hazards Reduction Program Act, which refined the description of agency responsibilities, program goals, and objectives.

The mission of the National Earthquake Hazards Reduction Program includes improved understanding, characterization, and prediction of hazards and vulnerabilities; improved building codes and land use practices; risk reduction through post-earthquake investigations and education; development and improvement of design and construction techniques; improved mitigation capacity; and accelerated application of research results. The National Earthquake Hazards Reduction Program Act designates the Federal Emergency Management Agency as the lead agency of the program and assigns several planning, coordinating, and reporting responsibilities. Other National Earthquake Hazards Reduction Program Act agencies include the National Institute of Standards and Technology, National Science Foundation, and USGS.

4.7.3.2 STATE

Alquist-Priolo Earthquake Fault Zoning Act, California Public Resources Code Sections 2621–2630

The Alquist-Priolo Earthquake Fault Zoning Act (Alquist-Priolo Act) (California Public Resources Code Sections 2621–2630) was passed in 1972 to reduce the hazard of surface faulting on structures designed for human occupancy. The main purpose of the law is to prevent the construction of buildings used for human occupancy on the surface trace of active faults. The law addresses only the hazard of surface fault rupture and is not directed toward other earthquake hazards. The Alquist-Priolo Act requires the State Geologist to establish regulatory zones known as Earthquake Fault Zones around the surface traces of active faults and to issue appropriate maps. The maps are distributed to all affected cities, counties, and state agencies for their use in planning efforts. Before a project can be permitted in a designated Alquist-Priolo Earthquake Fault Zone, cities and counties must require a geologic investigation to demonstrate that proposed buildings would not be constructed across active faults.

Seismic Hazards Mapping Act, California Public Resources Code Sections 2690–2699.6

The Seismic Hazards Mapping Act of 1990 (California Public Resources Code Sections 2690–2699.6) addresses earthquake hazards from non-surface fault rupture, including liquefaction and seismically induced landslides. The act established a mapping program for areas that have the potential for liquefaction, landslide, strong ground shaking, or other earthquake and geologic hazards. The act also specifies that the lead agency for a project may withhold development permits until geologic or soils investigations are conducted for specific sites and mitigation measures are incorporated into plans to reduce hazards associated with seismicity and unstable soils.

National Pollutant Discharge Elimination System

In California, the State Water Resources Control Board administers regulations promulgated by the U.S. Environmental Protection Agency (55 Code of Federal Regulations 47990) requiring the permitting of stormwater-generated pollution under the National Pollutant Discharge Elimination System (NPDES). In turn, the State Water Resources Control Board's jurisdiction is administered through nine regional water quality control boards. Under these federal regulations, an operator must obtain a general permit through the NPDES Stormwater Program for all construction activities with ground disturbance of 1 acre or more. The State Water Resources Control Board's statewide storm water general permit for construction activity (Order 2009-009-DWQ as amended by Order No. 2012-0006-DWQ) requires the implementation of best management practices (BMPs) to

reduce sedimentation into surface waters and to control erosion. One element of compliance with the NPDES permit is preparation of a storm water pollution prevention plan (SWPPP) that addresses control of water pollution, including sediment, in runoff during construction. (See Section 4.13 of this EIR, “Hydrology and Water Quality,” for more information about the NPDES permit program and SWPPPs.)

California Building Standards Code, California Code of Regulations Title 24

The California Building Standards Commission is responsible for coordinating, managing, adopting, and approving building codes in California. The State of California provides minimum standards for building design through the California Building Standards Code (CBC) (California Code of Regulations Title 24). Where no other building codes apply, Chapter 29 of the CBC regulates excavation, foundations, and retaining walls. The CBC applies to building design and construction in the state and is based on the Federal Uniform Building Code used widely throughout the country (generally adopted on a state-by-state or district-by-district basis). The CBC has been modified for California conditions with numerous more detailed or more stringent regulations.

The state earthquake protection law (California Health and Safety Code Section 19100 et seq.) requires that structures be designed to resist stresses produced by lateral forces caused by wind and earthquakes. The CBC requires an evaluation of seismic design that falls into Categories A–F (where F requires the most earthquake-resistant design) for structures designed for a project site. The CBC philosophy focuses on “collapse prevention,” meaning that structures are designed for prevention of collapse for the maximum level of ground shaking that could reasonably be expected to occur at a site. Chapter 16 of the CBC specifies exactly how each seismic design category is to be determined on a site-specific basis through the site-specific soil characteristics and proximity to potential seismic hazards.

Chapter 18 of the CBC regulates the excavation of foundations and retaining walls. This chapter regulates the preparation of a preliminary soil report, engineering geologic report, geotechnical report, and supplemental ground-response report. Chapter 18 also regulates analysis of expansive soils and the determination of the depth to groundwater table. For Seismic Design Category C, Chapter 18 requires analysis of slope instability, liquefaction, and surface rupture attributable to faulting or lateral spreading. For Seismic Design Categories D, E, and F, Chapter 18 requires these same analyses 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 requires mitigation measures to be considered in structural design. Mitigation measures 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. Peak ground acceleration must be determined from a site-specific study, the contents of which are specified in CBC Chapter 18.

Finally, Appendix Chapter J of the CBC regulates grading activities, including drainage and erosion control, and construction on unstable soils, such as expansive soils and areas subject to liquefaction.

4.7.3.3 REGIONAL AND LOCAL

Existing City of Roseville General Plan

The existing Roseville General Plan (City of Roseville 2016) includes the following goals and policies related to geology and soils. There are no existing General Plan policies related to paleontological resources.

Seismic and Geologic Hazards Goal 1: Minimize injury and property damage due to seismic activity and geologic hazards.

- ▶ **Policy 1:** Continue to monitor seismic activity in the region and take appropriate action if significant seismic hazards, including potentially active faults, are discovered in the planning area.
- ▶ **Policy 2:** Continue to mitigate the potential impacts of geologic hazards through building plan review.
- ▶ **Policy 3:** Minimize soil erosion and sedimentation by maintaining compatible land uses, suitable building designs, and appropriate construction techniques.
- ▶ **Policy 4:** Comply with state seismic and building standards in the design and siting of critical facilities including police and fire stations, school facilities, hospitals, hazardous material manufacture and storage facilities, bridges, and large public assembly halls
- ▶ **Policy 5:** Create and adopt slope development standards prior to or as part of the planning process for any area identified as having significant slope.
- ▶ **Policy 6:** Require contour grading, where feasible, and re-vegetation to mitigate the appearance of engineered slopes and to control erosion.
- ▶ **Vegetation and Wildlife Policy 4:** Require preservation of contiguous areas in excess of the City's Regulatory Floodplain, as defined in the Safety Element, as merited by special resources or circumstances. Special circumstances may include, but are not limited to, sensitive wildlife or vegetation, wetland habitat, oak woodland areas, grassland connections in association with other habitat areas, slope or topographical considerations, recreation opportunities, and maintenance access requirements.

Groundwater Recharge and Water Quality Goal 1: Continue to improve surface water quality and accommodate water flow increases.

- ▶ **Policy 2:** Implement erosion control and topsoil conservation measures to limit sediments within watercourses.

City of Roseville Building Code, Roseville Municipal Code Chapter 16.04

The City of Roseville has adopted and incorporated by reference into the City of Roseville Municipal Code the 2019 California Building Standards Code (Roseville Municipal Code Title 16, Chapter 16.04.100). See the heading above, "California Building Standards Code."

City of Roseville Grading Ordinance, Roseville Municipal Code Chapter 16.20

The City's Grading Ordinance (Roseville Municipal Code Chapter 16.20) establishes a process to regulate grading that is not otherwise permitted as part of a separate discretionary action. A grading permit is required for construction projects throughout the city. The permit application process includes submittal of grading plans, copies of any necessary state or federal permits, description and quantity of work (including mitigation measures to protect watercourses and wetlands), and dates when the work will be performed. The Grading Ordinance requires prompt re-vegetation of disturbed areas, avoidance of grading activities during wet weather, avoidance of disturbance within drainageways, and other erosion control measures.

City of Roseville 2019 Design and Construction Standards

The City's Design and Construction Standards (City of Roseville 2019) apply to transportation, storm drainage, sewer, wastewater pumping, water distribution, graywater distribution, underground pipelines, roadways, and other improvements, and are designed, in part, to avoid impacts related to geologic constraints and to control erosion and stormwater runoff.

City of Roseville Stormwater Quality BMP Guidance Manual for Construction

The *Stormwater Quality BMP Guidance Manual for Construction* (City of Roseville 2011a) was developed as part of the City's program to implement the goals contained in the *City of Roseville Stormwater Management Program* (City of Roseville 2004), as required by the NPDES municipal stormwater permit from the State Water Resources Control Board. The BMP Guidance Manual provides the requirements for preparation and submittal of SWPPPs for construction activities, including City and State procedural requirements for SWPPP submittals and site inspections related to stormwater quality. The BMP Guidance Manual also identifies the various construction-related BMPs that can be used within the City to control construction site runoff. The manual addresses issues such as erosion control, sediment control, and good housekeeping practices.

Open Space Preserve Overarching Management Plan

The City's General Plan focuses on the preservation and enhancement of a network of open space that not only provides habitat linkages, but also provides connections between neighborhoods and destinations. These connections are provided primarily via a network of open space corridors adjacent to streams throughout the Planning Area that typically also include pedestrian/bicycle trails. The General Plan recognizes that there is a balance between habitat protection and public access. Therefore, sensitive native communities, such as those that support endangered species have limited or supervised access, whereas other areas have regular access points, such as pedestrian/bicycle trails. Both habitat protection and public access must be considered for successful open space management. The City's Open Space Preserve Overarching Management Plan provides a City-wide approach and specific goals, which serve as the implementing framework for open space management, maintenance, and monitoring for all open space within City limits (City of Roseville 2011b).

The Open Space Preserve Overarching Management Plan includes specific requirements and adopted mitigation measures for open space management, maintenance, and monitoring that are related to soils, erosion, and water quality, including the following:

- ▶ **Work Zone:** Heavy equipment, vehicles, and maintenance work will be confined to existing or designated access roads, road shoulders, and disturbed or designated areas. Ground disturbance and vegetation removal will be confined to the minimum extent necessary to complete the work.
- ▶ **Erosion and Dust Control:** The City will implement erosion, sediment, material stockpile, and dust control BMPs on-site to minimize the potential for fill or runoff to enter wetlands or waterways. A biological monitor will be retained as necessary to monitor and inspect the installation and removal of erosion/sediment control devices, if applicable.
- ▶ **Spill Prevention/Containment and Refueling Precautions:** The City will maintain all maintenance equipment to prevent leaks of fuels, lubricants, or other fluids into waterways. Appropriate materials will be on-site to prevent and manage accidental spills. City will take appropriate precaution when handling and/or storing chemicals (e.g., fuel and hydraulic fluid) near waterways and wetlands, and any and all applicable laws and regulations will be followed. Service and refueling procedures will take place outside open space areas or at least 100 feet from waterways or in an upland area at least 100 feet from wetland boundaries to prevent spills from entering waterways or wetlands.
- ▶ **Trash Cleanup:** The City will properly contain and remove all trash and waste items generated by maintenance activities.
- ▶ **Work Window:** The City will only perform ground disturbing work within 250 feet of vernal pool habitat or work that will result in direct impacts authorized by the Biological Opinion during the dry season (generally May 15–October 15).

Adopted Specific Plans and Mitigation Measures

Currently, the City has adopted 14 Specific Plans. A Specific Plan is a comprehensive planning and zoning document that implements the General Plan by providing development and conservation standards for a defined geographic location within the Planning Area. Each Specific Plan contains guidelines for site, architectural, landscaping, lighting, roadway networks, pedestrian/bicycle paths, open space corridors, parks, and other aspects of design. Each adopted Specific Plan included an EIR, which evaluated potential impacts related to geology, soils, and paleontological resources. Where appropriate, mitigation measures were adopted to reduce the potential to impact paleontological resources, and these measures are required to be implemented in the respective Specific Plan Areas. Impacts related to geology and soils were found to be less than significant. The adopted mitigation measures include protection for unique paleontological resources, such as construction worker personnel training, monitoring during construction activities, and assessment and management recommendations in the event that fossil specimens are encountered.

4.7.4 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

4.7.4.1 METHODOLOGY

The analysis prepared for this EIR relies on published geologic literature and maps, NRCS soil survey data, and a records search performed at the University of California Museum of Paleontology (UCMP). The information obtained from these sources was reviewed and summarized to present the existing conditions and to identify potential environmental impacts, based on the thresholds of significance presented in this section. Impacts

associated with geology, soils, and paleontological resources that could result from construction and operational activities; expected construction practices; and the materials, locations, and duration of potential construction and related activities.

This proposed General Plan Update is compared to existing physical conditions which constitute the baseline for purposes of determining whether potential impacts are significant. This General Plan Update does not include any changes to land use designations, expansion to the City's Planning Area, or other major physical changes to areas planned for development compared to the existing General Plan, but does include changes to goals, policies, and implementation measures, which are analyzed as a part of this EIR.

4.7.4.2 THRESHOLDS OF SIGNIFICANCE

Geology and Soils

The basis for determining the significance of impacts for this analysis is based on the environmental checklist in Appendix G of the State CEQA Guidelines. The proposed project would result in a significant impact related to geology and soils if it would do any of the following:

- ▶ directly or indirectly cause potential substantial adverse impacts, including the risk of loss, injury, or death involving:
 - rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault;
 - strong seismic ground shaking;
 - seismic-related ground failure, including liquefaction; or
 - landslides;
- ▶ result in substantial soil erosion or the loss of topsoil;
- ▶ be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse;
- ▶ be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property; or
- ▶ have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water.

Paleontological Resources

The proposed project would have a significant impact on paleontological resources if it would:

- ▶ directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Based on criteria developed by qualified professionals, a “unique paleontological resource or site” is one that is considered significant under the professional paleontological standards described below.

An individual vertebrate fossil specimen may be considered unique or significant if it is identifiable and well preserved, and it meets one of the following criteria:

- ▶ a type specimen (i.e., the individual from which a species or subspecies has been described);
- ▶ a member of a rare species;
- ▶ a species that is part of a diverse assemblage (i.e., a site where more than one fossil has been discovered) wherein other species are also identifiable, and important information regarding life history of individuals can be drawn;
- ▶ a skeletal element different from, or a specimen more complete than, those now available for its species; or
- ▶ a complete specimen (i.e., all or substantially all of the entire skeleton is present).

The value or importance of different fossil groups varies depending on the age and depositional environment of the rock unit that contains the fossils, their rarity, the extent to which they have already been identified and documented, and the ability to recover similar materials under more controlled conditions (such as for a research project). Marine invertebrates are generally common; the fossil record is well developed and well documented, and they would generally not be considered a unique paleontological resource. Identifiable vertebrate marine and terrestrial fossils are generally considered scientifically important because they are relatively rare.

4.7.4.3 ISSUES NOT DISCUSSED FURTHER

Surface Fault Rupture—There are no fault traces either within or immediately adjacent to the Planning Area. Thus, surface fault rupture would not pose a hazard for the Planning Area, and this impact is not addressed further in this EIR.

Liquefaction—The depth to groundwater in the Planning Area ranges from 50 to 140 feet bgs; the Planning Area is underlain by stable, moderately cemented to very well cemented, older Pleistocene–Eocene age rock formations; and active seismic sources are at least 30 miles away. Thus, liquefaction would not pose a hazard for the Planning Area, and this impact is not addressed further in this EIR.

Landslide Hazards—Most land use change during General Plan buildout would occur in the nearly flat portions of the Sacramento Valley floor in the western and northwestern portions of the Planning Area. The eastern and northeastern portions of the Planning Area, which are within the Sierra Nevada foothills, have areas where slopes exceed 15 percent. However, the Planning Area does not have a history of landslides, is composed of stable geologic units that are moderately to very strongly cemented, and active seismic sources are at least 30 miles away. Therefore, it is unlikely that landslides would pose a hazard in the Planning Area, and this impact is not addressed further in this EIR.

Soil Suitability for Alternative Wastewater Treatment Systems—All new and infill development in the Planning Area is required to install utility connections for wastewater treatment at the Pleasant Grove or Dry Creek Wastewater Treatment Plants (depending on the location of the development). Therefore, alternative

wastewater treatment systems (such as septic systems) would not be used, and this impact is not addressed further in this EIR.

4.7.4.4 IMPACT ANALYSIS

IMPACT 4.7-1 **Substantial Adverse Impacts Related to Strong Seismic Ground Shaking.** *Development occurring through buildout of the General Plan and utilities and public facilities required to serve such development could subject people and structures to hazards associated with seismic ground shaking. Implementation of the policies in the proposed General Plan Update, and compliance with relevant laws and ordinances, would reduce the potential for loss or damage from seismic hazards. This impact is **less than significant**.*

If buildings and other improvements are constructed in areas with potential seismic activity, this could expose people and property to damage related to ground shaking. Damage from strong seismic ground shaking is most likely to occur in areas where older buildings that consist of unreinforced masonry are located. However, Roseville is in an area with relatively low seismic activity, and there are no fault traces either within or immediately adjacent to the Planning Area. The nearest active seismic source is 30 miles to the west. Other active seismic sources are 45–60 miles to the north, east, and southwest near Lake Oroville, Lake Tahoe, and in the Coast Ranges, respectively. However, the estimated probabilistic ground motions are very low (0.14–0.16) indicating that strong seismic ground shaking is unlikely to occur.

The State earthquake protection law (Health and Safety Code Section 19100 et seq.) requires that structures be designed to resist stresses produced by lateral forces caused by wind and earthquakes. The CBC, which has been adopted by the City, requires a site-specific analysis of seismic hazards by a licensed engineer, and incorporation of a variety of design features (such as metal bars designed to tie the structural elements of a building together) based on the results of the site-specific assessment, which are intended to prevent structural damage and collapse, and thereby protect human life, to the maximum extent practicable.

There are no existing General Plan goals or policies related to risks from seismic ground shaking that are proposed for revision as part of the proposed General Plan Update.

Conclusion

Development occurring as a part of buildout of the General Plan could lead to an increase in the number of people and structures exposed to hazards associated with seismic ground shaking from regional faults; however, as discussed in the foregoing analysis, strong seismic ground shaking is unlikely. Furthermore, implementation of existing General Plan Seismic and Geologic Hazards Goal 1 and Policies 1, 2, and 4 (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), in combination with compliance with the geologic and seismic requirements in the CBC (which the City has adopted), and the City's site-specific Design Review process (as set forth in the City's Design Standards Section 2, General Requirements), would reduce the potential for adverse impacts to people or structures related to seismic shaking. Building plans would be reviewed by City engineers to ensure that structures are consistent with standard engineering practices and requirements contained in the CBC, which are specifically designed to prevent the collapse of structures during seismic ground shaking. This impact is **less than significant**.

Mitigation Measures

No mitigation is required.

IMPACT 4.7-2 **Substantial Adverse Impacts Related to Soil Erosion.** *Development occurring through buildout of the General Plan and utilities and public facilities required to serve such development would result in substantial grading, excavation, and movement of earth associated with site preparation activities. These activities would increase the potential for soil erosion from wind and water, and the potential for siltation of local drainages. Implementation of the policies in the proposed General Plan Update, combined with relevant laws and ordinances, would reduce the potential for soil erosion. This impact is less than significant.*

Land use change occurring as a part of buildout of the General Plan, along with construction of public infrastructure and facilities required to support this land use change, would involve grading, excavation, and earth-moving activities. NRCS (2019) soil survey data indicate that most of the Planning Area is composed of Group D soils, which have a very slow water infiltration rate and therefore have a very high stormwater runoff potential. Construction would result in the temporary disturbance of soil and would expose disturbed areas to winter storm events. Rain of sufficient intensity could dislodge soil particles from the soil surface. If the storm is large enough to generate runoff, localized erosion could occur. In addition, soil disturbance during the summer as a result of construction activities could result in soil loss because of wind erosion.

Chapter 16.20 of the City of Roseville Municipal Code addresses erosion and sediment control under the City's Grading Ordinance. Project applicants must obtain a grading permit that includes evidence of environmental documentation under CEQA, a list of measures to be implemented that would provide erosion control, and a soils engineering report and an engineering geology report as required by Appendix Chapter 33 of the CBC, Section 3309. Erosion and sediment control are also regulated for both private and public projects through the City's Design and Construction Standards (Sections 10, 11, 101, and 111).

The City addresses the potential for stormwater runoff from construction sites with requirements for development projects in the *City of Roseville Stormwater Management Program* (City of Roseville 2004) (described in detail in Section 4.13, "Hydrology and Water Quality").

Projects that disturb more than 1 acre of land must comply with the requirements in the State Water Resources Control Board *General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities* (Order 2009-0009-DWQ, as amended). The State Water Resources Control Board general permit contains a numeric, two-part, risk-based analysis process. It also identifies the need to address hydromodification (stream channel modification and alterations in the natural hydrology of a watershed that result from changes in land cover/land use), and requires low impact development (LID) controls to more closely mimic the pre-developed hydrologic condition. The SWPPP must include a site map and a description of construction activities, and must identify the BMPs that will be employed to prevent soil erosion and discharge of other construction-related pollutants.

In the City of Roseville, project applicants are required to comply with the *Stormwater Quality BMP Guidance Manual for Construction* (City of Roseville 2011a), which includes the City's BMPs for erosion and sediment control relating to construction activities and stormwater runoff (such as mulch, re-seeding, straw wattles, check

dams, sediment traps, silt fencing, sediment basins, placement of rip rap under drain outfalls, and stabilizing construction entrances and exits).

The following policy related to soil erosion and associated degradation of water quality would be revised as a part of the proposed General Plan Update, with additions shown in **bold, underlined** text and deletions shown in ~~striketrough~~ text:

- **Policy SAFE1.3:** Minimize soil erosion and sedimentation **through** ~~by maintaining compatible land uses,~~ suitable building **placement, maximum lot coverage standards, context-sensitive** designs, and appropriate construction techniques.

The proposed General Plan Update policy change listed above is intended to clarify that the compatibility of adjacent land uses does not relate to soil erosion. This change would not result in any adverse environmental impacts.

Conclusion

Existing General Plan Seismic and Geologic Hazards Goal 1 and Policies 3, 5, and 6, Vegetation and Wildlife Policy 4, and Groundwater Recharge and Water Quality Goal 1 and Policy 2 (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Policy SAFE1.3 listed above, would reduce soil erosion by requiring consideration of appropriate land uses on slopes, use of the appropriate construction techniques to stabilize slopes, and the use of contour grading.

Development occurring as part of buildout of the General Plan, and the utilities and public facilities required to serve such development, have the potential to cause an increase in construction-related soil erosion due to increased grading, excavation, movement of construction vehicles, and other construction activities. Eroded soil can be transported into local waterways, resulting in a degradation of water quality. However, compliance with existing stormwater, grading, and erosion control regulations and implementation of policies in the existing General Plan and proposed General Plan Update would reduce the soil erosion impact by requiring applicants to implement BMPs based on the City's *Stormwater Quality BMP Guidance Manual for Construction*, develop and implement a SWPPP, comply with the City's Grading Ordinance, comply with the City's Design and Construction Standards, and comply with the avoidance and minimization measures contained in the Open Space Preserve Overarching Management Plan, all of which are specifically designed to minimize construction-related soil erosion and degradation of water quality to the maximum extent feasible. This impact is **less than significant**.

Mitigation Measure

No mitigation is required.

IMPACT 4.7-3 **Geologic Hazards Related to Unstable and Expansive Soils.** *Development occurring as a part of General Plan buildout would result in the construction of buildings and infrastructure in areas of unstable soils and soils with a moderate to high shrink-swell potential. Implementation of the policies in the proposed General Plan Update, combined with relevant laws and ordinances, would reduce the potential for hazards from unstable and expansive soils. This impact is **less than significant**.*

Land use change occurring as a part of buildout of the General Plan would place buildings and infrastructure in areas of unstable soils, and soils with high a shrink-swell potential. A review of NRCS (2019) soil data indicates that Planning Area soils have been rated with moderate limitations for construction of buildings and roads because of a shallow depth to bedrock, low soil bearing strength, and a moderate to high shrink-swell potential. Construction in unstable soils could result in structural damage to buildings, roads, and bridges.

Expansive soils shrink and swell as a result of moisture change. These volume changes can result in damage to building foundations, underground utilities, and other subsurface facilities and infrastructure if they are not designed and constructed appropriately to resist the damage associated with changing soil conditions. Based on a review of NRCS (2019) soil survey data, some of the soil types in the Planning Area have a moderate to high shrink-swell potential, indicating that the soils are expansive.

The City has adopted the CBC. The CBC includes engineering practices that require special design and construction methods to reduce or eliminate hazards from construction in unstable and expansive soil. Compliance with the CBC ensures appropriate design and construction of building foundations to resist soil movement. In addition, the CBC also contains drainage-related requirements to reduce seasonal fluctuations in soil moisture content. Construction in soils of low strength is also addressed in the CBC through implementation of soil engineering tests and amending and compacting soils.

No goals or policies related to risks from construction in unstable or expansive soils that are proposed for revision as part of the proposed General Plan Update.

Conclusion

Development occurring as a part of General Plan buildout has the potential to expose buildings and structures to unstable and expansive soils. However, implementation of existing General Plan Seismic and Geologic Hazards Goal 1 and Policies 2, 5, and 6 (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), and compliance with existing laws and regulations, including Section 111 (Grading) of the City's Design and Construction Standards related to soil testing for earthwork and backfill, would address issues related to unstable and expansive soils by requiring new construction to prepare site-specific geotechnical reports to identify areas of unstable soil and shrink-swell potential, and to follow design specifications contained in the CBC and standard engineering practices to prevent adverse impacts associated with these limitations. This impact is **less than significant**.

Mitigation Measure

No mitigation is required.

IMPACT 4.7-4 **Damage or Destruction of Unique Paleontological Resources, Sites, or Unique Geologic Features During Earthmoving Activities.** *The Planning Area contains paleontologically sensitive rock formations, and therefore construction activities associated with new and/or infill development under buildout of the General Plan and public infrastructure required to serve such development could result in accidental damage to, or destruction of, unknown subsurface paleontological resources. This impact is considered potentially significant.*

As shown on Exhibit 4.7-1, there are a variety of geologic formations in the Planning Area. As discussed in Table 4.7-1, Holocene-age alluvial and basin deposits (which are primarily located along stream channels in the Planning Area) contain only the remains of extant, modern taxa (if any resources are present), which are not considered “unique” paleontological resources. As also discussed in Table 4.7-1, the Valley Springs Formation located in the far southeastern corner of the Planning Area (see Exhibit 4.7-1) contains no known vertebrate fossils or plant fossil assemblages; therefore, its paleontological sensitivity is low. The Rocklin Pluton, also located in the far southeastern corner of the Planning area (see Exhibit 4.7-1), is a type of intrusive rock that formed from magma solidified at great depths below the earth’s surface; thus, it does not contain fossils. Therefore, construction-related earthmoving activities in the alluvial and basin deposits, Valley Springs Formation, and Rocklin Pluton would not affect unique paleontological resources.

The Modesto, Riverbank, Turlock Lake, Mehrten, and Ione Formations all outcrop at the surface in various locations in the Planning Area (see Exhibit 4.7-1). Pleistocene-age sediments of the Modesto, Riverbank, and Turlock Lake Formations have yielded thousands of vertebrate fossils at localities throughout the Central Valley. The Pliocene-age Mehrten Formation, although primarily volcanic in nature, contains lenses of alluvial deposits that have yielded vertebrate fossils from several localities along the eastern margin of the Central Valley. Finally, the Eocene-age Ione Formation has yielded hundreds of plant fossils from large assemblages in the western Sierra Nevada foothills. Therefore, these formations are considered paleontologically sensitive.

The following proposed General Plan Update goals and policies are proposed for revision:

Goal OS4.1: Strengthen Roseville's unique identify through the protection of its archaeological, historic, **paleontological**, and **tribal** cultural resources.

- ▶ **Policy OS4.11: Provide guidance to construction personnel for recognizing paleontological resources and when items of paleontological significance are discovered within the City, a qualified paleontologist shall be called to evaluate the find and to recommend proper action.**

The proposed General Plan Update changes listed above are intended to clarify that the City intends to protect paleontological resources, and therefore these changes would result in an environmental benefit. The proposed changes would not result in any adverse environmental impacts.

Conclusion

The existing General Plan does not contain goals or policies that would protect unique paleontological resources. With the revision to Goal OS4.1, the City’s intent to protect unique paleontological resources is identified, and with the new Policy OS4.11, the City has established the approach to protecting resources during future construction activities. This would help to reduce potential impacts during construction-related earthmoving activities associated with projects envisioned under the proposed General Plan Update that occur in the Modesto,

Riverbank, Turlock Lake, Mehrten, and Ione Formations could damage or destroy unique paleontological resources. While this policy would reduce potential impacts, additional, more specific guidance will be helpful, and this impact is conservatively determined to be **potentially significant**.

Mitigation Measures

Mitigation Measure 4.7-4 – *The proposed General Plan Update should be amended as follows:*

Implementation Measure

Paleontological Resources

Where there is potential for a significant impact to paleontological resources:

1. Consult the Paleontological Sensitivity Map.
2. For projects located in geologic units that are not identified as paleontologically sensitive and which do not involve ground disturbance to a depth greater than 5 feet below the ground surface, no further actions related to paleontological resources shall be required.
3. For projects that would be located in paleontologically sensitive geologic units, or those that would be located in non-paleontologically sensitive surficial units but would involve ground disturbance to a depth greater than 5 feet, provide a site-specific analysis of the project's potential to damage or destroy unique paleontological resources, and measures designed to protect unique paleontological resources, as needed and appropriate. Such measures may include, but are not limited to, construction worker personnel training, periodic monitoring during construction activities, stopping work within 50 feet of any fossil that is discovered, evaluation of the fossil by a qualified paleontologist, and proper recordation and curation of the specimen.

Significance after Mitigation

Implementing Mitigation Measure 4.7-4 would reduce impacts to unique paleontological resources to a **less-than-significant** level because guidance would be provided to construction personnel for projects that could affect unique paleontological resources, and in the event fossil specimens are encountered during construction activities, a paleontologist would be retained to evaluate the fossil and recommend appropriate actions, which may include, but are not limited to, full or part-time construction monitoring, along with appropriate measures for documenting, recording, and curating the specimens.

This page intentionally left blank

4.8 BIOLOGICAL RESOURCES

4.8.1 INTRODUCTION

This section addresses known or potential biological resources in the Planning Area associated with the proposed General Plan Update. To provide context for the impact analysis, this section begins with an environmental setting describing the existing conditions in the Planning Area related to biological resources. Next, the regulatory framework is described, which informs the selection of the significance thresholds used in the impact analysis. The regulatory framework also includes existing General Plan policies related to the impact analysis of this section. The section concludes with the applicable significance thresholds, the impacts of the proposed changes to adopted General Plan policies, recommended mitigation measures, and the significance conclusions.

As part of the impact analysis, Notice of Preparation (NOP) comments were reviewed to help guide the analysis. One NOP comment letter was received from the California Department of Fish and Wildlife (CDFW). Comments from the CDFW included suggestions for analyses that should be included in the DEIR, including an assessment of the flora and fauna; identification of impacts to rare, threatened, endangered, and other sensitive species and their habitats; and the inclusion of appropriate avoidance, minimization, or mitigation measures. The City reviewed and considered this information during preparation of this section.

This proposed General Plan Update does not include any changes to land use designations, expansion to the City's Planning Area, or other physical changes to areas planned for development compared to the existing General Plan, but does include changes to goals and policies, which are analyzed in this EIR.

The biological resources information presented in this section is based on review of the following sources: previous studies conducted for the West Roseville, Sierra Vista, Creekview, and Amoruso Ranch Specific Plan Areas and associated EIRs (City of Roseville 2004, 2010, 2011a, and 2016); a comment letter received from CDFW in response to the NOP (CDFW 2019a); biological resource databases, including the United States Fish and Wildlife Service (USFWS) Information, Planning, and Conservation System (IPaC) (USFWS 2019a), USFWS Critical Habitat Mapper (USFWS 2019b), USFWS National Wetlands Inventory (NWI) Wetlands Mapper (USFWS 2019c), the California Natural Diversity Database (CNDDDB) and Biogeographic Information and Observation System (BIOS) (CDFW 2019a), and the California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants (CNPS 2019a); aerial photography interpretation; and the draft Western Placer County Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP) (PCCP 2018).

4.8.2 ENVIRONMENTAL SETTING

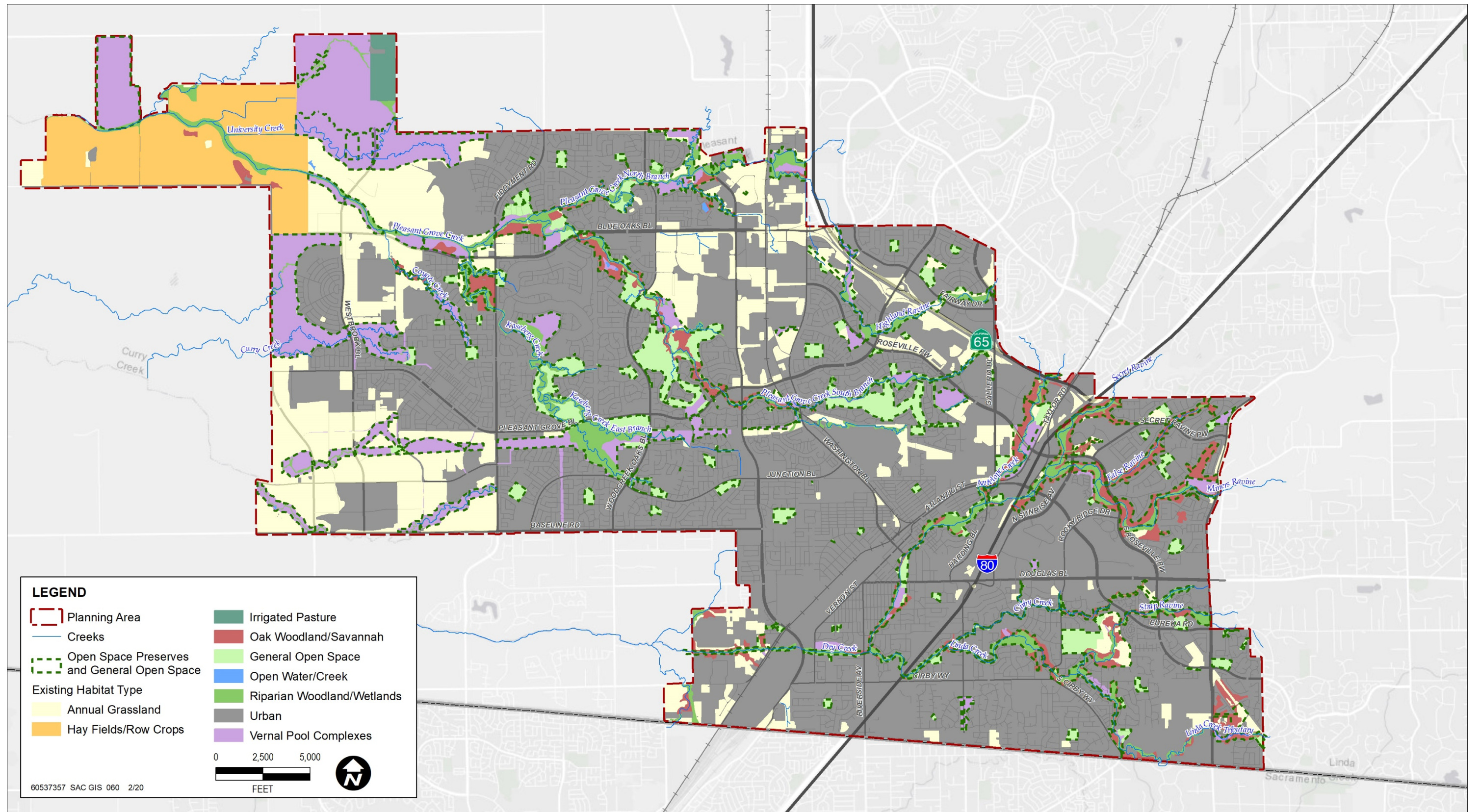
The Planning Area is located along the eastern edge of the Central California Valley ecoregion, which is defined by an underlying geomorphology of alluvial fans and terraces (Griffith, et al. 2016). The region features flat, intensively farmed plains and large areas of urban development. Soils are characterized predominantly by sandy and cobbly loam that is often underlain by a cemented silica hardpan (NRCS 2019). The topography of the Planning Area slopes gently upward from west to east, with elevations ranging from approximately 100 feet in the southwest to approximately 400 feet in the northeast. The Planning Area is located within portions of four watersheds: Pleasant Grove Creek, Dry Creek, Curry Creek, and Steelhead Creek (see Exhibit 4.13-1 in Chapter 4.13, "Hydrology and Water Quality"). These watersheds include numerous creeks and ravines that traverse the Planning Area from east to west, providing wildlife habitat and movement corridors, as well as flood water storage and conveyance across the Planning Area.

Surrounding regional land uses include rice fields and other agriculture to the north and west, and extensive urban development to the east and south, including the cities of Rocklin, Citrus Heights, and Sacramento. Although most of the land within the city limits is urbanized, the Planning Area includes numerous undeveloped properties and a network of designated open spaces and parks that are maintained by the City. Parks and other open spaces within the City's urban settings provide habitat for several native plant and wildlife species. However, diversity and abundance are generally lower compared to natural habitats, which generally are not present within the Planning Area, except for in open space preserves. There are 32 City-owned open space preserves in the Planning Area, all governed by the City of Roseville's *Open Space Preserve Operations and Management Plan* (City of Roseville 2011b) and encompasses a total area of approximately 1,992 acres. In addition, there are at least three privately-owned preserves funded by homeowners' associations that protect another 15 acres of open space habitat in the Planning Area. The City-owned preserves tend to be associated with vernal pool and riparian/wetland areas adjacent to the various creeks and drainages that traverse the Planning Area, serving to protect natural vegetation, wildlife habitat, and movement corridors amidst urban development (Exhibit 4.8-1). Several preserves also protect special-status species, including the federally-threatened vernal pool fairy shrimp (*Branchinecta lynchi*) and valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*)¹ (City of Roseville 2011b). City-owned preserves average approximately 66 acres in size (City of Roseville 2011b). The West Roseville Specific Plan Preserve is the largest preserve in the Planning Area, encompassing 737 acres that connect to, and overlap with the USFWS Vernal Pool Recovery Plan Western Placer County Core Area (USFWS 2005), as well as the western extents of Pleasant Grove Creek and Kaseburg Creek, including adjacent grassland and oak woodland habitats. Another large preserve in the Planning Area is the 227-acre Reason Farms Environmental Preserve (designated for Open Space land use) located in the northwestern portion of the Planning Area, owned by the City of Roseville and managed by the Placer Land Trust to maintain and restore grassland, oak woodland, riparian, and vernal pool habitat (PLT 2019). The approximately 1,518-acre Al Johnson Wildlife Area consists of agricultural fields. This area is designated for Public/Quasi Public land uses and is planned to include two large regional stormwater detention basins in the future.

Agricultural lands are concentrated in the northwestern portion of the Planning Area and consist primarily of dryland farming, including hay fields and row crops, in addition to some irrigated pasture. Agricultural land provides important habitat value for certain wildlife species, including foraging habitat for Swainson's hawk (*Buteo swainsoni*), a state-listed threatened species, and white-tailed kite (*Elanus leucurus*), a CDFW fully-protected species.

Extensive undeveloped areas surround the Planning Area to the north and west contain sensitive habitats and special-status species associated with agricultural land, annual grassland, waterways, and wetlands. Many of the sensitive biological resources described in more detail below are found in these areas. For example, the Toad Hill Ranch Mitigation Bank immediately north of the Planning Area includes 1,630 acres of wetland mitigation lands, including preserved and constructed vernal pools, with habitat for vernal pool fairy shrimp, vernal pool tadpole shrimp (*Lepidurus packardii*), and Swainson's hawk (Wildlands 2019).

¹ City-owned preserves known to support vernal pool fairy shrimp are: Highland Reserve South/Heritage at Diamond Oaks; Silverado Oaks Urban Reserve; West Roseville Specific Plan; Woodcreek North; and Woodcreek West preserves. The Stoneridge Cavitt Ranch/Vista Oaks preserve supports valley elderberry longhorn beetle (City of Roseville 2011).



Sources: City of Roseville 2019, AECOM 2019, DWR 2019

Exhibit 4.8-1

Habitat Types and Preserve Areas

Habitat Types

This page intentionally left blank

4.8.2.1 COMMON HABITAT TYPES IN THE PLANNING AREA

Almost 64 percent of the approximately 29,038-acre Planning Area is currently urban and 5 percent is in agricultural use (Table 4.8-1). Mapped annual grassland habitats, vernal pool complexes, and open water habitats cover approximately 20 percent of the Planning Area. Other habitat types represent approximately seven percent of the total acreage. Habitat types in the Planning Area are shown in Exhibit 4.8-1.

| Table 4.8-1 Habitat Types in the Planning Area | |
|--|---------------|
| Habitat | Acres |
| Urban | 18,635 |
| Row Crops/Hay Fields | 1,336 |
| Irrigated Pasture | 103 |
| Annual Grassland | 3,549 |
| Open Water/Creeks | 6 |
| Oak Woodland/Savannah | 712 |
| Riparian Forest/Wetlands | 1,428 |
| Vernal Pool Complex | 2,249 |
| Total | 29,038 |
| Sources: City of Roseville 2019, DWR 2019; compiled by AECOM 2019. | |

Urban

Urban land cover consists of developed lands that are highly modified by humans, and that generally support little to no native plant species. Vegetation in developed areas is generally limited to horticultural landscaping, such as turf grass and ornamental trees and shrubs in maintained areas and weedy vegetation in areas that are subject to frequent ground disturbance. The majority of the Planning Area is developed, encompassing approximately 19,655 acres of urban land cover.

Agricultural Lands

Agricultural lands are comprised of active row crops, hay fields, and wheat fields concentrated in the northwestern portion of the Planning Area and are subject to regular mechanical disturbance associated with the practices of tillage and crop harvest. Native biodiversity within agricultural lands is generally low because cropland is managed with the goal of producing monotypic vegetation. In addition, ruderal non-native vegetation often occurs along the edges of fields, berms, and roadsides that are subject to frequent ground disturbance, such as regular vegetation clearing with the use of herbicide. Agricultural ditches and drainages sometimes support wetland species and riparian vegetation. The Planning Area has approximately 1,336 acres of agricultural lands.

Irrigated Pasture

Irrigated pasture is commonly dominated by forage grass species, including Bermuda grass (*Cynodon dactylon*), tall flatsedge (*Cyperus eragrostis*), and Kentucky fescue (*Festuca arundinaceae*) (City of Roseville 2016). Irrigated pasture lands are limited to approximately 103 acres in the northern portion of the Planning Area.

Annual Grasslands

Scattered parcels of annual grasslands are found throughout the Planning Area amidst developed lands, typically in association with open space, public lands, and vacant lots. Larger tracts of annual grasslands are concentrated in the western portion of the Planning Area adjacent to and overlapping agricultural lands and open space preserves. Grasslands in the Planning Area are generally subject to some level of periodic maintenance or other type of disturbance, such as disking, mowing, and grazing by cattle or other domestic animals. As a result, they are dominated by nonnative grasses, including foxtail barley (*Hordeum murinum*), Mediterranean barley (*Hordeum marinum* ssp. *gussoneanum*), ripgut brome (*Bromus diandrus*), soft chess brome (*Bromus hordeaceus*), Italian rye grass (*Festuca perennis*), and wild oats (*Avena fatua*, *A. barbata*). Commonly observed forbs in annual grassland include nonnative species such as cutleaf geranium (*Geranium dissectum*) and redstem filaree (*Erodium cicutarium*), and native wildflowers such as valley tassels (*Castilleja attenuata*), tarplant (*Holocarpha virgata*), and California poppy (*Eschscholzia californica*). The Planning Area has approximately 3,549 acres of annual grasslands.

Grassland habitat tends to support a modest diversity of wildlife species, including small mammals, such as California ground squirrel (*Spermophilus beecheyi*), western harvest mouse (*Reithrodontomys megalotis*), California vole (*Microtus californicus*), black-tailed jackrabbit (*Lepus californicus*), deer mouse (*Peromyscus maniculatus*), and Botta's pocket gopher (*Thomomys bottae*) that provide a prey base for raptors and other predators, such as northern harrier (*Circus hudsonius*), red-tailed hawk (*Buteo jamaicensis*), Swainson's hawk, white-tailed kite, gopher snake (*Pituophis catenifer*), western rattlesnake (*Crotalus viridis*), and coyote (*Canis latrans*). Grasslands often provide suitable nesting substrate for the horned lark (*Eremophila alpestris*), burrowing owl (*Athene cunicularia*), northern harrier, and western meadowlark (*Sturnella neglecta*). Other birds, which do not necessarily nest within the grasslands but may forage in this habitat, include Brewer's blackbirds (*Euphagus cyanocephalus*) and tricolored blackbird (*Agelaius tricolor*).

Open Water/Creeks

The open water land cover type consists of constructed ponds, including treatment ponds, retention basins, and farm/stock ponds, as well as the various mapped creeks and drainages that traverse the Planning Area. Approximately two acres of stock ponds were mapped in the Sierra Vista Specific Plan Area, along with 0.4 acres in the Amoruso Ranch Specific Plan Area (City of Roseville 2010, 2016). Retention ponds are designed to store stormwater for long durations and generally include a permanent pool of water. Features mapped as open water typically contain some amount of permanent surface water. Open water and creeks are limited to approximately six acres within the Planning Area.

Oak Woodland/Savannah

Oak woodlands and savannahs occur as scattered patches throughout the Planning Area along the outer edges of riparian corridors, and as small stands within agricultural, grassland, and vernal pool habitats. These habitats are dominated by native oak trees, including blue oak (*Quercus douglasii*), valley oak (*Quercus lobata*), and interior live oak (*Quercus wislizeni*). Other woody species often include native shrubs, such as hoary coffeeberry (*Frangula californica* ssp. *Tomentella*), coyote bush (*Baccharis pilularis*), toyon (*Heteromeles arbutifolia*), and poison oak (*Toxicodendron diversilobum*). Herbaceous understory plants include a variety of non-native grasses, such as ripgut brome, medusahead grass (*Elymus caput-medusae*), soft chess brome, wild oats, Mediterranean barley, and Italian ryegrass, all of which are especially predominant in oak savannahs.

Oak woodlands and savannahs provide important wildlife resources, including food, cover, shade, roosting, and breeding sites. Oak trees produce an abundance of acorns, which are an essential part of the diets of many species of native wildlife, including acorn woodpecker (*Melanerpes formicivorus*), California scrub-jay (*Aphelocoma californica*), and western gray squirrel (*Sciurus griseus*). Insects found in association with oak foliage and bark also attract insectivorous birds, such as yellow-rumped warbler (*Dendroica coronata*) and Hutton's vireo (*Vireo huttoni*). Larger, dead, and/or decaying trees provide nesting sites for cavity-nesting birds, such as American kestrel (*Falco sparverius*), western bluebird (*Sialia mexicana*), tree swallow (*Tachycineta bicolor*), and white-breasted nuthatch (*Sitta carolinensis*). Other wildlife species that may be found in the oak woodland/savannah include coyote, mule deer (*Odocoileus hemionus*), Mexican free-tailed bat (*Tadarida brasiliensis*), big brown bat (*Eptesicus fuscus*), pallid bat (*Antrozous pallidus*), Pacific chorus frog (*Pseudacris regilla*), western fence lizard (*Sceloporus occidentalis*), California kingsnake (*Lampropeltis getulus*), sharp-tailed snake (*Contia tenuis*), and striped racer (*Masticophis lateralis*). The Planning Area has approximately 712 acres of woodlands and savannahs.

Riparian Woodland/Wetlands

Within the Planning Area, riparian woodland and adjacent wetlands are found along the edges of creek corridors. Creek banks are often characterized by transitional wetlands, such as marshes, that intergrade with a riparian woodland canopy comprised of mature trees, an intermediate shrub layer, and herbaceous ground-cover. The stratified community provides an important migration corridor for a variety of wildlife, in addition to providing a wide variety of forage and cover. Wetland types are described in Section 4.8.2.2.

The canopy of the riparian woodland is typically comprised primarily of valley oak with scattered black willow (*Salix gooddingii*), Fremont cottonwood (*Populus fremontii*), and California buckeye (*Aesculus californica*). Herbaceous riparian understory often includes a mixture of native and non-native grasses and forbs, including Canada thistle (*Cirsium arvense*), bull thistle (*Cirsium vulgare*), tall flatsedge (*Cyperus eragrostis*), hairy willow-herb (*Epilobium ciliatum*), prickly sowthistle (*Sonchus asper*), vetch (*Vicia villosa*), rough cockle-bur (*Xanthium strumarium*), as well as California wild grape (*Vitis californica*). However, there is only remnant understory vegetation through most of the Pleasant Grove Creek corridor as a result of extensive cattle grazing (City of Roseville 2011b).

Riparian communities typically support a wide variety of bird species, including Bewick's wren (*Thryomanes bewickii*), downy woodpecker (*Picoides pubescens*), Swainson's hawk, wood duck (*Aix sponsa*), red-shouldered hawk (*Buteo lineatus*), great horned owl (*Bubo virginianus*), and tree swallow. Several bat species as previously described in the oak woodland community may occur within the riparian areas, as well.

The understory scrub community provides nesting habitat for song sparrow (*Melospiza melodia*) and California towhee (*Pipilo crissalis*). Resident and migratory songbirds, such as hermit thrush (*Catharus guttatus*), fox sparrow (*Passerella iliaca*), and spotted towhee also utilize willow scrub communities for foraging and cover. Other wildlife species observed within the riparian communities include Pacific chorus frog, western gray squirrel, mule deer, striped skunk (*Mephitis mephitis*), beaver (*Castor canadensis*), common garter snake (*Thamnophis sirtalis*), and raccoon (*Procyon lotor*). There are approximately 1,428 acres of riparian woodlands and wetlands within the Planning Area.

Vernal Pool Complexes

Vernal pool complexes are habitats that consist of uplands and ephemeral wetlands and drainages (i.e., vernal pools and swales) that are described in detail in section 4.8.2.2. This habitat type is found throughout the Planning Area, generally as small patches within open space preserves and in association with upland terraces along various creek drainage corridors. Larger expanses of vernal pool complexes are found in rolling grasslands in the western and northern portions of the Planning Area within the Reason Farms Environmental Preserve (PLT 2019), the Creekview Specific Plan Area (City of Roseville 2011a), the Amoruso Ranch Specific Plan Area (City of Roseville 2016), and the West Roseville Specific Plan Area (City of Roseville 2004). Numerous plant and animal species found in the Planning Area are endemic to vernal pools, and include several special-status species, such as dwarf downingia (*Downingia pusilla*), Boggs Lake hedge hyssop (*Gratiola heterosepala*), and the vernal pool fairy shrimp.

The upland portion of the vernal pool grassland community is comprised primarily of non-native naturalized Mediterranean grasses, such as ripgut brome, soft chess brome, wild oats, Italian ryegrass, Mediterranean barley, and medusahead. Other herbaceous species in this community may include bur clover (*Medicago polymorpha*), redstem filaree, clover (*Trifolium* species), field cluster lily (*Dichelostemma capitatum*), Fitch's spikeweed (*Centromadia fitchii*), and yellow star-thistle (*Centaurea solstitialis*). Wildlife usage of these areas is like that described for the annual grassland habitat type, above. There are approximately 2,249 acres of vernal pool complexes within the Planning Area.

4.8.2.2 SENSITIVE HABITAT TYPES IN THE PLANNING AREA AND VICINITY

Sensitive habitats are defined as habitats with particularly high ecological values or functions, of limited distribution, or otherwise of concern to federal, State, and/or local resource agencies.² Sensitive habitats mapped in the vicinity of the Planning Area include perennial streams, intermittent drainages, freshwater marsh, riparian forest, freshwater wetlands, drainages, and vernal pool complexes (Exhibit 4.8-1). Most sensitive habitats in the Planning Area are also considered jurisdictional wetlands.

The Planning Area is overlapped by the Pleasant Grove Creek, Dry Creek, Curry Creek, and Steelhead Creek watersheds. Pleasant Grove Creek originates approximately five miles east of the Planning Area near the City of Rocklin and then drains westward to the Pleasant Grove Canal, which connects to the Sacramento River just south of its confluence with the Feather River, approximately eight miles west of the Planning Area (EPA 2018). Dry Creek originates in the upper portions of the Loomis Basin in the vicinity of the town of Newcastle, approximately nine miles northeast of the Planning Area, and terminates at its confluence with Steelhead Creek (i.e., the Natomas East Main Drainage Canal [NEMDC]), which connects to the Sacramento River, approximately 9 miles to the southwest (EPA 2018). Neither Pleasant Grove Creek nor Dry Creek connect to upstream reservoirs. Although identified as a separate watershed, Curry Creek is currently considered to be a tributary of Pleasant Grove Creek. Curry Creek discharges into the Pleasant Grove Creek Canal approximately 0.5 mile south of the Pleasant Grove Creek confluence with the canal in Sutter County, west of the Planning Area. Steelhead

² Sensitive habitats are often designated because they are declining regionally or statewide. Sensitive habitats are of special concern because they have high potential to support special-status plant and animal species and can provide other important ecological functions, such as enhancing flood and erosion control and maintaining water quality. Sensitive habitats include Sensitive Natural Communities that are identified by the California Department of Fish and Wildlife (CDFW) (e.g., having a high priority for inventory by the California Natural Diversity Database [CNDDB]) or those afforded specific consideration through CEQA, Section 1602 of the California Fish and Game Code, California's Porter-Cologne Act, or Section 404 of the Clean Water Act (CWA).

Creek, also known as the NEMDC, flows into the Sacramento River immediately upstream from the confluence of the American and Sacramento rivers. For additional discussion related to regional hydrology and wetlands, please see Section 4.13 of this EIR, “Hydrology and Water Quality.”

Perennial Streams

The Pleasant Grove Creek watershed within the Planning Area is comprised of the north and south forks of Pleasant Grove Creek, Kaseberg Creek, Coyote Creek, and several unnamed seasonal drainages and tributaries. Most of these creeks are perennially inundated due to surface runoff and from upstream activities. The Dry Creek watershed within the Planning Area is comprised of Secret Ravine, Miners Ravine, False Ravine, Antelope Creek, Cirby Creek, and Linda Creek. Like the Pleasant Grove watershed, most of these creeks are perennially inundated. Secret Ravine, Miners Ravine and Linda Creek are all considered potential salmonid habitat, while the main stem of Dry Creek is considered a migratory passage for Steelhead salmon. These streams support mature riparian forest habitat along the stream banks. The creeks and associated riparian forest provide important movement corridors for wildlife in an otherwise urban setting. Special-status wildlife that may use these habitats include Swainson’s hawk, Steelhead – Central Valley Distinct Population Segment, and numerous species of migratory birds.

Intermittent Drainages

Intermittent drainages are characterized by the presence of an ordinary high-water mark that can have a defined bed and bank. These drainage features convey flows during storm events and through the wet season, however standing water generally does not persist except in areas where deeper pools form. These types of drainages are largely unvegetated due to the scouring effects of fast flowing water, but hydrophytic vegetation may be prevalent at the upper edges of the drainage. Approximately 1.77 acres of intermittent streams were mapped in the Creekview Specific Plan Area (City of Roseville 2011a). University Creek, a tributary to Pleasant Grove Creek, was mapped as an intermittent drainage as part of the wetland mapping effort for the Amoruso Specific Plan (City of Roseville 2016).

Freshwater Marsh

The freshwater emergent marshes in the Planning Area are typically perennial systems within or adjacent to riparian areas in open space preserves. Freshwater marsh and associated wetlands form in permanently, or nearly permanently flooded or saturated soils in depressions or at the edges of streams, rivers, ponds, and lakes, as well as ditches and canals. Distinct vegetation zones often form as rings, strips, or patches in response to varying water depths and hydroperiods. Freshwater marshes are dominated by large, perennial herbaceous plants, particularly hardstem bulrush (*Schoenoplectus acutus* var. *acutus*) and cattail (*Typha* spp.). Cattail and bulrush species typically create dense monotypic stands of vegetation with few species present in the understory. Freshwater marsh habitat has generally not been mapped within the Planning Area, but minor areas of freshwater marsh habitat are expected to occur along creeks, canals, and ponds within the Planning Area. Two marshes totaling 1.822 acres were mapped within the Amoruso Specific Plan Area (City of Roseville 2016) and 2.7 acres of seasonal marsh were mapped in the Creekview Specific Plan Area (City of Roseville 2011a).

Seasonal Wetlands and Vernal Pools

Seasonal wetlands have generally not been mapped within the Planning Area but are expected to form in seasonally flooded or saturated soils in depressions or at the edges of streams, rivers, ponds, and lakes, as well as

ditches and canals that occur throughout the Planning Area in open space preserves, vacant lands, and agricultural areas. There are 4.827 acres of seasonal wetlands mapped within the Amoruso Ranch Specific Plan Area (City of Roseville 2016), 2.278 acres in the Sierra Vista Specific Plan Area (City of Roseville 2010), and 9.18 acres in the Creekview Specific Plan Area (City of Roseville 2011a). Dominant vegetation in these wetlands includes Mediterranean barley, Italian ryegrass, slender popcorn-flower (*Plagiobothrys stipitatus*), white-head navarretia (*Navarretia leucocephalus*), and hairy hawkbit (*Leontodon saxatilis*) (City of Roseville 2016).

Vernal pools are a type of seasonal wetland found in the Planning Area in open space areas, typically surrounding creeks and drainages. A total of approximately 2,249 acres of vernal pool complexes (i.e., vernal pool wetlands and surrounding uplands) has been mapped throughout the Planning Area, generally as small remnant patches along designated open space corridors, as well as a few larger complexes in the northwestern portion of the Planning Area. Vernal pools are ephemeral wetlands that form in shallow depressions underlain by an impervious or restrictive soil layer near the surface that restricts the percolation of water. These wetland types support low-growing, herbaceous plant communities dominated by annual plants and are typically characterized by a high percentage of native plant species, many of which may be endemic (restricted) to vernal pools. Preserved vernal pools throughout the City include both natural and constructed wetlands. Constructed wetlands were created as mitigation in several Open Space Preserve areas. Vernal pools are dominated by native plants, such as slender popcorn-flower, annual hairgrass (*Deschampsia danthonioides*), downingia (*Downingia* species), and Vasey's coyote-thistle (*Eryngium vaseyi*). Typical wildlife associated with vernal pools include various aquatic invertebrates and amphibians, as well as waterfowl and wading bird species that may forage and/or rest within vernal pools during the wet season.

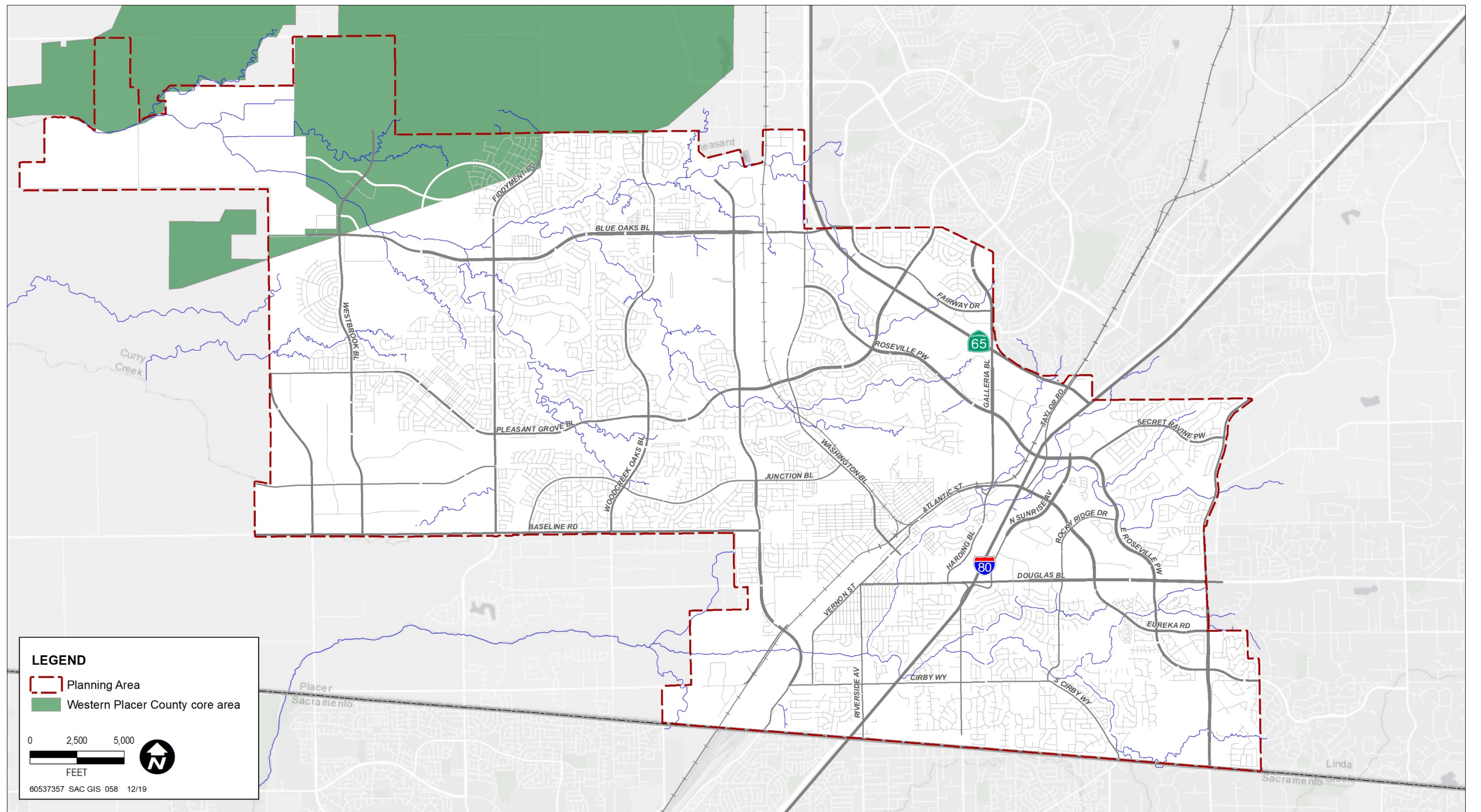
On December 15, 2005, USFWS released *The Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon*. This plan focuses on 33 species of plants and animals that occur exclusively or primarily within vernal pool ecosystems, including the federally listed vernal pool fairy shrimp and vernal pool tadpole shrimp. This plan includes several core habitat recovery areas, one of which (the Western Placer County Core Area) overlaps with the Planning Area (Exhibit 4.8-2). Special-status species associated with vernal pool habitats, and their potential to occur in the Planning Area, are further discussed in Section 4.8.2.4.

Riparian Habitat

Riparian habitat is defined in the context of Section 1600 of the California Fish and Game Code. CDFW takes jurisdiction over riparian habitat. According to guidance provided in *A Field Guide to Lake and Streambed Alteration Agreements: Section 1600 Fish and Game Code*, the outer edge of riparian vegetation is a reasonable and identifiable boundary for the lateral extent of a stream, the protection of which should result in preserving the fish and wildlife at risk within a stream or drainage, and therefore may constitute the limits of CDFW jurisdiction along waterways. Within the Planning Area, riparian woodlands/wetlands are mapped along the banks and floodplains of major creeks and drainages (Exhibit 4.8-1). These habitats tend to be structurally diverse and dominated by trees. However, any vegetation that overlaps waterways within the Planning Area may be subject to regulation by CDFW under Section 1602 of the California Fish and Game Code.

4.8.2.3 GENERAL WILDLIFE USAGE OF THE PLANNING AREA

The majority of the Planning Area is characterized by developed and agricultural lands. Developed lands are generally not of high value for wildlife. Birds and mammals that occur in these areas typically include introduced species and those that are adapted to human habitation, such as Eurasian collared dove (*Streptopelia decaocto*),



Source: USFWS 2005

Exhibit 4.8-2

USFWS Vernal Pool Recovery Plan - Western Placer County Core Area

This page intentionally left blank

European starling (*Sturnus vulgaris*), rock pigeon (*Columba livia*), house sparrow (*Passer domesticus*), mourning dove (*Zenaida macroura*), American crow (*Corvus branchyrhynchus*), house finch (*Carpodacus mexicanus*), eastern fox squirrel (*Sciurus niger*), brown rat (*Rattus norvegicus*), North American possum (*Didelphis virginiana*), and raccoon (*Procyon lotor*). Although agricultural lands typically provide lower habitat values for most species than native habitats, they can provide important foraging habitat for some species, such as Swainson's hawk and tricolored blackbird, and generally provide greater habitat values than urban areas and developed land. Although not present in the Planning Area, rice fields are regionally important and support large wintering populations of waterfowl and shorebirds and provide habitat for the federally-threatened giant garter snake. Alfalfa, disked fields, fallow fields, dry-land pasture, irrigated pasture, grain, hay, and other row crops tend to support large rodent populations and therefore provide foraging habitat for Swainson's hawk, white-tailed kite, northern harrier, and more common raptors, such as American kestrel (*Falco sparverius*), great horned owl, and red-tailed hawk.

Annual grasslands and vernal pool complexes in the Planning Area support numerous small mammal species that provide prey for a variety of raptor species that are likely to hunt in the area. Other common species expected to use these habitats include western toad (*Bufo boreas*), gopher snake, racer (*Coluber constrictor*), western fence lizard (*Sceloporus occidentalis*), western kingbird (*Tyrannus verticalis*), western meadowlark, Brewer's blackbird, striped skunk, black-tailed jackrabbit, and coyote.

Aquatic habitats in and near the Planning Area support a number of common wildlife species, including red-winged blackbird (*Agelaius phoeniceus*), mallard (*Anas platyrhynchos*), cinnamon teal (*Anas cyanoptera*), belted kingfisher (*Ceryle alcyon*), great blue heron (*Ardea herodias*), great egret (*Ardea alba*), American bullfrog (*Rana catesbeiana*), and Pacific chorus frog (*Pseudacris sierra*).

4.8.2.4 SPECIAL-STATUS SPECIES

Special-status species include plants and animals in the following categories:

- ▶ species officially listed by the State of California or the Federal government as endangered, threatened, or rare;
- ▶ candidates for state or federal listing as endangered or threatened;
- ▶ taxa (i.e., taxonomic categories or groups) that meet the criteria for listing, even if not currently included on any list, as described in Section 15380 of the State CEQA Guidelines;
- ▶ species identified by the CDFW as species of special concern;
- ▶ species listed as Fully Protected under the California Fish and Game Code;
- ▶ species afforded protection under local or regional planning documents; and
- ▶ taxa considered by CDFW to be "rare, threatened, or endangered in California" and assigned a California Rare Plant Rank (CRPR). The CDFW system includes six rarity and endangerment ranks for categorizing plant species of concern, which are summarized as follows:

- CRPR 1A - Plants presumed to be extinct in California;
- CRPR 1B - Plants that are rare, threatened, or endangered in California and elsewhere;
- CRPR 2A - Plants presumed to be extinct in California, but more common elsewhere;
- CRPR 2B - Plants that are rare, threatened, or endangered in California, but more common elsewhere;
- CRPR 3 - Plants about which more information is needed (a review list); and
- CRPR 4 - Plants of limited distribution (a watch list).

All plants with a CRPR are considered “special plants” by CDFW. The term “special plants” is a broad term used by CDFW to refer to all the plant taxa inventoried in CDFW’s CNDDDB, regardless of their legal or protection status. Plants ranked as CRPR 1A, 1B, 2A, and 2B may qualify as endangered, rare, or threatened species within the definition of CEQA Guidelines Section 15380. CDFW recommends that potential impacts to CRPR 1 and 2 species be evaluated in CEQA documents. In general, CRPR 3 and 4 species do not meet the definition of endangered, rare, or threatened pursuant to CEQA Guidelines Section 15380. However, these species may be evaluated by the lead agency on a case-by-case basis.

A list of special-status species that could potentially occur in the Planning Area or immediate vicinity, provided suitable habitat conditions are present, was developed through review of available background reports; previous studies conducted in or near the Planning Area; biological resource databases, including the CNDDDB and CNPS Inventory; a list obtained from the U.S. Fish and Wildlife Service Information, Planning, and Conservation System (IPaC); and the draft Western Placer County Habitat Conservation Plan/Natural Community Conservation Plan.

Special-Status Plants

AECOM biologists compiled a list of special-status plant species with potential to occur in the project region. The list was compiled using information provided in the USFWS IPaC database (USFWS 2019a); documentation of species during technical studies prepared for the West Roseville, Sierra Vista, Creekview, and Amoruso Ranch Specific Plans (City of Roseville 2004, 2010, 2011a, 2016); and the results of a search of the CNPS (2019a) and CNDDDB databases (CDFW 2019b) for the five USGS quadrangles within which the Planning Area occurs – Pleasant Grove, Roseville, Rocklin, Citrus Heights, and Folsom – as well as the surrounding 14 USGS quadrangles: Verona, Nicolaus, Sheridan, Lincoln, Rio Linda, Taylor Monument, Folsom, Gold Hill, Auburn, Pilot Hill, Clarksville, Carmichael, Buffalo Creek, Folsom SE, and Sacramento East (USGS 2018a-s).

The database searches resulted in a total of 23 special-status plant species evaluated for their potential to occur on within or in the vicinity of the Planning Area. Table 4.8-2 summarizes the regulatory status, habitat, potential for occurrence, and results of botanical surveys within the Planning Area for each species (CDFW 2019b).

Based on database search results and results of botanical survey work for the West Roseville, Sierra Vista, and Amoruso Ranch Specific Plans, there are six special-status plant species with records in, or adjacent to the Planning Area: big-scale balsam root, Boggs Lake hedge hyssop, dwarf downingia, Hispid salty bird’s-beak, legenere, and Sanford’s arrowhead. Additional species that could occur due to the presence of suitable vernal pool habitat include Ahart’s dwarf rush and pincushion navarretia.

| Table 4.8-2 Special-Status Plant Species with Potential to Occur Within the Planning Area | | | | | | | | |
|--|--------------------------|-----------------------------|-------|-------------------|--|---|-----------------|---|
| Species | | Listing Status ¹ | | | Habitat Requirements | Elevation Range (feet AMSL ³) | Blooming Period | Potential for Occurrence in the Planning Area ⁴ |
| Scientific Name | Common Name | Federal | State | CRPR ² | | | | |
| <i>Allium jepsonii</i> | Jepson's onion | - | - | 1B.2 | Serpentine or volcanic soil in chaparral, cismontane woodland, and lower montane coniferous forest. | 980–4,330 | Apr–Aug | No potential; no suitable habitat (serpentine or volcanic soils) present. |
| <i>Balsamorhiza macrolepis</i> | big-scale balsamroot | - | - | 1B.2 | Chaparral, cismontane woodland, valley and foothill grassland; sometimes on serpentine soils | 145–5,100 | Mar–Jun | Could Occur; suitable habitat (grassland) present in the Planning Area, and there is one record of this species within 2 miles to the north of the Planning Area, in uncultivated ground near railroad tracks (CDFW 2019b). Although not found during botanical surveys, species considered to have low potential to occur within the Amoroso Ranch Specific Plan Area (City of Roseville 2016). |
| <i>Calystegia stebbinsii</i> | Stebbins' morning-glory | FE | SE | 1B.1 | Gabbroic or serpentine soils in openings in chaparral and cismontane woodland. | 605–3,575 | Apr–Jul | No potential; no suitable habitat (gabbroic or serpentine soils) present. |
| <i>Carex xerophila</i> | chaparral sedge | - | - | 1B.2 | Serpentine or gabbroic soils in chaparral, cismontane woodland, and lower montane coniferous forest. | 1,440–2,525 | Mar–Jun | No potential; no suitable habitat (gabbroic or serpentine soils) present. |
| <i>Ceanothus roderickii</i> | Pine Hill ceanothus | FE | SR | 1B.1 | Serpentine or nutrient-deficient gabbroic soil in chaparral and cismontane woodland. | 800–3,575 | Apr–Jun | No potential; no suitable habitat (gabbroic or serpentine soils) present. |
| <i>Chlorogalum grandiflorum</i> | Red Hills soaproot | - | - | 1B.2 | Serpentine, gabbroic, or other soils in chaparral, cismontane woodland, and lower montane coniferous forest. | 800–5,545 | May–Jun | No potential; no suitable habitat (gabbroic or serpentine soils) present. |
| <i>Chloropyron molle</i> ssp. <i>hispidum</i> | hispid salty bird's-beak | - | - | 1B.1 | Alkaline soils in meadows, seeps, and playas in valley and foothill grassland. | 0–510 | Jun–Sep | Not likely to occur; no suitable habitat (alkaline seep, meadow, or playa) mapped within the Planning Area. There is only one record of this species within a 19-quad search radius, and it is approximately 2 miles northeast of the Planning Area at the Stanford Ranch Alkali Seep Preserve (CDFW 2019b). |

| Table 4.8-2 Special-Status Plant Species with Potential to Occur Within the Planning Area | | | | | | | | |
|--|-------------------------|-----------------------------|-------|-------------------|--|---|-----------------|---|
| Species | | Listing Status ¹ | | | Habitat Requirements | Elevation Range (feet AMSL ³) | Blooming Period | Potential for Occurrence in the Planning Area ⁴ |
| Scientific Name | Common Name | Federal | State | CRPR ² | | | | |
| <i>Downingia pusilla</i> | dwarf downingia | - | - | 2B.2 | Mesic sites and vernal pools in valley and foothill grassland. | 0–1,460 | Mar–May | Known to Occur; suitable habitat (vernal pools in valley grassland) present, and there are 13 records of this species within the Planning Area (CDFW 2019b). Species found during botanical surveys within the West Roseville Specific Plan Area in 2000; the Sierra Vista Specific Plan Area in 2007; the Creekview Specific Plan Area in 2008; and in 2015 within the Amoroso Ranch Specific Plan Area (City of Roseville 2004, 2010, 2011a, 2016). Also located off-site at the Al Johnson Wildlife Area (Reason Farms) improvements area (City of Roseville 2016). |
| <i>Eryngium pinnatisectum</i> | Tuolumne button-celery | - | - | 1B.2 | Mesic sites and vernal pools in cismontane woodland and lower montane coniferous forest. | 225–3,000 | May–Aug | No potential; no suitable habitat (cismontane woodland or lower-montane coniferous forest) present. There is only one record of this species in a 19-quad search radius, and it is from a 1941 collection on Michigan Bar, 25 miles southeast of the Planning Area (CDFW 2019b). |
| <i>Fremontodendron decumbens</i> | Pine Hill flannelbush | FE | SR | 1B.2 | Rocky gabbroic or serpentine soils in chaparral and cismontane woodland. | 1,390–2,495 | Apr–Jul | No potential; no suitable habitat (gabbroic or serpentine soils) present. |
| <i>Galium californicum</i> ssp. <i>sierrae</i> | El Dorado bedstraw | FE | SR | 1B.2 | Gabbroic soils in chaparral, cismontane woodland, and lower montane coniferous forest. | 325–1,920 | May–Jun | No potential; no suitable habitat (gabbroic soils) present. |
| <i>Gratiola heterosepala</i> | Boggs Lake hedge-hyssop | - | SE | 1B.2 | Marshes and swamps (lake margins), and vernal pools. | 30–7,790 | Apr–Aug | Known to occur; suitable habitats (marshes and vernal pools) present and there are 3 records of this species from within the Planning Area (CDFW 2019b). Observed in one deep basin vernal pool in the Creekview Specific Plan Area (City of Roseville 2011a). |

| Table 4.8-2 Special-Status Plant Species with Potential to Occur Within the Planning Area | | | | | | | | |
|--|----------------------|-----------------------------|-------|-------------------|--|---|-----------------|--|
| Species | | Listing Status ¹ | | | Habitat Requirements | Elevation Range (feet AMSL ³) | Blooming Period | Potential for Occurrence in the Planning Area ⁴ |
| Scientific Name | Common Name | Federal | State | CRPR ² | | | | |
| <i>Hibiscus lasiocarpus</i> var. <i>occidentalis</i> | woolly rose-mallow | - | - | 1B.2 | Freshwater marshes and swamps, often in riprap on sides of levees. | 0–395 | Jun–Sep | Not likely to occur; potentially suitable habitat (freshwater marsh) in the Planning Area is marginal, with little or no riprap levees. There is only one record of this species in a 19-quad search radius, along East Side Canal approximately 5 miles to the northwest of the Planning Area (CDFW 2019b). |
| <i>Juncus leiospermus</i> var. <i>ahartii</i> | Ahart's dwarf rush | - | - | 1B.2 | Mesic sites in valley and foothill grassland. | 95–750 | Mar–May | Could occur; suitable habitat (grassland) present throughout the Planning Area. The nearest record of this species is from within the city of Lincoln in Placer County (CDFW 2019b). Species considered to have low potential to occur within the Amoruso Ranch Specific Plan Area (City of Roseville 2016). |
| <i>Juncus leiospermus</i> var. <i>leiospermus</i> | Red Bluff dwarf rush | - | - | 1B.1 | Vernally mesic sites including meadows, seeps, and vernal pools in chaparral and cismontane woodlands. | 110–4,100 | Mar–Jun | Not likely to occur; no suitable habitat (chaparral and cismontane woodlands) in the Planning Area. Although there is one occurrence of this species from within the Planning Area, it is considered an erroneous record and likely a misidentification (CDFW 2019b). Considered to have low potential to occur within the Amoruso Ranch Specific Plan Area (City of Roseville 2016). |
| <i>Legenere limosa</i> | legenere | - | - | 1B.1 | Vernal pools | 0–2,885 | Apr–Jun | Could occur; suitable habitat (vernal pools) present in the Planning Area. There are two records of this species within 2 miles, in the floodplain of Pleasant Grove Creek (CDFW 2019b). Although not found during botanical surveys, species considered to have low potential to occur within the Amoruso Ranch Specific Plan Area (City of Roseville 2016). |

| Table 4.8-2 Special-Status Plant Species with Potential to Occur Within the Planning Area | | | | | | | | |
|--|-------------------------|-----------------------------|-------|-------------------|--|---|-----------------|---|
| Species | | Listing Status ¹ | | | Habitat Requirements | Elevation Range (feet AMSL ³) | Blooming Period | Potential for Occurrence in the Planning Area ⁴ |
| Scientific Name | Common Name | Federal | State | CRPR ² | | | | |
| <i>Navarretia myersii</i> ssp. <i>myersii</i> | pincushion navarretia | - | - | 1B.1 | Vernal pools, often with acidic soils. | 60–1,085 | Apr–May | Could occur; suitable habitat (vernal pools) present in the Planning Area. There are 2 records of this species within 10 miles of the Planning Area: one is from the Phoenix Field Ecological Reserve in Fair Oaks approximately 4 miles to the south, and the other is from a 1971 collection in Lincoln, 6 miles to the north (CDFW 2019b). Although not found during botanical surveys, species considered to have low potential to occur within the Amoruso Ranch Specific Plan Area (City of Roseville 2016). |
| <i>Orcuttia tenuis</i> | slender Orcutt grass | FT | SE | 1B.1 | Vernal pools, often with gravelly soils. | 110–5,775 | May–Sep (Oct) | Not likely to occur; although suitable habitat (vernal pools) is present, there are no records of this species in Placer County (CDFW 2019b). There is only one record of this species within a 19-quad search radius, approximately 20 miles to the south, near Mather Field. Considered to have low potential to occur within the Amoruso Ranch Specific Plan Area (City of Roseville 2016). |
| <i>Orcuttia viscida</i> | Sacramento Orcutt grass | FE | SE | 1B.1 | Vernal pools | 95–330 | Apr–Jul (Sep) | Not likely to occur; although suitable habitat (vernal pools) is present, there are no records of this species in Placer County (CDFW 2019b). There are 11 records of this species several miles to the south of the Planning Area in Sacramento County. Considered to have low potential to occur within the Amoruso Ranch Specific Plan Area (City of Roseville 2016). |
| <i>Packera layneae</i> | Layne’s ragwort | FT | SR | 1B.2 | Rocky serpentine or gabbroic soils in chaparral and cismontane woodland. | 655–3,560 | Apr–Aug | No potential; no suitable habitat (gabbroic or serpentine soils) present. |
| <i>Sagittaria sanfordii</i> | Sanford’s arrowhead | - | - | 1B.2 | Marshes, swamps, and other shallow freshwater habitats. | 0–2,135 | May–Oct (Nov) | Could occur; suitable habitat (freshwater wetlands) present within the Planning Area. There are three records of this species within 2 miles of the Planning Area in drainage channel habitats (CDFW 2019b). |

| Table 4.8-2 Special-Status Plant Species with Potential to Occur Within the Planning Area | | | | | | | | |
|--|----------------------------|-----------------------------|-------|-------------------|--|---|-----------------|---|
| Species | | Listing Status ¹ | | | Habitat Requirements | Elevation Range (feet AMSL ³) | Blooming Period | Potential for Occurrence in the Planning Area ⁴ |
| Scientific Name | Common Name | Federal | State | CRPR ² | | | | |
| <i>Viburnum ellipticum</i> | oval-leaved viburnum | - | - | 2B.3 | Chaparral, cismontane woodland, and lower montane coniferous forest. | 705–4,595 | May–Jun | No potential; the Planning Area is outside of the elevation range of this species, and no suitable habitat (chaparral, cismontane woodland, or lower montane coniferous forest) present. |
| <i>Wyethia reticulata</i> | El Dorado County mule ears | - | - | 1B.2 | Clay or gabbroic soils in chaparral, cismontane woodland, and lower montane coniferous forest. | 605–2,065 | Apr–Aug | No potential; the Planning Area is outside of the elevation range of this species, and no suitable habitat (chaparral, cismontane woodland, or lower montane coniferous forest) present. |
| <p>Notes:</p> <p>¹Listing Status:</p> <p>Federal—U.S. Fish and Wildlife Service:</p> <p>FE = endangered</p> <p>FT = threatened</p> <p>– = no status</p> <p>State—California Department of Fish and Wildlife:</p> <p>SE = endangered</p> <p>SR = rare</p> <p>– = no status</p> <p>²CRPR (California Rare Plant Ranks):</p> <p>1B = plant species considered rare, threatened, or endangered in California and elsewhere</p> <p>2B = plant species considered rare, threatened, or endangered in California but more common elsewhere</p> <p>California Rare Plant Rank Extensions:</p> <p>.1 = seriously endangered in California (>80 percent of occurrences are threatened and/or have high degree and immediacy of threat)</p> <p>.2 = fairly endangered in California (20–80 percent of occurrences are threatened)</p> <p>.3 = not very endangered in California</p> <p>³AMSL = above mean sea level</p> <p>⁴Potential for Occurrence:</p> <p>No Potential to Occur: The Planning Area is outside the species' range or suitable habitat for the species is absent from the Planning Area and adjacent areas.</p> <p>Not Likely to Occur: The Planning Area is within the species' range, no occurrences of the species have been recorded within or immediately adjacent to the Planning Area, and either habitat for the species is marginal or potentially suitable habitat may occur, but the species' current known range is restricted to areas outside of the Planning Area.</p> <p>Could Occur: The Planning Area is within the species' range, and no occurrences of the species have been recorded within the Planning Area; however, suitable habitat for the species is present and recorded occurrences of the species are generally present in the vicinity.</p> <p>Known to Occur: The Planning Area is within the species' range, suitable habitat for the species is present, and the species has been recorded from within the Planning Area.</p> | | | | | | | | |

Although Hispid salty bird's beak is present in the region and is recorded within two miles of the Planning Area in the CNDDDB, suitable micro habitat required by the species (i.e., alkaline seeps and meadows) is not present in the Planning Area, so this species is considered unlikely to occur and not discussed further. In addition, although a population of Red Bluff dwarf rush is mapped in the City of Roseville, according to the notes on this record,

experts in vernal pool botany consider this site to be erroneous since it is outside the known range of the species (City of Roseville 2016). Furthermore, Red Bluff dwarf rush is associated with chaparral or cismontane woodland habitats, which do not exist within the Planning Area; therefore, Red Bluff dwarf rush is considered unlikely to occur and not discussed further.

The life history and ecology of the seven special-status plant species that are known to occur or have potential to occur in the Planning Area are discussed further below.

Big-scale Balsam Root

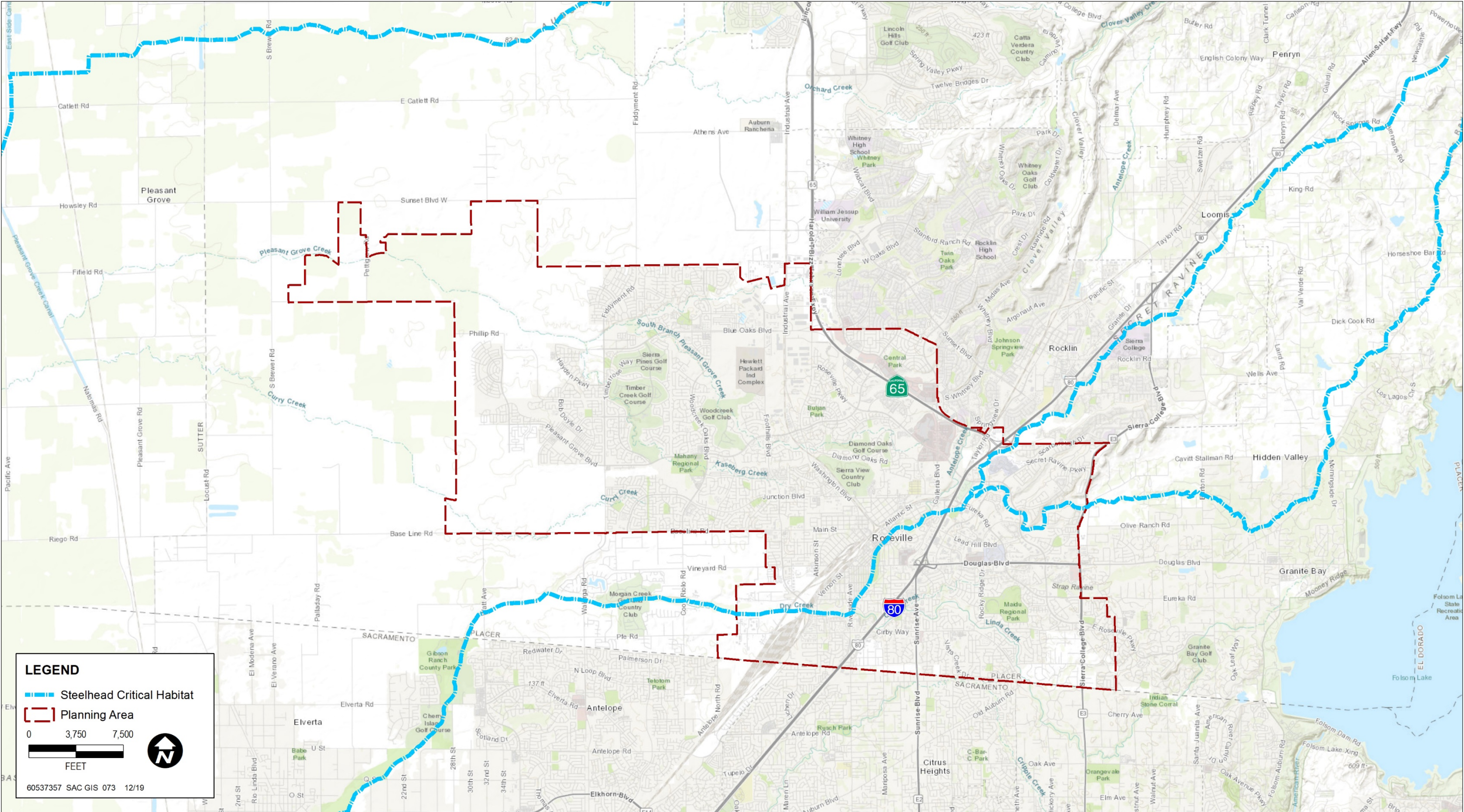
Big-scale balsamroot is designated as a CRPR 1B.2 species; however, it is not listed under federal Endangered Species Act (FESA) or California Endangered Species Act (CESA). This species is an herbaceous perennial that occurs in chaparral, cismontane woodlands, valley and foothill grasslands, and occasionally on serpentine soils. The big-scale balsamroot blooms from March through June and is known to occur at elevations ranging from 45 to 5,100 feet above mean sea level (amsl). Big-scale balsamroot is endemic to California; the current range of this species includes Amador, Butte, Colusa, El Dorado, Lake, Mariposa, Napa, Placer, Santa Clara, Shasta, Solano, Sonoma, Tehama, and Tuolumne counties (CNPS 2019b).

Annual grasslands in the Planning Area have suitable habitat present in the Planning Area, and there is one record of this species within two miles to the north of the Planning Area, in uncultivated ground near railroad tracks (CDFW 2019b). This species considered to have low potential to occur within the Amoruso Ranch Specific Plan Area and the Al Johnson Wildlife area (Reason Farms) and was not found during 2013 and 2015 botanical surveys (City of Roseville 2016).

Boggs Lake Hedge-Hyssop

Boggs Lake hedge-hyssop is designated as a CRPR 1B.2 species and listed as endangered pursuant to CESA; however, it is not listed under FESA. This species is a small herbaceous, semi-aquatic annual that occurs on clay soils in vernal pools, and marshes and swamps of lake margins. Boggs Lake hedge-hyssop blooms from April through August and is known to occur at elevations ranging from 33 to 7,792 feet amsl. The current range of this species in California includes Fresno, Lake, Lassen, Madera, Mendocino, Merced, Modoc, Placer, Sacramento, Shasta, Siskiyou, San Juan, Solano, and Tehama counties (CNPS 2019b).

Suitable habitats (marshes and vernal pools) for Boggs Lake hedge-hyssop are present in the Planning Area and there are three records of this species from within the Planning Area (CDFW 2019b). This species was observed in a deep basin vernal pool in the Creekview Specific Planning Area during botanical surveys conducted in 2006 and 2008 (City of Roseville 2011a).



Source: NMFS 2005

Exhibit 4.8-3

Steelhead Critical Habitat

This page intentionally left blank

Dwarf Downingia

Dwarf downingia is designated as a CRPR 2B.2 species; however, it is not listed under FESA or CESA. This species is a small herbaceous annual that occurs in vernal pools and mesic areas in valley and foothill grasslands. This species blooms from March through May and is known to occur at elevations ranging from 3 to 1,460 feet amsl. The current range of this species in California includes Amador, Fresno, Merced, Napa, Placer, Sacramento, San Joaquin, Solano, Sonoma, Stanislaus, Tehama, and Yuba counties (CNPS 2019b).

Suitable habitat (vernal pools in valley grassland) is present for dwarf downingia and there are 13 records of this species within the Planning Area (CDFW 2019b). This species was found during 2006 botanical surveys in the Creekview Specific Plan Area in vernal pool, wetland swale, and man-made ditch habitats (City of Roseville 2011a). Dwarf downingia was also detected in 2013 and 2015 botanical surveys within the Amoruso Ranch Specific Plan Area and off-site at the Al Johnson Wildlife Area (Reason Farms) improvements area (City of Roseville 2016).

Legenere

Legenere is designated as a CRPR 1B.1 species; however, it is not listed under FESA or CESA. This species is an herbaceous annual that occurs in vernal pools, seasonal wetlands, wetland swales, marshes, artificial ponds, and floodplains of intermittent drainages. Legenere blooms from April through June and is known to occur at elevations ranging from 3 to 2,887 feet amsl. Legenere is endemic to California; the current range of this species includes Alameda, Lake, Monterey, Napa, Placer, Sacramento, Santa Clara, Shasta, San Joaquin, San Mateo, Solano, Sonoma, Stanislaus, Tehama, and Yuba counties.

Suitable habitat (vernal pools) for legenere is present within the Planning Area. There are two records of this species within two miles, in the floodplain of Pleasant Grove Creek (CDFW 2019b). This species was not found during botanical surveys in 2013 and 2015 and is considered to have low potential to occur within the Amoruso Ranch Specific Plan Area and the Al Johnson Wildlife Area (Reason Farms) (City of Roseville 2016).

Pincushion Navarretia

Pincushion navarretia is designated as a CRPR 1B.1; however, it is not listed under FESA or CESA. This species is an herbaceous annual that occurs in vernal pools that are often acidic. Pincushion navarretia blooms from April through May and is known to occur at elevations ranging from 66 to 1,083 feet amsl. Pincushion navarretia is endemic to California; the current range of this species includes Amador, Calaveras, Merced, Placer, and Sacramento counties.

Suitable habitat (vernal pools) for pincushion navarretia is present within the Planning Area. There are two records of this species within 10 miles of the Planning Area: one is from the Phoenix Field Ecological Reserve in Fair Oaks approximately 4 miles to the south, and the other is from a 1971 collection in Lincoln, 6 miles to the north (CDFW 2019b). This species was not found during botanical surveys in 2013 and 2015 and is considered to have low potential to occur within the Amoruso Ranch Specific Plan Area and the Al Johnson Wildlife Area (Reason Farms) (City of Roseville 2016).

Ahart's Dwarf Rush

Ahart's dwarf rush is designated as a CRPR 1B.1; however, it is not listed under FESA or CESA. This species is an herbaceous annual that occurs in vernal mesic sites in valley and foothill grassland, vernal pools, meadows and seeps, cismontane woodland, and chaparral. Ahart's dwarf rush blooms from March through June and is known to occur at elevations ranging from 95 to 750 feet amsl. This species is endemic to California; the current range of this species includes Butte, Placer, Shasta, and Tehama counties.

Suitable habitat (grassland) is present for Ahart's dwarf rush throughout the Planning Area. The nearest record of this species is from within the city of Lincoln in Placer County (CDFW 2019b). Ahart's dwarf rush is considered to have low potential to occur within the Amoruso Ranch Specific Plan Area and the Al Johnson Wildlife Area (Reason Farms) and was not found during 2013 and 2015 botanical surveys (City of Roseville 2016).

Sanford's Arrowhead

Sanford's arrowhead is designated as a CRPR 1B.2 species; however, it is not listed under FESA or CESA. This species is a rhizomatous herbaceous perennial that occurs in shallow marshes and freshwater swamps. Sanford's arrowhead blooms from May through October and is known to occur at elevations ranging from sea level to 2,133 feet amsl. Sanford's arrowhead is endemic to California; the current range of this species includes Butte, Del Norte, El Dorado, Fresno, Merced, Mariposa, Marin, Napa, Orange, Placer, Sacramento, San Bernardino, Shasta, San Joaquin, Solano, Tehama, Tulare, Ventura, and Yuba counties.

Suitable habitat (freshwater wetlands) for Sanford's arrowhead is present within the Planning Area at Pleasant Grove Creek, and at drainages, marshes, and ponds within the Amoruso Ranch Specific Plan Area and the Al Johnson Wildlife Area (Reason Farms); however, the species was not found on the project site of the Al Johnson Wildlife Area (Reason Farms) improvements area during 2013 and 2015 surveys (City of Roseville 2016). There are three records of this species within two miles of the Planning Area in drainage channel habitats. The nearest documented occurrence of Sanford's arrowhead is near the south-central border of the City of Roseville (CDFW 2019b).

Special-Status Wildlife

AECOM biologists compiled a list of special-status wildlife species with the potential to occur in the Planning Area, using information obtained from a search of the USFWS IPaC database and a search of the CNDDB database (CDFW 2019b) for the five USGS quadrangles within which the Planning Area occurs – Pleasant Grove, Roseville, Rocklin, Citrus Heights, and Folsom – as well as the surrounding 14 USGS quadrangles: Verona, Nicolaus, Sheridan, Lincoln, Rio Linda, Taylor Monument, Folsom, Gold Hill, Auburn, Pilot Hill, Clarksville, Carmichael, Buffalo Creek, Folsom SE, and Sacramento East (USGS 2018a-s). Database searches identified a total of 34 special-status wildlife species in the region. Several wildlife habitat surveys have also been conducted in the Planning Area between 2007 and 2015 for the Sierra Vista Specific Plan and Amoruso Ranch Specific Plan, respectively, the results of which are incorporated into this analysis. Based on database search results and site-specific surveys conducted for the above-mentioned Specific Plans, 26 special-status wildlife species are known or have the potential to occur in the Planning Area. These species are listed below in Table 4.8-3, along with their status, habitat, and potential to occur in the Planning Area.

| Table 4.8-3 Special-Status Wildlife Species with Potential to Occur Within the Planning Area | | | | | | | |
|--|-----------------------------------|-----------------------------|-------|------|---|---|---|
| Species | | Listing Status ¹ | | | Habitat Requirements | Distribution | Potential for Occurrence in the Planning Area ² |
| Scientific Name | Common Name | Federal | State | CDFW | | | |
| Invertebrates | | | | | | | |
| <i>Branchinecta conservatio</i> | Conservancy fairy shrimp | FE | - | - | Vernal pools and swales in valley and foothill grassland; found in large, turbid pools. | Endemic to the grasslands of the northern two-thirds of the Central Valley from Tulare County to Shasta County. | Not likely to occur; there is only one record of this species within a 19-quad search radius and it is from the Mariner Conservation Bank approximately 6 miles north of the Planning Area (CDFW 2019b). |
| <i>Branchinecta lynchi</i> | vernal pool fairy shrimp | FT | - | - | Small, clear-water sandstone-depression vernal pools and grassed swale, earth slump, or basalt-flow depression vernal pools. | Endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains. | Known to occur; suitable habitat present and there are 26 records of the species from within and adjacent to the Planning Area (CDFW 2019b). In addition, the species has been detected in several open space preserves within the Planning Area (City of Roseville 2011b), and in the West Roseville, Sierra Vista, Creekview, and Amoruso Ranch Specific Plan Areas (City of Roseville 2004, 2010, 2011a, 2016). |
| <i>Lepidurus packardii</i> | vernal pool tadpole shrimp | FE | - | - | Inhabits vernal pools and swales, often found in grass-bottomed swales of unplowed grasslands. Some pools are mud-bottomed and highly turbid. | Endemic to the California Central Valley, with most individuals found in the Sacramento Valley. | Known to occur; suitable habitat is present within the Planning Area, and there is one record of this species from within the Planning Area that is now possibly extirpated (CDFW 2019b). |
| <i>Desmocerus californicus dimorphus</i> | valley elderberry longhorn beetle | FT | - | - | Elderberry shrubs (the host plant species), typically as a component of dense riparian habitat. | Throughout the Central Valley from Shasta County to Fresno County including the valley floor and lower foothills, usually below 500 feet (amsl) in elevation. | Known to occur; species has been documented within the Planning Area in the Stoneridge Cavitt Ranch/Vista Oaks preserve (City of Roseville 2019). There are another 5 records of this species within 2 miles east of the Planning Area, in riparian habitats associated with Secret Ravine, Linda Creek, and the shore of Folsom Lake (CDFW 2019b). |

| Table 4.8-3 Special-Status Wildlife Species with Potential to Occur Within the Planning Area | | | | | | | |
|--|--|-----------------------------|-------|------|---|---|--|
| Species | | Listing Status ¹ | | | Habitat Requirements | Distribution | Potential for Occurrence in the Planning Area ² |
| Scientific Name | Common Name | Federal | State | CDFW | | | |
| <i>Bombus occidentalis</i> | western bumble bee | - | SCE | - | Generalist foragers for nectar and pollen. Nest sites include abandoned rodent burrows and bird nests. | Once common in the western United States and western Canada, populations from Southern British Columbia to central California have nearly disappeared. | Not likely to occur; there is only one record of this species within a 19-quad search radius and is it from a 1976 collection at Pilot Hill approximately 12 miles northeast of the Planning Area (CDFW 2019b). |
| Fish | | | | | | | |
| <i>Oncorhynchus mykiss irideus</i> pop. 11 | steelhead – Central Valley Distinct Population Segment (DPS) | FT | - | - | Cool, clear streams with abundant cover and well-vegetated banks, with relatively stable flows. Pool and riffle complexes and cold gravelly streambeds for spawning. | Populations in the Sacramento and San Joaquin Rivers and their tributaries. | Known to occur; detected in mainstem Dry Creek, which is used as a migratory corridor, with spawning & rearing habitat upstream in Secret Ravine and Miners Ravine (CDFW 2019b). |
| <i>Oncorhynchus tshawytscha</i> pop. 6 | chinook salmon – Central Valley spring-run Evolutionary Significant Unit (ESU) | FT | ST | - | Water temperatures greater than 27 degrees Celsius (80.6 degrees Fahrenheit) are lethal to adults. Spring-run Chinook Salmon enter the Sacramento River from late March through September. Adults hold in cool water habitats through the summer, then spawn in the fall from mid-August through early October. | The Sacramento River and its tributaries, including Butte, Mill, Deer, Antelope, and Beegum Creeks. | Not likely to occur; the Planning Area is outside of the known range of this ESU. There is only one record of this ESU within a 19-quad search radius, and it is from the Lower Feather River (CDFW 2019b). |
| <i>Oncorhynchus tshawytscha</i> | chinook salmon – Central Valley fall/late-fall run Evolutionary Significant Unit (ESU) | SC | - | SSC | Water temperatures greater than 27 degrees Celsius (80.6 degrees Fahrenheit) are lethal to adults. Fall-run Chinook Salmon migrate to Central Valley rivers from approximately July to December. Peak spawning for fall-run spawning fish occurs during late October and November. | The most abundant populations of fall-run Chinook salmon occur in the Sacramento, Feather, Yuba, and American Rivers. The ESU also occurs in smaller tributaries of the Sacramento River and in tributaries of the San Joaquin River. | Known to occur; species detected in Dry Creek and its tributaries (Miners Ravine, Secret Ravine, Antelope Creek, Linda/Cirby Creek) from 2003 – 2008 (PCCP 2018). |

| Table 4.8-3 Special-Status Wildlife Species with Potential to Occur Within the Planning Area | | | | | | | |
|---|-----------------------------|-----------------------------|-------|------|--|--|--|
| Species | | Listing Status ¹ | | | Habitat Requirements | Distribution | Potential for Occurrence in the Planning Area ² |
| Scientific Name | Common Name | Federal | State | CDFW | | | |
| <i>Hypomesus transpacificus</i> | Delta smelt | FT | FE | - | River channels; spawn in backwater sloughs and channel with tidal influence. | Found only from the Suisun Bay upstream through the Sacramento-San Joaquin River Delta in Contra Costa, Sacramento, San Joaquin, Solano, and Yolo Counties. | No potential to occur; no suitable habitat, and the Planning Area is outside of the species' range. There are no records of this species in a 19-quad search radius (CDFW 2019b). |
| <i>Spirinchus thaleichthys</i> | longfin smelt | FC | ST | - | Found in open waters of estuaries, mostly in middle or bottom of water column. | Bays and estuaries along the Pacific Northwest, from the San Francisco Bay to Alaska. | No potential to occur; no suitable habitat in the Planning Area. |
| <i>Pogonichthys macrolepidotus</i> | Sacramento splittail | - | - | SSC | Slow moving river sections, and dead-end sloughs. Requires flooded vegetation for spawning and foraging for young. | Endemic to the lakes and rivers of the Central Valley, but now confined to the Delta, Suisun Bay and associated marshes. | Not likely to occur; low potential in Dry Creek and its tributaries. |
| Amphibians | | | | | | | |
| <i>Ambystoma californiense</i> | California tiger salamander | FT | - | SSC | Vernal pools, vernal pool grasslands, and ponds. | Occurs from near Petaluma and Sonoma Counties, east through the Central Valley to Yolo and Sacramento Counties and south to Tulare County; and from the vicinity of San Francisco Bay south to Santa Barbara County. | Not likely to occur; there are no records of this species within a 19-quad search radius, and no recent or historical records from western Placer County (CDFW 2019b). |

| Table 4.8-3 Special-Status Wildlife Species with Potential to Occur Within the Planning Area | | | | | | | |
|--|-----------------------------|-----------------------------|-------|------|--|---|---|
| Species | | Listing Status ¹ | | | Habitat Requirements | Distribution | Potential for Occurrence in the Planning Area ² |
| Scientific Name | Common Name | Federal | State | CDFW | | | |
| <i>Rana boylei</i> | foothill yellow-legged frog | - | SCT | SSC | Typically found in streams and rivers with rocky substrate and open, sunny banks, in forests, chaparral, and woodlands. Sometimes found in isolated pools, vegetated backwaters, and deep, shaded, spring-fed pools. Needs at least 15 weeks of permanent water to attain metamorphosis. | Occurs in the Coast Ranges from the Oregon border south to the Transverse Mountains in Los Angeles County, in most of northern California west of the Cascade crest, and along the western flank of the Sierra Nevada south to Kern County. | Not likely to occur; there are only two records of this species within a 19-quadrant search radius, and both are from within the American River watershed. The nearest record is from a 1972 collection near Salmon Falls Road in a drainage to Folsom Lake, approximately 7 miles east of the Planning Area (CDFW 2019b). |
| <i>Rana draytonii</i> | California red-legged frog | FT | - | SSC | Lowlands and foothills in or near permanent sources of deep water with dense, shrubby, or emergent riparian vegetation. Requires 11–20 weeks of permanent water for larval development and must have access to aestivation habitat. | Occurs along the Coast Ranges from Mendocino County south and in portions of the Sierra Nevada and Cascades ranges, usually below 3936 feet. | Not likely to occur; there is only one record of this species within a 19-quadrant search radius and it is from a drainage along the east shore of Folsom Lake approximately 7 miles east of the Planning Area (CDFW 2019b). |
| <i>Spea hammondi</i> | western spadefoot | - | - | SSC | Occurs primarily in grassland habitats but can be found in valley-foothill hardwood woodland. Vernal pools are essential for breeding and egg-laying. | Ranges throughout the Central Valley and adjacent foothills, and in the Coast Ranges from Point Conception south to the Mexican border. | Known to occur; there are 5 records of this species from within the Planning Area in vernal pool and seasonal wetland habitats (CDFW 2019b). |
| Reptiles | | | | | | | |
| <i>Actinemys marmorata</i> | western pond turtle | - | - | SSC | Forages in ponds, marshes, slow-moving streams, sloughs, and irrigation/drainage ditches; nests in nearby uplands with low, sparse vegetation. Generally, nest within 325 feet of aquatic habitat, but has been reported to nest up to 1,600 feet from water. | Throughout California west of the Sierra-Cascade crest and absent from desert regions, except in the Mojave Desert along the Mojave River and its tributaries. Elevation range extends from near sea level to 4,690 ft (amsl). | Could occur; suitable aquatic habitat is present in the Planning Area. The nearest record of the species is approximately 2 miles to the east, in wetland habitat near Folsom Lake (CDFW 2019b). |

| Table 4.8-3 Special-Status Wildlife Species with Potential to Occur Within the Planning Area | | | | | | | |
|--|----------------------|-----------------------------|-------|------|--|--|---|
| Species | | Listing Status ¹ | | | Habitat Requirements | Distribution | Potential for Occurrence in the Planning Area ² |
| Scientific Name | Common Name | Federal | State | CDFW | | | |
| <i>Thamnophis gigas</i> | giant gartersnake | FT | ST | - | Cultivated rice, freshwater marsh, and slow-moving streams, or ditches and canals with mud bottoms, earthen banks, emergent vegetation, abundant small aquatic prey, and absence or low numbers of large predatory fish. Requires permanent water during the active season. Also requires upland refugia not subject to flooding during the snake's inactive season. | Endemic to California's Central Valley. | Not likely to occur; there are no records of this species from Placer County (CDFW 2019b). No suitable rice fields or associated agricultural ditches/canals are present within the Planning Area. Other marginally suitable habitats may occur, but the Planning Area is outside the known range of the species. |
| Birds* | | | | | | | |
| <i>Accipiter cooperii</i> (nesting) | Cooper's hawk | - | - | WL | Wooded areas, including dense stands of live oak, riparian deciduous, and other forest habitats, typically near water. | Resident throughout most of the wooded portion of the state. | Known to occur; there are over 400 observations of this species in and adjacent to the Planning Area in all months of the year from January 2014 to December 2018 (Levatich and Padilla 2019). Nearest recorded nest is from Goethe Park along the American River, approximately 10 miles southwest of the Planning Area (CDFW 2019b). |
| <i>Agelaius tricolor</i> (nesting colony) | tricolored blackbird | - | ST | SSC | Nests in marshes, riparian scrub, and other areas that support cattails or dense thickets of shrubs or herbs. Requires adjacent agricultural lands and grasslands for foraging. | Breeding range includes the Central Valley and other lowland areas of California west of the Cascade-Sierra Nevada axis. | Could occur; there are 2 records of this species adjacent to the Planning Area along the eastern and northern boundaries in marsh and blackberry bramble nesting habitat, respectively (CDFW 2019b). There are 73 eBird observations of this species within or near the Planning Area between 2014 and 2019 (Levatich and Pedilla 2019). |

| Table 4.8-3 Special-Status Wildlife Species with Potential to Occur Within the Planning Area | | | | | | | |
|--|---------------------|-----------------------------|-------|------|---|--|---|
| Species | | Listing Status ¹ | | | Habitat Requirements | Distribution | Potential for Occurrence in the Planning Area ² |
| Scientific Name | Common Name | Federal | State | CDFW | | | |
| <i>Ammodramus savannarum</i> (nesting) | grasshopper sparrow | - | - | SSC | Forages and nests in dense grasslands; favors a mix of native grasses, forbs, and scattered shrubs. Nests in depressions on the ground at the bases of grass clumps. | Occurs in California primarily as a summer resident from Mendocino, Trinity, and Tehama counties south, west of the Cascade–Sierra Nevada axis and southeastern deserts, to San Diego County, from sea level to 4,900 feet (amsl). | Could occur; suitable habitat is present in the Planning Area. There are two records within 10 miles of the Planning Area, in rolling vernal pool grasslands near Lincoln and Folsom (CDFW 2019b). There are no records of this species in the eBird database for the past 5 years (Levatich and Pedilla 2019). |
| <i>Aquila chrysaetos</i> (nesting) | golden eagle | - | - | FP | Nests in rugged, open habitats with canyons and escarpments, typically on cliffs and rock outcroppings; however, will also nest in large trees in open areas, including oaks, sycamores, redwoods, pines, and eucalyptus, overlooking open hunting habitat. | Uncommon permanent resident and migrant throughout California, except in the center of the Central Valley. | Not likely to occur; no suitable nesting habitat (steep slopes, cliffs, or large trees overlooking hunting areas) present in the Planning Area. There are only 2 records of nesting golden eagles within a 19-quad search radius, both of which are from a steep west-facing hillside near El Dorado Hills, approximately 8 miles southeast of the Planning Area (CDFW 2019b). Potential foraging habitat present, and species may occur as a fly over. There are 7 recorded observations of individual golden eagles in the eBird database within and near the Planning Area (Levatich and Pedilla 2019). |
| <i>Asio flammeus</i> (nesting) | short-eared owl | - | - | SSC | Usually found in grasslands, dunes, meadows, and saline and fresh emergent wetlands with low perches. Nests on the ground in vegetation. | Breeding range includes coastal areas in Del Norte and Humboldt counties, the San Francisco Bay Delta, northeastern Modoc plateau, the east side of the Sierra from Lake Tahoe south to Inyo county, and the San Joaquin valley. | Could occur; the Planning Area is outside of the known breeding range of this species and there are no CNDDDB records of this species in a 19-quad search radius (CDFW 2019b). However, there are 7 records of short-eared owl from within 2 miles of the Planning Area in annual grassland/vernal pool complexes to the south and east, 6 of which were during the non-breeding season (December – February) and one from April (Levatich and Pedilla 2019). |

| Table 4.8-3 Special-Status Wildlife Species with Potential to Occur Within the Planning Area | | | | | | | |
|---|-----------------------|-----------------------------|-------|------|--|---|--|
| Species | | Listing Status ¹ | | | Habitat Requirements | Distribution | Potential for Occurrence in the Planning Area ² |
| Scientific Name | Common Name | Federal | State | CDFW | | | |
| <i>Athene cunicularia</i> (burrow sites and some wintering sites) | Western burrowing owl | - | - | SSC | Nests and forages in grasslands, agricultural lands, open shrublands, and open woodlands with existing ground squirrel burrows or friable soils. | Broadly distributed in western North America; year-round resident throughout much of California. | Known to occur; suitable habitat is present in the Planning Area in grasslands and agricultural areas. Species detected within the Sierra Vista Planning Area (City of Roseville 2010) and the West Roseville Specific Plan Area (City of Roseville 2004). There are also two records of this species within 2 miles to the northwest of the Planning Area in grazed annual grassland and vernal pool habitats (CDFW 2019b). |
| <i>Buteo regalis</i> (wintering) | Ferruginous hawk | - | - | WL | Open grasslands, sagebrush flats, desert scrub, low foothills surrounding valleys, and fringes of pinyon-juniper habitat. | Uncommon winter resident and migrant in the Modoc Plateau, Central Valley, and Coast Ranges; common winter resident in southwestern California. | Known to occur; there are 31 observations of this species from within and adjacent to the planning area during the winter months of 2014, 2015, and 2018 (Levatich and Padilla 2019). Nearest CNDDDB record is from grazed annual grassland approximately 10 miles southeast of the Planning Area (CDFW 2019b). |
| <i>Buteo swainsoni</i> (nesting) | Swainson's hawk | - | ST | | Nests in riparian forest and isolated trees, open woodlands, and woodland margins; forages in grasslands and agricultural fields. | Breeds in California's Central Valley and in the Great Basin area of northeastern California, with a few territories located in Shasta Valley, the Owens Valley, and the Mohave Desert. | Known to occur; suitable nesting and foraging habitat are present and numerous occurrences documented throughout Planning Area, including a nesting pairs observed in 2007 in the Sierra Vista Specific Plan Area (City of Roseville 2010) and in the Creekview Specific Plan Area in 2007-2008 (City of Roseville 2011a). Species also observed foraging during surveys in the West Roseville Specific Plan Area (City of Roseville 2004). There are 9 records of this species within 2 miles of the Planning Area, with nests recorded in oak, willow, and eucalyptus trees (CDFW 2019b). |

| Table 4.8-3 Special-Status Wildlife Species with Potential to Occur Within the Planning Area | | | | | | | |
|--|------------------------------|-----------------------------|-------|------|---|---|---|
| Species | | Listing Status ¹ | | | Habitat Requirements | Distribution | Potential for Occurrence in the Planning Area ² |
| Scientific Name | Common Name | Federal | State | CDFW | | | |
| <i>Circus hudsonius</i> (nesting) | northern harrier | - | - | SSC | Nests and forages in grasslands, agricultural fields, and marshes. Nests on the ground within patches of dense, often tall, vegetation in undisturbed areas. | Breeds from sea level to 5700 feet (amsl) in the Central Valley and Sierra Nevada, and up to 3600 feet in northeastern California. | Known to occur; the Planning Area is within the breeding range of the species, and suitable nesting and foraging habitat are present in the Planning Area. Species observed foraging in the West Roseville, Sierra Vista, and Creekview Specific Plan Areas (City of Roseville 2004, 2010, 2011a). |
| <i>Coccyzus americanus occidentalis</i> (nesting) | western yellow-billed cuckoo | FT | SE | - | Nests in large blocks of deciduous riparian thickets or forests with dense, low-level or understory foliage adjacent to slow-moving watercourses, backwaters along broad, lower floodplains of larger river systems. Willow and cottonwood are almost always a component of the vegetation. In the Sacramento Valley, also utilizes adjacent walnut orchards. | In California, the western yellow-billed cuckoo's breeding distribution is restricted to isolated sites in the Sacramento, Amargosa, Kern, Santa Ana, and Colorado River Valleys. | Not likely to occur; the Planning Area is outside of the known breeding range of this species. Potential stopover during the non-breeding season. There are no eBird observations of this species within or near the Planning Area (Levatich and Pedilla 2019). |
| <i>Elanus leucurus</i> (nesting) | white-tailed kite | - | - | FP | Forages in grasslands and agricultural fields; nests in riparian zones, oak woodlands, and isolated trees. | Yearlong resident in coastal and valley lowlands of California. | Known to occur; suitable foraging and nesting habitat is present in the Planning Area, and there is one record of the species from within the Planning Area, in oak woodland habitat along the west bank of Pleasant Grove Creek (CDFW 2019b). Two nests were observed in 2008 during surveys in the Creekview Specific Plan Area (City of Roseville 2011a). Species observed foraging during surveys conducted in the West Roseville and Sierra Vista Specific Plan Areas (City of Roseville 2004, 2010). |

| Table 4.8-3 Special-Status Wildlife Species with Potential to Occur Within the Planning Area | | | | | | | |
|---|---------------------------|-----------------------------|-------|------|--|---|---|
| Species | | Listing Status ¹ | | | Habitat Requirements | Distribution | Potential for Occurrence in the Planning Area ² |
| Scientific Name | Common Name | Federal | State | CDFW | | | |
| <i>Falco peregrinus anatum</i> (nesting) | American peregrine falcon | FD | SD | FP | Nests on cliffs, banks, dunes, mounds or humanmade structures. Nest consists of a scrape, depression, or ledge in an open site. Requires protected cliffs and ledges for cover. | Breeds along the coast north of Santa Barbara, in the Sierra Nevada, and in other mountains of northern California. | Not likely to occur; the Planning Area is outside of the breeding range of this species. Potential flyover or foraging in the Planning Area. There are 26 observations of this species within and near the Planning Area during the non-breeding season (Levatich and Pedilla 2019). |
| <i>Haliaeetus leucocephalus</i> (nesting and wintering) | bald eagle | FD | SE | FP | Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within 1 mile of water. Nests in large, old-growth, or dominant live tree with open branches, especially ponderosa pine. Individuals forage primarily in large inland fish-bearing waters with adjacent large trees or snags; occasionally in uplands with abundant small mammals or carrion. | Restricted to breeding mostly in Butte, Lake, Lassen, Modoc, Plumas, Shasta, Siskiyou, and Trinity Counties. About half of the wintering population is in the Klamath Basin. Not found in the high Sierra Nevada. | Known to occur; there are 25 records of bald eagle within and near the Planning Area, 18 of which are from during the breeding season (Levatich and Pedilla 2019). Most records are outside the Planning Area, but there are 4 observations from Veteran's Memorial Park in northwest Roseville (Levatich and Pedilla 2019). |
| <i>Lanius ludovicianus</i> (nesting) | loggerhead shrike | - | - | SSC | Forages and nests in grasslands, shrublands, and open woodlands. Nests in trees and shrubs. | Lowlands and foothills throughout California. | Known to occur; suitable nesting habitat is present within the Planning Area. Species observed foraging in the Sierra Vista and Creekview Specific Plan Areas in 2007 and 2008 (City of Roseville 2010, 2011a). |
| <i>Laterallus jamaicensis coturniculus</i> (year-round) | California black rail | - | ST | FP | Freshwater marshes, wet meadows and shallow margins of saltwater marshes bordering larger bays. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat. | San Francisco Bay area, Sacramento-San Joaquin Delta, coastal southern California at Morro Bay and a few other locations, the Salton Sea, and lower Colorado River area. | Could occur; species detected in Placer County in perennial wetland habitats to the north of the Planning Area (PCCP 2018). Freshwater marsh habitat in the Planning Area may provide suitable habitat, especially in the northern and western portions of the Planning Area. |

| Table 4.8-3 Special-Status Wildlife Species with Potential to Occur Within the Planning Area | | | | | | | |
|---|---|-----------------------------|-------|------|---|--|--|
| Species | | Listing Status ¹ | | | Habitat Requirements | Distribution | Potential for Occurrence in the Planning Area ² |
| Scientific Name | Common Name | Federal | State | CDFW | | | |
| <i>Melospiza melodia</i> (year-round) | song sparrow ("Modesto" population) | - | - | SSC | Nests and forages primarily in emergent marsh, riparian scrub, and early successional riparian forest habitats in the north-central portion of the Central Valley; infrequently in mature riparian forest and sparsely vegetated ditches and levees. Forages primarily on exposed ground or in leaf litter. | Found throughout most of California, except for higher mountains, and occurs only locally in southern deserts. | Could occur; suitable marsh and riparian habitat is present in the Planning Area. Nearest record is from Yankee Slough, approximately 10 miles north of the Planning Area, in willow thickets surrounding a marsh (CDFW 2019b). |
| <i>Numenius americanus</i> (nesting) | Long-billed curlew | - | - | WL | Breeds in wet meadow habitat from April to September; winter (July to early April) habitats include large coastal estuaries, upland herbaceous areas, and croplands. | Breeds in Siskiyou, Modoc, Lassen, and Inyo Counties; winters along the California coast and in the Central and Imperial Valleys. | Known to occur; the Planning Area is outside of the species' known nesting range, but species could occur during the winter months. There are no CNDDB records of this species within a 19-quad search radius (CDFW 2019b), but there are 36 eBird observations of the species within and near the Planning Area during the nonbreeding season (Levatich and Padilla 2019). |
| <i>Progne subis</i> (nesting) | purple martin | - | - | SSC | Nests in tree cavities, bridges, freeway overpasses, utility poles, lava tubes, and buildings. Forages in foothill and low montane oak and riparian woodlands; less frequently in coniferous forests and open or developed habitats. | Uncommon to rare local summer resident throughout the state; generally absent from higher desert regions and higher slopes of Sierra Nevada. | Known to occur; species was detected nesting in weepoles in the Highway 65 overpass within the Planning Area in 2007 (CDFW 2019b). |
| <i>Riparia</i> (nesting) | bank swallow | - | ST | - | Nests in colonies in unvegetated vertical banks or cliffs with fine-textured, sandy soils, typically next to streams, rivers, or lakes. | Riparian and other lowland habitats in California west of the deserts. | Not likely to occur; there are no records of the species within or near the Planning Area, and suitable habitat likely not present (vertical sandy banks) in the stream corridors that traverse the Planning Area. There are no eBird observations of this species from within or near the Planning Area (Levatich and Pedilla 2019). There are 15 records of the species within a 9-quad radius, all from the banks of the American and Feather Rivers (CDFW 2019b). |

| Table 4.8-3 Special-Status Wildlife Species with Potential to Occur Within the Planning Area | | | | | | | |
|--|--------------------------|-----------------------------|-------|------|--|--|--|
| Species | | Listing Status ¹ | | | Habitat Requirements | Distribution | Potential for Occurrence in the Planning Area ² |
| Scientific Name | Common Name | Federal | State | CDFW | | | |
| Mammals | | | | | | | |
| <i>Antrozous pallidus</i> | pallid bat | - | - | SSC | Deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats with rocky areas for roosting. Individuals roost in rock crevices, cliffs, caves, mines, and hollows of oaks and redwoods, and under sloughing bark, and human structures (e.g., bridges, buildings). | Low elevations in California from Shasta to Kern Counties, and the northwestern corner of the state from Del Norte and western Siskiyou Counties to northern Mendocino County. | Could occur; suitable roost habitat (oak trees and human structures in grassland and woodland) is present in the Planning Area. There is one record of the species within 2 miles southeast of the Planning Area in Folsom (CDFW 2019b). |
| <i>Corynorhinus townsendii</i> | Townsend’s big-eared bat | - | - | SSC | Uncommon colonial bat associated with coniferous forests, mixed mesophytic forests, deserts, agricultural areas, native prairies, riparian communities, and coastal habitat types; individuals typically roost in caves and mines, but also in basal hollows of large trees and human structures (e.g., bridges, buildings). | Throughout California in a wide variety of habitats, except for subalpine and alpine habitats. Most abundant in mesic habitats. | Could occur; suitable roost habitat (human structures in agricultural and riparian areas) is present in the Planning Area. The nearest record of this species is from an abandoned mine near Dutch Ravine, approximately 8 miles northeast of the Planning Area (CDFW 2019b). |
| <i>Myotis yumanensis</i> | Yuma myotis | - | - | - | Wide variety of habitats from sea level to 11,000 feet; optimal habitats are open forests and woodlands with sources of water. Roosts in buildings, mines, caves, or crevices; also abandoned swallow nests and under bridges. Forms large maternity colonies of several thousand females. | Common and widespread throughout California. | Could occur; suitable roosting (buildings and bridges) and foraging (woodlands near open water) habitats are present in the Planning Area. However, there are no records of the species within a 19-quad search radius (CDFW 2019b). |

| Table 4.8-3 Special-Status Wildlife Species with Potential to Occur Within the Planning Area | | | | | | | |
|---|-----------------|-----------------------------|-------|------|---|---|---|
| Species | | Listing Status ¹ | | | Habitat Requirements | Distribution | Potential for Occurrence in the Planning Area ² |
| Scientific Name | Common Name | Federal | State | CDFW | | | |
| <i>Taxidea taxus</i> | American badger | - | - | SSC | Most abundant in drier open stages of most shrub, forest, and herbaceous habitats with friable soils; generally associated with treeless regions, prairies, parklands, and desert areas. Needs open, uncultivated land. | Found throughout most of California, except in the northern North Coast area. | Could occur; suitable habitat (dry open grassland with friable soils) present in the Planning Area. Nearest record is from annual grassland habitat near the city of Rancho Cordova, approximately 11 miles south of the Planning Area (CDFW 2019b). |
| <p>Notes:</p> <p>*Because the distribution and abundance of individual bird species varies seasonally, the season, or life phase, during which the species is of conservation concern in California is provided in parentheses beneath the bird species scientific name. There is potential for any of these bird species to fly over or pass through the Planning Area, however, these species would not be at risk of adverse effects unless nesting on or otherwise residing in the Planning Area during the season or life phase when the species is of conservation concern in California.</p> <p>¹Listing Status:</p> <p>Federal Endangered Species Act:</p> <p>FE = endangered</p> <p>FT = threatened</p> <p>FD = delisted</p> <p>- = no status</p> <p>Federal—National Marine Fisheries Service:</p> <p>SC = species of concern</p> <p>State Endangered Species Act:</p> <p>SE = endangered</p> <p>SCE = candidate endangered</p> <p>ST = threatened</p> <p>SCT = candidate threatened</p> <p>SD = delisted</p> <p>SR = rare</p> <p>- = no status</p> <p>CDFW:</p> <p>SSC = species of special concern</p> <p>FP = fully protected</p> <p>WL = Watch List</p> <p>- = no status</p> <p>²Potential for Occurrence:</p> <p>No Potential to Occur: The Planning Area is outside the species' range or suitable habitat for the species is absent from the Planning Area and adjacent areas.</p> <p>Not Likely to Occur: The Planning Area is within the species' range, no occurrences of the species have been recorded within or immediately adjacent to the Planning Area, and either habitat for the species is marginal or potentially suitable habitat may occur, but the species' current known range is restricted to areas outside of the Planning Area.</p> <p>Could Occur: The Planning Area is within the species' range, and no occurrences of the species have been recorded within the Planning Area; however, suitable habitat for the species is present and recorded occurrences of the species are generally present in the vicinity.</p> <p>Known to Occur: The Planning Area is within the species' range, suitable habitat for the species is present, and the species has been recorded from within the project site.</p> <p>Source: CDFW 2019b, USFWS 2019a; Levatich and Pedilla 2019; compiled by AECOM in 2019.</p> | | | | | | | |

Designated critical habitat for steelhead includes the portion of Dry Creek that runs through the southern extent of the Planning Area; no other critical habitats occur within the Planning Area (Exhibit 4.8-3). Other designated critical habitat in the region includes that for Sacramento Orcutt grass, approximately 4.2 miles to the south, and vernal pool fairy shrimp, approximately 4.7 miles to the north (USFWS 2019b).

Based on database search results and wildlife surveys in the Planning Area, the following special-status species are known to occur in or adjacent to the Planning Area: vernal pool fairy shrimp, vernal pool tadpole shrimp, valley elderberry longhorn beetle, Chinook salmon – Central Valley fall/late-fall run evolutionarily significant unit (ESU), Steelhead - Central Valley distinct population segment (DPS), western spadefoot toad, western pond turtle, giant garter snake, tricolored blackbird, grasshopper sparrow, western burrowing owl, Swainson's hawk, northern harrier, white-tailed kite, loggerhead shrike, California black rail, song sparrow (Modesto population), purple martin, pallid bat, Townsend's big-eared bat, and American badger. The life history and ecology of special-status species known or with potential to occur in the Planning Area is discussed further below. Heron/egret rookeries and nesting birds are also protected and discussed further below. The following species are not discussed further because they and/or suitable habitats are absent from the Planning Area: conservancy fairy shrimp, western bumble bee, Chinook salmon – Central Valley spring-run ESU, longfin smelt, Sacramento splittail, foothill yellow-legged frog, California red-legged frog, golden eagle, short-eared owl, western yellow-billed cuckoo, American peregrine falcon, bald eagle, and bank swallow.

Vernal Pool Fairy Shrimp

Vernal pool fairy shrimp is a federally threatened species under FESA. Vernal pool fairy shrimp are known to occur mainly in California's Central Valley and coastal ranges from Shasta County in the north to Tulare County in the south. A population in Jackson County, Oregon was discovered in 1998. Vernal pool fairy shrimp occur primarily in small, clear-water sandstone-depression vernal pools and grassed swales or basalt-flow depression vernal pools that fill with water during fall and winter rains and dry up in the spring and summer. They typically hatch when the first rains of the season fill the vernal pools and mature in about 41 days under typical winter conditions. Adult fairy shrimp live only for a single season, while there is water in the pools, and toward the end of their brief lifetime, females produce thick-shelled eggs or cysts. During the summer, these cysts become buried in the dried bottom mud of the vernal pools, and during the winter, they are frozen for varying lengths of time.

These cysts hatch when the rains come again in the fall and winter (USFWS 2019d). Vernal pool fairy shrimp eat algae and plankton. Suitable habitat is present and there are 26 records of the species from within and adjacent to the Planning Area (CDFW 2019b). In addition, this species has been detected in several open space preserves within the Planning Area (City of Roseville 2011b), and from within the Amoruso Ranch and Creekview Specific Plan Areas (City of Roseville 2016, 2011a).

Vernal Pool Tadpole Shrimp

Vernal pool tadpole shrimp is a federally endangered species under FESA. Vernal pool tadpole shrimp are known to occur in California's Central Valley and the San Francisco Bay and southern Oregon; however, most individuals are found in the Sacramento Valley. Vernal pool tadpole shrimp occur in vernal pools, seasonal wetlands, and alkaline pools. They have a similar life cycle as the vernal pool fairy shrimp. Vernal pool tadpole shrimp hatching is temperature dependent and is optimal between 50 to 59 degrees Fahrenheit. Vernal pool tadpole shrimp eat organic detritus, fairy shrimp, and other invertebrates (USFWS 2007). Suitable habitat is

present within the Planning Area, and there is one record of this species from within the Planning Area that is now possibly extirpated (CDFW 2019b).

Valley Elderberry Longhorn Beetle

Valley elderberry longhorn beetle is a federally threatened species under FESA. Valley elderberry longhorn beetle is known to occur throughout the Central Valley from southern Shasta County to Fresno County including the valley floor and lower foothills, usually below 500 feet (amsl) in elevation. This species is almost always found on or close to its host plant, red or blue elderberry (*Sambucus* species). Females lay their eggs on the bark of the elderberry bush, and the larvae hatch and burrow into the stems. The larval stage can last two years, after which they become pupae and then transform into adult beetles. Adults are active from March to June, breeding and eating (USFWS 2019e). This species has been documented within the Planning Area in the Stoneridge Cavitt Ranch/Vista Oaks preserve (City of Roseville 2019). There are another five records of this species within 2 miles east of the Planning Area, in riparian habitats associated with Secret Ravine, Linda Creek, and the shore of Folsom Lake (CDFW 2019b).

Chinook Salmon – Central Valley Fall/Late-Fall Run Evolutionarily Significant Unit

Chinook Salmon (Central Valley fall/late-fall run Evolutionarily Significant Unit [ESU]) is a federal species of concern and a State species of special concern. California rivers and streams support the southern-most Chinook Salmon runs. The most abundant populations of fall-run Chinook salmon occur in the Sacramento, Feather, Yuba, and American Rivers. The ESU also occurs in smaller tributaries of the Sacramento River and in tributaries of the San Joaquin River. Chinook salmon are anadromous fish that migrate upstream as adults to spawn in freshwater rivers and streams and migrate downstream to the ocean as juveniles to grow and mature at sea (CDFW 2019d). Fall-run Chinook salmon migrate to Central Valley rivers from approximately July to December. Peak spawning for fall-run spawning fish occurs during late October and November. This species has been detected in Dry Creek and its tributaries (Miners Ravine, Secret Ravine, Antelope Creek, Linda/Cirby Creek) from 2003 – 2008 (PCCP 2018).

Steelhead – Central Valley DPS

Steelhead (Central Valley DPS) is a Salmonidae and is a federally threatened species under FESA. This DPS includes all naturally spawned populations of steelhead in the Sacramento and San Joaquin Rivers and their tributaries. They require cool, clear streams with abundant cover and well-vegetated banks, with relatively stable flows, pool and riffle complexes and cold gravelly streambeds for spawning. They are anadromous fish that are born in fresh water streams where they spend one to three years, and then emigrate to the ocean where they grow to adults, and after one to four years return to their natal fresh water stream to spawn (USFWS 2019f). Steelhead have been detected in mainstem Dry Creek, which is used as a migratory corridor, with spawning and rearing habitat upstream in Secret Ravine and Miners Ravine (CDFW 2019b).

Western Spadefoot Toad

Western spadefoot toad is a State species of special concern. Endemic to California and northern Baja California, Western spadefoot toads range from near Redding south through the Central Valley and its associated foothills, through the South Coast Ranges into coastal southern California into coastal Baja California. They are found from near sea level up to 4,500 feet (amsl) in elevation. Western spadefoot toads are mostly terrestrial and occur primarily in grassland habitats, but can be found in valley-foothill hardwood woodland, spending time in water

only to breed. They live in hot, dry environments and spend most of their life buried underground in burrows. They become active during seasonally wet weather and rainfall, typically between October to May, and breed in vernal pools and other temporary rain pools, typically between January and May. Eggs are laid in groups of 10-42 and are attached to underwater vegetation. Eggs hatch anywhere from a little over half a day to six days later into tadpoles. Tadpoles transform into toads in 4-11 weeks, depending on food availability and duration of the seasonal pool (CalHerps 2019a). Western spadefoot toad is known to occur within the Planning Area and there are five records of this species from within the Planning Area in vernal pool and seasonal wetland habitats (CDFW 2019b).

Western Pond Turtle

Western pond turtle is a State species of special concern. Their range includes north of the San Francisco Bay area plus populations from the Central Valley north into Oregon and Washington and an apparently introduced population in Nevada. Western pond turtles are found from sea level to approximately 6,696 feet (amsl) in elevation. They are found in rivers, streams, creeks, ponds, marshes, irrigation ditches, damp woodland and forest, and grassland. The turtles require logs, rocks, vegetation mats, or exposed banks to bask in the sun. Adult males do not mate until they are approximately eight to 10 years old. Mating occurs in April and May and females lay their eggs between April and August in upland habitat, usually along stream or pond margins. Their diet consists of aquatic plants, invertebrates, worms, frog and salamander eggs and larvae, crayfish, carrion, and occasionally frogs and fish (CalHerps 2019b). Suitable aquatic habitat for western pond turtle occurs throughout the Planning Area and they have potential to occur. The nearest record of the species is approximately two miles to the east, in wetland habitat near Folsom Lake (CDFW 2019b).

Giant Garter Snake

Giant garter snake is a State and federally threatened species under CESA and FESA. Endemic to California, currently this snake ranges from Glenn County to the southern edge of the San Francisco Bay Delta, and from Merced County to northern Fresno County in the San Joaquin Valley. The elevational range of this snake is from sea level to 400 feet (amsl). Giant garter snake is found primarily in marshes, sloughs, drainage canals, and irrigation ditches, especially around rice fields, and occasionally in slow-moving creeks (CalHerps 2019c). During the spring and summer, giant garter snake can be found in vegetated upland areas within 200 feet of suitable aquatic habitat. The giant garter snake uses upland habitat for basking, cover, and mammal burrows and crevices in the soil to escape predation and during ecdysis (shedding of skin). In the fall, around October 1, giant garter snakes move underground into mammal burrows, crevices, or other voids in the ground to avoid potentially lethal cool autumn and winter temperatures. Around April 1, and as early as March 1 in some years and locations, giant garter snakes begin to emerge from overwintering sites and start to forage for food and start to breed. Breeding season occurs from March through April and females give birth to live young from late July through early September (USFWS 2019g). There are no records of giant garter snake occurrence in western Placer County and it is believed that its original habitat in the vast marshes around the Sacramento River did not extend east into what is now Placer County; however, giant garter snake has been recorded frequently in neighboring Sutter and Sacramento counties (PCCP 2018). Therefore, giant garter snake is not likely to occur within the Planning Area and is not discussed further.

Tricolored Blackbird

Tricolored blackbird is a state threatened species under CESA and is under review to list as endangered under FESA. Tricolored blackbirds are a permanent resident in California but make extensive migrations and movements within their range during both the breeding season and in winter. In California, tricolored blackbird breeding occurs in the Sacramento and San Joaquin valleys, the foothills of the Sierra Nevada south to Kern County, the coastal slope from Sonoma County south to the Mexican border, and sporadically on the Modoc Plateau. Colonies vary in size from a minimum of about 50 nests to over 20,000 in an area of 10 acres or less. Breeding colonies require a nearby source of water, suitable nesting substrate (such as marshes, riparian scrub and other areas that support cattails or dense thickets of shrubs or herbs), and natural grassland, woodland, or agricultural cropland in which to forage. Preferred foraging habitats include crops such as rice, alfalfa, irrigated pastures, and ripening or cut grain fields, as well as annual grasslands, cattle feedlots, and dairies. Tricolored blackbirds also forage in more natural habitats, including wet and dry vernal pools and other seasonal wetlands, riparian scrub, and open marsh borders (USFWS 2019h). Although no records of this species have been documented within the Planning Area, suitable habitat for tricolored blackbird occurs. There are two records of this species adjacent to the Planning Area along the eastern and northern boundaries in marsh and blackberry bramble nesting habitat, respectively (CDFW 2019b).

Grasshopper Sparrow

Grasshopper sparrow is a State species of special concern. This species is an uncommon and local, summer resident and breeder in foothills and lowlands west of the Cascade-Sierra Nevada crest from Mendocino and Trinity counties, south to San Diego County. The grasshopper sparrow occurs in dry, dense grasslands, especially those with a variety of grasses and tall forbs and scattered shrubs for singing perches. Breeding occurs from early April to mid-July and they may form semi-colonial breeding groups of 3–12 pairs, but does not form flocks in winter. This species nests in depressions on the ground at the bases of grass clumps. Grasshopper sparrow feeds primarily on insects, but also eats grass and forb seeds. This species searches for food on the ground and low foliage within relatively dense grasslands (CDFW 2019c). Suitable habitat is present in the Planning Area and there are two records within 10 miles of the Planning Area, in rolling vernal pool grasslands near Lincoln and Folsom (CDFW 2019b).

Western Burrowing Owl

Western burrowing owl is a bird of conservation concern by the USFWS and a State species of special concern. Burrowing owls are a year-round resident in most of California, including the Central Valley, San Francisco Bay region, Carrizo Plain, and Imperial Valley. Western burrowing owls primarily inhabit open, dry grassland and desert habitats, and levees adjacent to agricultural areas. Main habitat components include burrows for roosting and nesting, and relatively short vegetation with sparse shrubs and taller vegetation. Burrowing owls most commonly use ground squirrel burrows, but they may also use badger, coyote, and fox holes or dens; or human-made structures such as culverts, piles of concrete rubble, pipes, and nest boxes. This species thrives in highly altered human landscapes. In agricultural areas, burrowing owls nest along roadsides, under water conveyance structures, and near and under runways and similar structures. In urban areas, burrowing owls persist in low numbers in highly developed parcels, busy urban parks, and adjacent to roads with heavy traffic. Burrowing owl is a semi-colonial species that breeds in California from March through August, though breeding can begin as early as February and extend into December. Burrowing owls typically feed on a broad range of insects, small rodents, birds, amphibians, reptiles, and carrion. Foraging usually occurs close to their burrow (CDFW 2019c).

The annual grassland and agricultural areas within and adjacent to the Planning Area provides suitable nesting and foraging habitat for burrowing owl. There are two records of this species within two miles to the northwest of the Planning Area in grazed annual grassland and vernal pool habitats (CDFW 2019b).

Swainson's Hawk

Swainson's hawk is a State threatened species and is protected under CESA. This species of hawk is an uncommon breeding resident and migrant in the Central Valley, Klamath Basin, Northeastern Plateau, Lassen County, and Mojave Desert. Swainson's hawk breed and forage in the California Central Valley in spring and summer. California populations of this species are believed to overwinter in Mexico. Typical habitat includes open desert, grassland, or cropland containing scattered, large trees or small groves. Swainson's hawk breeds from late March to late August. Swainson's hawk nest in open riparian habitat, in scattered trees, or in small groves in sparsely vegetated flatlands. Nesting areas are usually located near water but are occasionally found in arid regions. They forage in adjacent grasslands, suitable grain or alfalfa fields, or in livestock pastures, feeding on rodents, small mammals, small birds, reptiles, large arthropods, amphibians, and rarely, fish (CDFW 2019c). Suitable nesting and foraging habitat are present and numerous occurrences documented throughout Planning Area. There are nine records of this species within two miles of the Planning Area, with nests recorded in oak, willow, and eucalyptus trees (CDFW 2019b).

Northern Harrier

Northern harrier is a State species of special concern. This raptor is a permanent resident of the northeastern plateau and coastal areas of California, but is a less common resident of the Central Valley. Northern harrier occurs from annual grassland up to lodgepole pine and alpine meadow habitats, as high as 10,000 feet (amsl). This species breeds from sea level to 5,700 feet (amsl) in the Central Valley and Sierra Nevada, and up to 3,600 feet (amsl) in northeastern California. This species frequents meadows, grasslands, open rangelands, desert sinks, and fresh and saltwater emergent wetlands; however, it is seldom found in wooded areas. Northern harrier nest on the ground within patches of dense, often tall, vegetation in undisturbed areas. (CDFW 2019c). Suitable nesting and foraging habitat for Northern harrier exists in the annual grasslands, wetlands, and agricultural areas within and adjacent to the Planning Area.

White-tailed Kite

White-tailed kite is a fully protected species under Section 3511 of the CDFG Code. White-tailed kites are a year-round resident of coastal and valley lowlands in cismontane California; they are absent from higher elevations in the Sierra Nevada, the Modoc Plateau, and from most desert regions. White-tailed kites occur in herbaceous and open stages of most habitats in cismontane California, and areas of substantial groves of dense, broad-leaved deciduous trees are used for nesting and roosting. White-tailed kites breed from February to October, with peak activity from May to August. Nests are typically located 20 to 100 feet above the ground near the top of dense oak, willow, or other tree stands, and are often located near an open foraging area with a dense population of voles (CDFW 2019c). Riparian areas and open space preserves within and adjacent to the Planning Area provide suitable habitat for nesting; and annual grasslands, wetlands, and agricultural areas within and adjacent to the Planning Area provide suitable habitat for foraging for the white-tailed kite. There is one CNDDDB record of the species from within the Planning Area, in oak woodland habitat along the west bank of Pleasant Grove Creek (CDFW 2019b).

Loggerhead Shrike

Loggerhead shrike is a bird of conservation concern by the USFWS and a State species of special concern. Loggerhead shrike is a common resident and winter visitor in lowlands and foothills throughout California. This species prefers open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches. Loggerhead shrike occurs only rarely in heavily urbanized areas, but is often found in open cropland and sometimes uses edges of denser habitats. This passerine begins breeding in February and may continue with raising a second brood as late as July. It feeds mostly on large insects, but also eats small birds, amphibians, reptiles, and small rodents over open ground within areas of short vegetation, usually by impaling prey on thorns, wire barbs, or sharp twigs to cache for later feeding (CDFW 2019c). Suitable habitat for this species occurs within and adjacent to the Planning Area in annual grassland and agricultural areas.

California Black Rail

California black rail is a federal species of management concern and a State threatened and fully protected species. Its range includes the San Francisco Bay area, Sacramento-San Joaquin Delta, coastal southern California at Morro Bay, and a few other locations, such as the Salton Sea and lower Colorado River area. Habitat for this elusive small bird include freshwater marshes, wet meadows, and shallow margins of saltwater marshes bordering larger bays. This species needs water depths of about one inch that do not fluctuate during the year and dense vegetation for nesting habitat (CDFW 2019c). Freshwater marsh habitat in the Planning Area may provide suitable habitat, especially in the northern and western portions of the Planning Area. This species was detected in Placer County in perennial wetland habitats north of the Planning Area (PCCP 2018).

Song Sparrow (“Modesto” population)

Song sparrow is a State species of special concern. This species is found throughout most of California, except for higher mountains, and occurs only locally in southern deserts. The song sparrow nests and forages primarily in emergent marsh, riparian scrub, and early successional riparian forest habitats in the north-central portion of the Central Valley; infrequently in mature riparian forest and sparsely vegetated ditches and levees. The song sparrow forages primarily on exposed ground or in leaf litter and seeds are the most important foods in their annual diet; but insects, spiders, and other small invertebrates make up half of the diet in the nesting season (CDFW 2019c). Suitable marsh and riparian habitat is present in the Planning Area. The nearest record is from Yankee Slough, approximately 10 miles north of the Planning Area in willow thickets surrounding a marsh (CDFW 2019b).

Purple Martin

Purple martin is a State species of special concern. This species is an uncommon to rare local summer resident throughout California and generally absent from higher desert regions and higher slopes of the Sierra Nevada. Purple martin nests in old woodpecker cavities mostly, and sometimes in human-made structures such as in nesting boxes, under bridges, and in culverts. This species forages in foothill and low montane oak and riparian woodlands, and less frequently in coniferous forests and open or developed habitats. Suitable foraging habitat exists in the form of oak woodland habitat, however, due to competition with other cavity-nesting bird species, particularly non-native invasive European starlings, suitable nesting habitat in the Sacramento Valley is restricted to manmade structures, particularly bridges (CDFW 2019c). This species was detected nesting in weepholes in the State Route 65 overpass within the Planning Area in 2007 (CDFW 2019b).

Heron/Egret Rookeries

The great egret (*Ardea alba*), great blue heron (*Ardea herodias*), snowy egret (*Egretta thula*), and black-crowned night heron (*Nycticorax nycticorax*) are colonial nesting birds that typically nest in trees and/or riparian areas in rookeries. While these species are not formally listed and protected pursuant to either CESA or FESA, their rookeries are of interest to CDFW and are subject to CEQA review. These birds are also protected under the federal Migratory Bird Treaty Act (MBTA). Rookeries can have hundreds of individual nests. Rookery sites have the potential to occur in riparian areas and open space preserves throughout the Planning Area, especially in the open space and preserves, including the Al Johnson Wildlife Area (Reason Farms).

Nesting Birds

Nesting birds and their nests are protected under the California Fish and Game Code (FGC) §3503. All birds in the orders Falconiformes and Strigiformes (collectively known as birds of prey) are also protected by FGC §3503.5. Birds of prey include raptors, falcons, and owls. The federal MBTA of 1918 (16 United States Code [U.S.C.] 703-711) also protects most birds and their nests, including many birds that are non-migratory in California. The MBTA makes it unlawful to take, possess, buy, sell, purchase, or barter any bird listed in 50 CFR Part 10 including feathers or other parts, nests, eggs, or products, except as allowed by implementing regulations. Any disturbance that causes direct injury, death, nest abandonment, or forced fledging of migratory birds, is restricted under the MBTA. Any removal of active nests during the breeding season or any disturbance that results in the abandonment of nestlings is considered a ‘take’ of the species under federal law. The Planning Area and adjacent areas provide nesting and foraging habitat for birds protected under MBTA and/or FGC.

Pallid Bat

The pallid bat is a State species of special concern. This bat is a locally common species of low elevations in California and occurs throughout the state except for the high Sierra Nevada from Shasta to Kern counties, and the northwestern corner of the state from Del Norte and western Siskiyou counties to northern Mendocino county. The pallid bat inhabits grasslands, cottonwood-riparian zones, juniper woodlands, and low desert shrublands. It needs open, dry areas with rocky areas for roosting, or may also roost in abandoned, man-made structures. Pallid bats are colonial and typically have 30-70 animals in a colony. Pallid bats breed in the fall or winter and give birth in early summer. They forage on a wide variety of insects and arachnids over open ground usually 1.6 to 8 feet above ground level (CDFW 2019c). Suitable roosting habitat for the pallid bat is distributed throughout the Planning Area in oak trees and man-made structures in grasslands and woodlands. There is an abundance of open, grassland areas adjacent to the Planning Area, as well as some within the Planning Area. There are also riparian zones within the Planning Area. Due to the large range size of this species, the entire Planning Area is located within suitable habitat for the species, except for disturbed and developed areas that would lack a prey base. There is one record of the species within two miles southeast of the Planning Area in Folsom (CDFW 2019b).

Townsend's Big-Eared Bat

Townsend's big-eared bat is a State species of special concern. This uncommon bat occurs throughout California in a wide variety of habitats, except for subalpine and alpine habitats and is most abundant in mesic habitats. Townsend's big-eared bat is a colonial bat associated with coniferous forests, mixed mesophytic forests, deserts, agricultural areas, native prairies, riparian communities, and coastal habitat types. Individuals typically roost in caves and mines, but also in basal hollows of large trees and human structures, such as bridges and buildings

(CDFW 2019c). Suitable roost habitat (human structures in agricultural and riparian areas) is present in the Planning Area. The nearest record of this species is from an abandoned mine near Dutch Ravine, approximately eight miles northeast of the Planning Area (CDFW 2019b).

American Badger

The American badger is a State species of special concern. This Mustelidae mammal is an uncommon, permanent resident found throughout most of the state, except in the northern North Coast area that occupies open, uncultivated habitats. It occurs primarily in grasslands, parklands, farms, and other treeless areas with friable soil and a supply of rodent prey. It is also found in forest glades and meadows, marshes, brushy areas, hot deserts, and mountain meadows. It is sometimes found at elevations up to 12,000 feet, but is usually found at elevations lower and warmer than those characterized by coniferous forests. American badgers are occasionally found in open chaparral (with less than 50-percent plant cover) and riparian zones. American badgers create burrows for sleeping and concealment, protection from weather, and natal dens. Breeding generally occurs between December and February, and cubs are born between March and April. Badgers are carnivorous and eat fossorial rodents, such as rats, mice, chipmunks, and especially ground squirrels and pocket gophers. They also eat some reptiles, insects, earthworms, eggs, and birds (CDFW 2019c). The Planning Area is located within the range of American badger. Suitable habitat occurs in undeveloped areas, grasslands, and open spaces throughout the Planning Area. The nearest record is from annual grassland habitat near Rancho Cordova, approximately 11 miles south of the Planning Area (CDFW 2019b).

4.8.3 REGULATORY FRAMEWORK

4.8.3.1 FEDERAL

Endangered Species Act, 16 U.S.C. Section 1531 et seq

Pursuant to the Endangered Species Act (ESA) (16 U.S.C. Section 1531 et seq.), U.S. Fish and Wildlife Service (USFWS) has regulatory authority over species listed or proposed for listing as endangered or threatened. USFWS and the National Marine Fisheries Service have authority over projects that may result in take of a species listed as threatened or endangered under ESA (i.e., a federally listed species). In general, persons subject to ESA (including private parties) are prohibited from “taking” endangered or threatened fish and wildlife species on private property, and from “taking” endangered or threatened plants in areas under federal jurisdiction or in violation of state law.

Under Section 9 of the ESA, the definition of “take” is to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” USFWS has also interpreted the definition of “harm” to include significant habitat modification that could result in take.

The take prohibition of ESA Section 9 applies only to listed species of fish and wildlife. Section 9(a)(2)(B) describes federal protection for endangered plants. In general, ESA does not protect listed plants located on nonfederal land (i.e., areas not under federal jurisdiction), unless such species are already protected by state law.

Section 7 of the ESA outlines procedures for federal interagency cooperation to protect and conserve federally listed species. Section 7(a)(2) requires federal agencies to consult with USFWS to ensure that they are not

undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species or destroying or adversely modifying designated critical habitat.

For projects where federal action is not involved and take of a listed species may occur, a project proponent may seek an incidental take permit under section 10(a) of the ESA. Section 10(a) of ESA allows USFWS to permit the incidental take of listed species if such take is accompanied by a habitat conservation plan that ensures minimization and mitigation of impacts associated with the take.

City/U.S. Fish and Wildlife Service MOUs

In May and August 2000, the City and the USFWS entered into memorandums of understanding (MOUs) to prepare a Habitat Conservation Plan (HCP) or equivalent permit process to minimize the indirect impacts and incidental take of vernal pool species from future City growth. Consistent with this agreement, the City of Roseville, landowners, and the USFWS, the USACE, and the U.S. Environmental Protection Agency (EPA) conducted an extensive early consultation process. The groups met on multiple different occasions with the following objective: to reach basic agreement on a land use plan and mitigation strategy that could be permitted under Section 404 of the Clean Water Act (CWA) utilizing a Section 7 Consultation process for ESA compliance. The City worked with the USFWS to assess the status of remaining vernal pool resources within the City, which included several mapping tasks to identify current development trends and remaining vernal pool resources. Based on the information gained through the mapping effort and ongoing dialog and written communication between City and USFWS staff, the USFWS concurred that nearly all remaining undeveloped land containing vernal pools had received federal permits for development through the Clean Water Act 404 process and, therefore, preparation of an HCP or equivalent to address remaining City development would not be necessary. However, the USFWS requested the City standardize the monitoring and maintenance of its system of vernal pool and wetland preserve areas. In response, the City prepared and adopted the City of Roseville Open Space Preserve Overarching Management Plan (OSPOMP).

Clean Water Act, 33 U.S.C. Section 1251 et seq.

Section 404 Permit Program

Section 404 of the Federal CWA requires a project applicant to obtain a permit from the USACE before engaging in any activity that involves any discharge of dredged or fill material into waters of the United States, including wetlands. Fill material is material placed in waters of the United States where the material has the effect of replacing any portion of a water of the United States with dry land, or changing the bottom elevation of any portion of a water of the United States. Waters of the United States include navigable waters of the United States; interstate waters; all other waters where the use, degradation, or destruction of the waters could affect interstate or foreign commerce; and tributaries to any of these waters. Wetlands are defined as those areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Potentially jurisdictional wetlands must meet three wetland delineation criteria: hydrophytic vegetation, hydric soil types, and wetland hydrology. Wetlands that meet the delineation criteria may be jurisdictional under Section 404 of CWA pending USACE and EPA review.

As part of the review of a project, USACE must ensure compliance with applicable federal laws, including EPA's Section 404(b)(1) Guidelines. USACE regulations require that impacts to waters of the United States are avoided

and minimized to the maximum extent practicable, and that unavoidable impacts are compensated (33 Code of Federal Regulations [CFR] 320.4[r]).

In 2008, USACE and EPA issued regulations governing compensatory mitigation for activities authorized by permits issued by USACE (33 CFR 332). The rule establishes a preference for the use of mitigation banks because they provide established wetland habitats that have already met success criteria thereby reducing some of the risks and uncertainties associated with compensatory mitigation involving creation of new wetlands that cannot yet demonstrate functionality at the time of project implementation. The rule also establishes a preference for providing compensatory mitigation within the affected watershed. Ideally, compensatory mitigation would take place at a mitigation bank within the same watershed as the waters to be replaced. If mitigation banks are not available within the affected watershed, then compensatory mitigation involving creation or restoration within the affected watershed may be preferable to using a mitigation bank outside the affected watershed.

Section 401 Water Quality Certification

Under Section 401 of the CWA, an applicant for a Section 404 permit must obtain a certificate from the appropriate state agency stating that the intended dredging or filling activity is consistent with the State's water quality standards and criteria. In California, the authority to grant water quality certification is delegated by the State Water Resources Control Board to the nine Regional Water Quality Control Boards (RWQCBs).

National Pollutant Discharge Elimination System Permit Program, Section 402

The National Pollutant Discharge Elimination System (NPDES) permit program was established as part of the CWA to regulate municipal and industrial discharges to surface waters of the U.S. 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 limits on the concentrations and/or mass emissions of pollutants in effluent discharged into receiving waters; 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.

More specifically, the discharge prohibitions and limitations in an NPDES permit for wastewater treatment plants are designed to ensure the maintenance of public health and safety, protection of receiving water resources, and safeguarding of the water's designated beneficial uses. Discharge limitations typically define allowable effluent quantities for flow, biochemical oxygen demand, total suspended matter, residual chlorine, settleable matter, total coliform, oil and grease, pH, and toxic pollutants. Limitations also typically encompass narrative requirements regarding mineralization and toxicity to aquatic life.

In November 1990, EPA published regulations establishing NPDES permit requirements for municipal and industrial stormwater discharges. Phase I of the permitting program applied to municipal discharges of stormwater in urban areas where the population exceeded 100,000 persons.³ Phase II of the NPDES stormwater permit regulations became effective in March 2003 and required NPDES permits be issued for construction activity for projects that disturb between one and five acres. Phase II of the municipal permit system (i.e., known as the NPDES General Permit for Small Municipal Separate Storm Sewer Systems [Small MS4s], Order NO. 2003-

³ Phase I also applies to storm water discharges from a large variety of industrial activities, including general construction activity if the project would disturb more than 5 acres.

0005-DWQ as amended by 2013-0001-DWQ) required small municipality areas of less than 100,000 persons to develop stormwater management programs. The *City of Roseville Stormwater Management Program* (City of Roseville 2004) describes the City's activities to comply with the NPDES General Permit for Small MS4s.

California's Regional Water Quality Control Boards (RWQCBs) are responsible for implementing the NPDES permit system.

Migratory Bird Treaty Act, 16 U.S.C. Section 703, et seq.

The Migratory Bird Treaty Act (MBTA) (16 U.S.C. Section 703, et seq.), first enacted in 1918, provides for protection of international migratory birds and authorizes the Secretary of the Interior to regulate the taking of migratory birds. The MBTA provides that it shall be unlawful, except as permitted by regulations, to pursue, take, or kill any migratory bird, or any part, nest, or egg of any such bird. This prohibition includes both direct and indirect acts, although harassment and habitat modification are not included unless they result in direct loss of birds, nests, or eggs. The current list of species protected by the MBTA can be found in Title 50 of the CFR, Section 10.13 (50 CFR 10.13). The list includes nearly all birds native to the United States.

Plant Protection Act, 7 U.S.C. Section 7701 et seq.

Introduced in 2000, the Plant Protection Act prevents importation, exportation, and spread of pests that are injurious to plants, and provides for the certification of plants and the control and eradication of plant pests. The Act consolidates requirements previously contained within multiple federal regulations, including the Federal Noxious Weed Act, the Plant Quarantine Act, and the Federal Plant Pest Act.

Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon

The Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon (USFWS 2005) was released by USFWS on December 15, 2005. This plan focuses on 33 species of plants and animals that occur exclusively or primarily within vernal pool ecosystems, including the federally listed vernal pool fairy shrimp and vernal pool tadpole shrimp.

The plan outlines recovery priorities and provides goals, objectives, strategies, and criteria for recovery. One of the overall objectives of the recovery plan is to promote natural ecosystem processes and functions by protecting and conserving intact vernal pools and vernal pool complexes. Habitat protection under the recovery plan includes the protection of the topographic, geographic, and soil features that support hydrologically interconnected systems of vernal pools, swales, and other seasonal wetlands within an upland matrix that together form hydrologically and ecologically functional vernal pool complexes.

While not regulatory in nature, the Recovery Plan should be taken into consideration when analyzing potential impacts on vernal pools and associated biota to ensure that projects do not prevent or impair the plan's future long-term implementation success. It is also used by the USFWS to determine recommendations and requirements during endangered species consultation for vernal pool dependent species.

There are two core areas within the Southeastern Sacramento Valley vernal pool region that are within the vicinity of the Planning Area. The Western Placer County core area overlaps a portion of the northwest Planning Area. The Beale core area lies approximately 20 miles north of the City of Roseville Planning Area. Core areas are the specific sites that USFWS has deemed necessary to recover federally endangered and threatened vernal pool

species. The Western Placer County and Beale core areas are ranked in Zone 2. Protection of Zone 2 core areas is important for recovery of some species that are rare and localized, but have significant populations within Zone 2. Protection of Zone 2 core areas is a lower priority than protection of Zone 1 core areas because USFWS believes that within each Zone 1 core area, species occurrences and suitable vernal pool habitat must be protected to prevent extinction or irreversible decline of at least one species covered in the recovery plan. The Western Placer County and Beale core areas have been designated to protect vernal pool fairy shrimp, vernal pool tadpole shrimp, California fairy shrimp, western spadefoot toad, and legenere. The Western Placer County core area has also been designated to protect special-status plants Boggs Lake hedge-hyssop, and Ahart's dwarf rush (USFWS 2005). Species covered in the Recovery Plan that are known to occur or may occur in the Planning Area consist of Boggs Lake hedge-hyssop, legenere, Ahart's dwarf rush, vernal pool fairy shrimp, vernal pool tadpole shrimp, and western spadefoot toad.

4.8.3.2 STATE

California Endangered Species Act, California Fish and Game Code Section 2050, *et seq.*

California Endangered Species Act (CESA) directs state agencies not to approve projects that would jeopardize the continued existence of an endangered or threatened species or result in the destruction or adverse modification of habitat essential to the continued existence of a species. Furthermore, CESA states that reasonable and prudent alternatives shall be developed by CDFW, together with the project proponent and any state lead agency, consistent with conserving the species, while at the same time maintaining the project purpose to the greatest extent possible. Under CESA, project-related impacts of the authorized take must be minimized and fully mitigated, and adequate funding to implement those mitigation measures and monitor compliance with and the effectiveness of the measures must be ensured. Standard CESA issuance requirements can include land acquisition, permanent protection and management, and/or funding in perpetuity of compensatory lands.

A "take" of a species, under CESA, is defined as an activity that would directly or indirectly kill an individual of a species. The CESA definition of take does not include "harm" or "harass" as is included in the federal act. As a result, the threshold for a take under CESA may be higher than under ESA because habitat modification is not necessarily considered take under CESA. The take of State-listed species incidental to otherwise lawful activities requires a permit, pursuant to Section 2081(b) of CESA. The State has the authority to issue an incidental take permit under California Fish and Game Code Section 2081, or to coordinate with USFWS during the Section 10(a) process to make the federal permit consistent with CESA.

As under federal law, listed plants have considerably less protection than fish and wildlife under California State law. The California Native Plant Protection Act (California Fish and Game Code Section 19000 *et seq.*) allows landowners to take listed plant species from, among other places, a canal, lateral ditch, building site, or road, or other right-of-way, provided that the owner first notifies CDFW and gives the agency at least 10 days to come and retrieve (and presumably replant) the plants before they are plowed under or otherwise destroyed.

Lake and Streambed Alteration Agreement, California Fish and Game Code Section 1602

All diversions, obstructions, or changes to the natural flow or bed, channel, or bank of any river, stream, or lake in California that supports wildlife resources are subject to regulation by CDFW under Section 1602 of the California Fish and Game Code. Under Section 1602, it is unlawful for any person to substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated

by CDFW, or use any material from the streambeds, without first notifying CDFW of such activity and obtaining a final agreement authorizing such activity.

“Stream” is defined as a body of water that flows at least periodically or intermittently through a bed or channel having banks and that supports fish or other aquatic life. CDFW’s jurisdiction within altered or artificial waterways is based on the value of those waterways to fish and wildlife. A CDFW lake or streambed alteration agreement must be obtained for any project that would result in an impact on a river, stream, or lake.

Porter-Cologne Water Quality Control Act, California Water Code Section 13000, *et seq.*

The Porter-Cologne Act (California Water Code Section 13000, *et seq.*) requires that each of the state’s nine RWQCBs prepare and periodically update basin plans for water quality control. Each basin plan sets forth water quality standards for surface water and groundwater and actions to control nonpoint and point sources of pollution to achieve and maintain these standards. Basin plans offer an opportunity to protect wetlands through the establishment of water quality objectives. The State Water Resources Control Board’s (SWRCB) and RWQCB’s jurisdiction includes federally protected waters, as well as areas that meet the definition of “waters of the state.” The term “waters of the state” is defined as any surface water or groundwater, including saline waters, within the boundaries of the state. The RWQCB has the discretion to take jurisdiction over areas not federally regulated under Section 401 provided they meet the definition of waters of the state. Mitigation requiring no net loss of wetlands functions and values of waters of the state is typically required by the RWQCB.

Fully Protected Species, California Fish and Game Code Sections 3511, 4700, 5050, and 5515

Four sections of the California Fish and Game Code (Fish and Game Code Sections 3511, 4700, 5050, and 5515) list 37 fully protected species. These statutes prohibit take or possession at any time of fully protected species. CDFW is unable to authorize incidental take of fully protected species when activities are proposed in areas inhabited by those species. CDFW has informed nonfederal agencies and private parties that they must avoid take of any fully protected species in carrying out projects.

Protection of Bird Nests and Raptors, California Fish and Game Code Section 3503 and 3513

Section 3503 of the Fish and Game Code states that it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird. Section 3503.5 of the California Fish and Game Code states that it is unlawful to take, possess, or destroy any raptors (i.e., species in the orders Falconiformes and Strigiformes), including their nests or eggs. Typical violations include destruction of active nests as a result of tree removal and failure of nesting attempts, resulting in loss of eggs and/or young. These violations can be caused by disturbance of nesting pairs by nearby human activity. Section 3513 provides for the adoption of the MBTA’s provisions (above).

Native Plant Protection Act, California Fish and Game Code Sections 1900-1913

Prior to enactment of CESA and the federal ESA, California adopted the Native Plant Protection Act (NPPA). The CESA (above) generally replaces the NPPA for plants originally listed as endangered under the NPPA. However, plants originally listed as rare retain that designation, and take is regulated under provisions of the NPPA. The California Fish and Game Commission adopted revisions to the NPPA allowing CDFW to issue incidental take authorization for listed rare plants, effective January 1, 2015.

4.8.3.3 REGIONAL

Placer County Conservation Plan/Natural Community Conservation Plan (Draft)

The Planning Area is located south of the proposed Draft Placer County Conservation Program (PCCP), which applies to western Placer County and specific areas where conservation activities will take place in neighboring Sutter County (PCCP 2018). According to the proposed PCCP, the goal is “to provide an effective framework to protect, enhance, and restore the natural resources in specific areas of western Placer County while streamlining environmental permitting for Covered Activities. Within this framework, the proposed PCCP will achieve conservation goals, comply with state and federal environmental regulations, accommodate anticipated urban and rural growth, and permit the construction and maintenance of infrastructure needed to serve the county’s population.” The proposed PCCP includes three separate, but complimentary, components that support two sets of state and federal permits:

- ▶ Western Placer County Habitat Conservation Plan and Natural Community Conservation Plan, referred to as the HCP/NCCP or “Plan.” The Plan is a joint HCP and NCCP that will protect fish and wildlife and their habitats and fulfill the requirements of the federal Endangered Species Act (ESA) and the California Natural Community and Conservation Planning Act (NCCP Act).
- ▶ Western Placer County Aquatic Resources Program, referred to as the CARP. The CARP will protect streams, wetlands, and other water resources and fulfill the requirements of the federal CWA and analogous state laws and regulations.
- ▶ In-Lieu Fee Program is a program under which compensatory mitigation requirements under Section 404 of the CWA can be fulfilled by payment of a fee. The In-Lieu Fee Program will provide wetland mitigation “credits” that can be used to fulfill Section 404 compensatory mitigation requirements. The In-Lieu Fee Program will provide compensatory mitigation for impacts on aquatic resources for all projects and activities that are covered under the HCP/NCCP and the CARP.

The proposed Placer HCP/NCCP coverage area includes Plan Area A and Plan Area B. Plan Area A, Valley, surrounds the City of Roseville on the south, west, and north sides and is 100,698 acres in total land area. Plan Area B includes “Permittee” activity in non-participating city jurisdictions, including Roseville. The Placer HCP/NCCP is in draft form (PCCP 2018) and is not an approved HCP or NCCP. The Placer HCP/NCCP is intended to serve as a HCP under the ESA and a NCCP under the California Natural Community Conservation Act. The 14 special-status species proposed for coverage under the plan are species that have potential to occur in the plan area that are currently listed as threatened or endangered under ESA or CESA, or that have potential to become listed during the 50-year life of the Plan. These special-status species include the following: vernal pool fairy shrimp, vernal pool tadpole shrimp, conservancy fairy shrimp, valley elderberry longhorn beetle, giant garter snake, western pond turtle, California red-legged frog, foothill yellow-legged frog, Central Valley steelhead, Chinook salmon (Central Valley fall/late fall-run), burrowing owl, tricolored blackbird, California black rail, and Swainson’s hawk.

The Placer HCP/NCCP will allow a “Permittee” to receive incidental take permits under the FESA and CESA for activities and projects they conduct and those under their jurisdiction. The Placer HCP/NCCP will provide a framework to improve conservation of natural resources, including endangered species habitat, while streamlining the permitting process for planned development, infrastructure, and maintenance activities by replacing the

individual project system of permitting and mitigation with a countywide mitigation and conservation program that comprehensively coordinates the implementation of permit requirements. This approach benefits natural resources and project proponents by addressing project effects and mitigation requirements comprehensively in a way that is more efficient and effective for sensitive species and their essential habitats and creating habitat reserves that will be larger in scale, more ecologically valuable, and easier to manage than individual mitigation sites created under the current approach (PCCP 2018).

Western Placer County Aquatic Resource Program (CARP)

The Western Placer County Aquatic Resources Program (CARP) is part of the Western Placer County HCP/NCCP and will protect streams, wetlands, and other water resources and fulfill the requirements of the federal CWA and analogous state laws and regulations in a streamlined manner. It will protect aquatic resources by establishing avoidance, minimization, and mitigation requirements for projects that have the potential to impact such resources. These avoidance, minimization, and mitigation requirements are derived from the HCP/NCCP; however, the CARP focuses on aquatic resources specifically and in some areas, addresses them in greater detail than the HCP/NCCP. An In-lieu Fee Program will provide compensatory mitigation, as required by Section 404 of the Clean Water Act, for impacts on aquatic resources for all projects and activities that are covered under the HCP/NCCP and the CARP (PCCP 2018).

4.8.3.4 LOCAL

Existing City of Roseville General Plan

The existing General Plan (City of Roseville 2016) includes the following goals and policies to protect biological resources.

Open Space System Goal 1: Establish a comprehensive system of public and private open space, including interconnected open space corridors that should include oak woodlands, riparian areas, grasslands, wetlands, and other open space resources.

- ▶ **Open Space System Policy 6:** Take into account consideration of natural habitat areas in developing linkages and in preserving open space areas. Identify alternate sites for linkages where sensitive habitat areas have the potential to be adversely impacted.
- ▶ **Open Space System Policy 7:** Maximize opportunities for preservation and maintenance of open space resources, including establishment of private open space areas. Consider coordination with non-profit organizations and investigate the potential for conservancy ownership and/or management of open space areas

Vegetation and Wildlife Goal 1: Preserve, protect, and enhance a significant system of interconnected natural habitat areas, including creek and riparian corridors, oak woodlands, wetlands, and adjacent grassland areas.

Vegetation and Wildlife Goal 2: Maintain healthy and well-managed habitat areas in conjunction with one another, maximizing the potential for compatible open space, recreation, and visual experiences.

Vegetation and Wildlife Goal 3: Protect special-status species and other species that are sensitive to human activities.

- ▶ **Vegetation and Wildlife Policy 1:** Incorporate existing trees into development projects, and where preservation is not feasible, continue to require mitigation for the loss of removed trees. Particular emphasis shall be placed on avoiding the removal of groupings or groves of trees.
- ▶ **Vegetation and Wildlife Policy 2:** Preserve and rehabilitate continuous riparian corridors and adjacent habitat along the City's creeks and waterways.
- ▶ **Vegetation and Wildlife Policy 3:** Require dedication of the City's Regulatory Floodplain, as defined in the Safety Element, or comparable mechanism to protect habitat and wildlife values in perpetuity.
- ▶ **Vegetation and Wildlife Policy 4:** Require preservation of contiguous areas in excess of the City's Regulatory Floodplain, as defined in the Safety Element, as merited by special resources or circumstances. Special circumstances may include, but are not limited to, sensitive wildlife or vegetation, wetland habitat, oak woodland areas, grassland connections in association with other habitat areas, slope or topographical considerations, recreation opportunities, and maintenance access requirements.
- ▶ **Vegetation and Wildlife Policy 5:** Limit recreation activities within the City's Regulatory Floodplain, as defined in the Safety Element, and require appropriate setback areas for trails and other public recreation uses so that natural resource areas are not adversely impacted.
- ▶ **Vegetation and Wildlife Policy 6:** Provide for protection and enhancement of native fishery resources, including continued coordination with the California Department of Fish and Wildlife to release water into Linda Creek.
- ▶ **Vegetation and Wildlife Policy 7:** Require cumulative mitigation plans for wetlands, where feasible, in association with specific plans.
- ▶ **Vegetation and Wildlife Policy 8:** Consider substitute site mitigation for federally non-regulated wetlands, provided that such mitigation will provide comparable habitat values.
- ▶ **Vegetation and Wildlife Policy 9:** Limit the access of pedestrians and cyclists to vernal pool and wetland areas so that access is compatible with long-term protection of these natural resource areas.
- ▶ **Vegetation and Wildlife Policy 10:** Manage public lands with special-status species to encourage propagation of the species and discourage non-indigenous, invasive species.
- ▶ **Vegetation and Wildlife Policy 11:** Habitat preservation and mitigation for woodlands, creeks, riparian and seasonal wetland areas should occur within the defined boundaries of the impacting projects where long-term resource viability is feasible and desirable consistent with applicable state and federal permits.
- ▶ **Vegetation and Wildlife Policy 12:** Consider the use of City property for habitat preservation and mitigation requirements resulting from development proposals when such efforts do not conflict with existing resources, recreational opportunities, or other City goals, policies, or programs.
- ▶ **Vegetation and Wildlife Policy 13:** Work with adjacent jurisdictions, regulatory agencies, and community organizations to explore opportunities for regional mitigation banking.

- ▶ **Groundwater Recharge and Water Quality Policy 2:** Implement erosion control and topsoil conservation measures to limit sediments within watercourses.
- ▶ **Groundwater Recharge and Water Quality Policy 3:** Ensure a buffer area between waterways and urban development to protect water quality and riparian areas.

City of Roseville Tree Preservation Ordinance, Municipal Code Chapter 19.66

The City of Roseville Tree Preservation Ordinance (Municipal Code Chapter 19.66) regulates the removal and preservation of trees within the City. Protected trees include native oak trees equal to or greater than six inches diameter at breast height (DBH) measured as a total of a single trunk or multiple trunks. Protected zones include a circle equal to the largest radius of a protected tree's dripline plus one foot. The radius is measured from the trunk at the base of the tree to the greatest extent of the tree's dripline. A permit is necessary for the removal of a protected tree and is described in Municipal Code Chapter 19.66.030. The City also requires that applications for development projects with activity occurring within the protected zone of a protected tree obtain a permit prior to construction, as described in Municipal Code Chapter 19.66.030, to identify measures that will aid in the preservation of native oak trees.

Roseville Creek and Riparian Management and Restoration Plan

The Roseville Creek and Riparian Management and Restoration Plan (City of Roseville 2005) provides standards for creek and riparian area management and enhancement for more than 60 miles of creeks located in the City of Roseville. These creeks, which include portions of the Dry Creek and Pleasant Grove/Curry Creek watersheds, serve many important functions, such as conveying flood waters away from developed areas, providing valuable aquatic and wildlife habitat, as well as providing open space for recreation and preserve areas. Restoration opportunities for 10 of the major tributaries in the City of Roseville are addressed in the plan, which includes a comprehensive list of restoration methods and techniques to improve wildlife habitat, fish habitat, channel stability, and water quality. The plan also recommends maintenance practices for various issues to balance public health, safety, and resource needs. Monitoring and assessment recommendations are included to assist in determining which measures are effective, identify any problems, and allow for adaptive management (City of Roseville 2005).

City of Roseville Open Space Preserve Overarching Management Plan

The City of Roseville Open Space Preserve Overarching Management Plan (City of Roseville 2011b) was developed at the request of the USFWS to provide one management strategy for all the previously protected open space vernal pool and wetland preserves. At the time of the plan, there were 32 City-owned preserves. The purposes of the plan are: (1) To provide a city-wide approach to open space management, maintenance, and monitoring; (2) To provide specific goals for open space management, maintenance, and monitoring; (3) To consolidate existing Open Space Preserve monitoring and reporting requirements to allow for more comprehensive data gathering and preparation of a single annual monitoring report; (4) To consolidate existing Operation and Management Plans and update the approved list of Open Space Preserve area allowed uses; (5) To eliminate the need for additional management plans when new open space is dedicated through the development process or habitat conservation efforts; (6) To gain approval of necessary open space management and maintenance tasks that might adversely affect federally listed species (threatened or endangered) protected by the

ESA; (7) To reduce Agency and City staff workload by providing an agreed-upon method for corrective actions; and (8) To provide a platform for grant funding.

Adopted Specific Plans and Mitigation Measures

Currently, the City has adopted 14 Specific Plans. A Specific Plan is a comprehensive planning and zoning document that implements the General Plan by providing development and conservation standards for a defined geographic location within the Planning Area. Each Specific Plan contains guidelines for site, architectural, landscaping, lighting, roadway networks, pedestrian/bicycle paths, open space corridors, parks, and other aspects of design. Each adopted Specific Plan included an EIR which analyzed impacts and included mitigation measures as appropriate, which are required to be implemented in the respective Specific Plan Areas. Adopted mitigation measures include 1:1 compensation for wetland loss, wetlands avoidance and the establishment of open space preserves, measures for the protection of special status species, nesting bird surveys, grassland habitat preservation and compensation, and pre-construction surveys for sensitive wildlife. Compliance with these existing mitigation measures is required for all future development activities within the City's remaining undeveloped Specific Plan areas. Copies of the adopted Specific Plans and their associated EIRs are available upon request from the City of Roseville Development Services Department, Planning Division.

4.8.4 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

4.8.4.1 METHODOLOGY

This analysis of impacts on biological resources associated with implementing the proposed General Plan Update is based primarily on a literature review, review of California Natural Diversity Database (CNDDDB), and California Native Plant Society (CNPS) records. Information sources used in this analysis include:

- ▶ West Roseville Specific Plan and EIR (City of Roseville 2004)
- ▶ Sierra Vista Specific Plan and EIR (City of Roseville 2010)
- ▶ Creekview Specific Plan and EIR (City of Roseville 2011a)
- ▶ City of Roseville Open Space Preserve Overarching Management Plan (City of Roseville 2011b)
- ▶ Amoruso Ranch Specific Plan and EIR (City of Roseville 2016)
- ▶ Western Placer County HCP/NCCP (PCCP 2018)

This EIR analyzes buildout of the Planning Area consistent with the existing General Plan land use designations and compares this to the existing physical conditions, which constitute the baseline for determining whether potential impacts are significant. Potential impacts on biological resources resulting from buildout of the City's General Plan and necessary public facilities and infrastructure improvements were determined by overlaying future buildout areas with the existing habitat layers (as shown in Exhibit 4.8-4), quantifying potential loss of common and sensitive habitats (e.g., vernal pools, oak woodland), and evaluating potential effects on special-status species that could result from this habitat loss and other potential direct and indirect effects.

Goals and policies pertaining to management and protection of biological resources in the City's Planning Area are mostly found in the Open Space and Conservation Element of the General Plan. This proposed General Plan Update does not include any changes to land use designations, expansion of the City's Planning Area, or other major physical changes to areas planned for development compared to the existing General Plan, but does include changes to goals, policies, and implementation measures, which are analyzed as a part of this EIR.

This page intentionally left blank

Potential impacts of General Plan buildout on biological resources were determined by analysis of mapping of biological habitats in the Planning Area and estimating impact acreages on the ground by habitat type (see Exhibit 4.8-4). This analysis is conservative because all identified sites were assumed to be fully developed unless specifically prohibited by current zoning and land use designations (e.g. as in the City's floodway or open space zoning), despite the fact that in many cases consistency with General Plan policies and other regulations results in the creation of open space or other undeveloped areas, in order to preserve onsite resources such as trees. Exhibit 4.8-4 was designed to estimate worst-case impacts, and does not necessarily represent the actual impacts which will occur as the General Plan is built out.

Details on the nature of the analysis and impact determination for each species are provided below for each specific impact topic. Table 4.8-4 provides an overview of impacts by wildlife habitat type.

It should be noted that multiple permits and approvals would need to be obtained for projects developed under buildout conditions, and authorizations issued by regulatory agencies (such as CDFW, USFWS, USACE, and RWQCB) include conditions of approval for the same species and resources analyzed in this EIR. Those additional conditions may be more stringent than the measures required to minimize, avoid, and mitigate impacts identified in this EIR depending on the conditions on each project site and the projects proposed.

This proposed General Plan Update does not include any changes to land use designations, expansion of the City's Planning Area, or other physical changes to areas planned for development compared to the existing General Plan, but does include changes to goals and policies, which are analyzed as a part of this EIR. The existing General Plan and the proposed General Plan Update includes goals and policies designed to avoid potential loss and other adverse effects to special-status species that may occur throughout the Planning Area. Such policies include requirements that a biological resources assessment for special-status species and their habitat be performed for development projects involving discretionary review that have the potential to affect special-status species. Policies also address potential adverse effects to species that could occur in the Planning Area by requiring evaluation of potential effects and development and implementation of plans to fully mitigate unavoidable effects in a manner acceptable to the resource agencies. Impact analyses consider how successful implementation of these conservation policies, in conjunction with mitigation, would avoid, minimize, and/or compensate for potential adverse effects to special-status species, as well as other more common species that use the same habitats. For development within Specific Plans, the General Plan's policies are included as a part of each Specific Plan's adopted mitigation measures or are Specific Plan development standards, as relevant to each Specific Plan Area.

4.8.4.2 THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines, the proposed project would result in a significant impact related to biological resources if it would do any of the following:

- ▶ have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS;
- ▶ have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or USFWS;

| Table 4.8-4 Habitat Types that Would Be Disturbed by Buildout of the General Plan | | | |
|--|----------------------------------|-------|---------------|
| Type | Disturbance Type | Acres | Total Acreage |
| Annual Grassland | Residential ¹ | 1,370 | 3,025 |
| | Commercial ² | 453 | |
| | Industrial ³ | 583 | |
| | Parks & Recreation ⁴ | 0 | |
| | Public/Quasi-Public ⁵ | 235 | |
| | Sphere of Influence ⁶ | 144 | |
| | Road Rights-of-Way ⁷ | 239 | |
| Hay Fields/Row Crops | Residential | 0 | 1,336 |
| | Commercial | 0 | |
| | Industrial | 0 | |
| | Parks & Recreation | 0 | |
| | Public/Quasi-Public | 1,335 | |
| | Sphere of Influence | 0 | |
| | Road Rights-of-Way | 1 | |
| Irrigated Pasture | Residential | 57 | 101 |
| | Commercial | 22 | |
| | Industrial | 0 | |
| | Parks & Recreation | 0 | |
| | Public/Quasi-Public | 0 | |
| | Sphere of Influence | 0 | |
| | Road Rights-of-Way | 22 | |
| Oak Woodland/Savannah | Residential | 40 | 141 |
| | Commercial | 12 | |
| | Industrial | 3 | |
| | Parks & Recreation | 0 | |
| | Public/Quasi-Public | 39 | |
| | Sphere of Influence | 40 | |
| | Road Rights-of-Way | 7 | |
| Open Water/Creek | Residential | 2 | 3 |
| | Commercial | 0 | |
| | Industrial | 0 | |
| | Parks & Recreation | 0 | |
| | Public/Quasi-Public | 0 | |
| | Sphere of Influence | 0 | |
| | Road Rights-of-Way | 0 | |
| Riparian Woodland/Wetlands | Residential | 53 | 251 |
| | Commercial | 9 | |
| | Industrial | 13 | |
| | Parks & Recreation | 0 | |
| | Public/Quasi-Public | 128 | |
| | Sphere of Influence | 34 | |
| | Road Rights-of-Way | 15 | |

| Table 4.8-4 Habitat Types that Would Be Disturbed by Buildout of the General Plan | | | |
|--|---------------------|-------|---------------|
| Type | Disturbance Type | Acres | Total Acreage |
| Vernal Pool Complexes | Residential | 0 | 53 |
| | Commercial | 39 | |
| | Industrial | 15 | |
| | Parks & Recreation | 0 | |
| | Public/Quasi-Public | 0 | |
| | Sphere of Influence | 0 | |
| | Road Rights-of-Way | 0 | |
| TOTAL | Residential | 1,523 | 4,910 |
| | Commercial | 534 | |
| | Industrial | 614 | |
| | Parks & Recreation | 0 | |
| | Public/Quasi-Public | 1,737 | |
| | Sphere of Influence | 219 | |
| | Road Rights-of-Way | 283 | |
| Notes: Totals may not add due to rounding. | | | |
| ¹ Residential includes low-, medium-, and high-density residential designations. | | | |
| ² Commercial includes neighborhood commercial, community commercial, regional commercial, central business district, and business commercial. | | | |
| ³ Industrial includes general industrial, light industrial, and transfer station. | | | |
| ⁴ Parks and Recreation includes developed park and recreation areas and golf courses. | | | |
| ⁵ Public/Quasi Public includes schools, places of worship, fire stations, electrical substations, corporation yards, well sites, tank and pump station sites, solid waste recycled drop off and park & ride lots. | | | |
| ⁶ Sphere of Influence (SOI) areas within the Planning Area are assumed to be converted to urban development, but they are not currently planned for a particular land use. | | | |
| ⁷ Road Right-of-Way (ROW). These are areas without actual parcels within the city, so they did not specifically have an assigned land use under the General Plan. | | | |
| Source: Data compiled by AECOM in 2020 | | | |

- ▶ have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- ▶ interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- ▶ conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- ▶ conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.

4.8.4.3 ISSUES NOT DISCUSSED FURTHER

All issues related to biological resources are discussed in detail below.

4.8.4.4 IMPACT ANALYSIS

IMPACT 4.8-1 **Loss and Degradation of Special-status Plant Habitat and Potential Loss of Special-status Plants.** *Full buildout of the General Plan would involve conversion of habitat that may be suitable for special-status plant species to developed use. In addition to direct removal of special-status plants, development would result in habitat modification that could degrade habitat quality to a degree that it is no longer suitable for special-status plants to regenerate, and these plant populations could eventually die out. This impact is considered potentially significant.*

Full buildout of the General Plan would allow conversion of up to 3,473 acres of habitat that may be suitable for special-status plant species, including 3,025 acres of annual grassland, 141 acres of oak woodland/savannah, 251 acres of riparian woodland/wetlands, 53 acres of vernal pool complexes, and 3 acres of open water, which could result in loss of special-status plants either through direct removal or through habitat degradation.

Potential direct impacts on special-status plants include grading, vegetation clearing and grubbing, excavation, and vehicle and foot traffic resulting in burying, crushing, or uprooting individual plants, root damage from soil compaction and disturbance, and disturbing seed banks. There are two special-status plant species that have been previously documented in the Planning Area—Boggs Lake hedge-hyssop, a species that is State-listed as endangered, and dwarf downingia, a CRPR list 2B.2 species—both of which are found in vernal pool habitats. Up to 571 acres of vernal pool complexes in the Planning Area may be developed for projects consistent with the General Plan. In addition, Boggs Lake hedge-hyssop could occur along the edges of marshes within riparian woodland/wetland habitat, the loss of which could result in direct removal of this species. Other special-status plants, including Sanford’s arrowhead, big-scale balsamroot, Ahart’s dwarf rush, legenere, and pincushion navarretia, could be present at previously undiscovered locations in annual grassland, vernal pool, and wetland habitat in the Planning Area that may be developed.

In addition to direct removal of special-status plants, buildout of the proposed project would result in habitat modification that could degrade habitat quality to a degree that it is no longer suitable for special-status plants to regenerate, and these plant populations could eventually die out. Indirect impacts could result from pollutants transported by urban runoff and other means, sedimentation and erosion, changes in vegetation as a result of changes in land use and management practices, altered hydrology from the construction of adjacent development and roadways, habitat fragmentation, and the introduction or spread of invasive species or noxious weeds from surrounding development.

Most areas identified for new development are in the western portion of the Planning Area (Exhibit 4.8-4), including the Sierra Vista (2,073 acres), Amoruso Ranch (701 acres), Creekview (502 acres), and West Roseville (3,162 acres) Specific Plan Areas. These areas consist of annual grassland, vernal pool, and agricultural habitats that have a high potential to support special-status plants. Previously adopted mitigation measures to avoid and reduce impacts on special-status plants as part of the Specific Plan EIRs consistent with General Plan policy would continue to apply, including requirements for special-status plant surveys; wetland, grassland, and special-status plant avoidance; wetland and grassland preservation and restoration; and off-site wetland and grassland mitigation and monitoring. These mitigation measures have been and will be implemented as part of development projects associated with buildout of each Specific Plan Area. Thus, impacts on special-status plants and their habitat would be reduced where most of the new development is planned (i.e., within the western portion of the Planning Area).

Of the 3,473 acres of development planned within suitable habitat for special-status plants, 40 acres would be converted to parks and recreation areas. Some of these parks and recreation areas will be developed for golf courses, playfields, playgrounds, and other facilities; however, some will have open space elements with walking/bicycle paths adjacent to natural areas. Impacts on special-status plant habitat within recreational areas could have direct and indirect impacts, such as those noted above related to construction and installation of pathway, hardscapes, and landscape plantings, as well as introduction of increased human disturbance. However, some open space areas would maintain natural areas that would be restricted from public use and thereby maintain value for special-status plants, thus reducing the potential impact on special-status plant species in these areas.

Compliance with the CESA would reduce impacts on Boggs Lake hedge-hyssop because this would require that this species be avoided or that any loss of this species be fully mitigated as a condition of permit approvals. This law would apply to Boggs Lake hedge-hyssop, which is the only plant species within the Planning Area that is protected under CESA and listed as Endangered. Take authorization from CDFW would be required for any losses of Boggs Lake hedge-hyssop. Under CESA, project-related impacts of the authorized take must be minimized and fully mitigated, and adequate funding to implement those mitigation measures and monitor compliance with and the effectiveness of the measures must be ensured.

If any federally listed plants occur in the Planning Area, the implementation of the federal ESA would reduce impacts to these species along with the federal Plant Protection Act. The City and USFWS entered into MOUs for the Sierra Vista, West Roseville, Creekview, and Amoruso Ranch Specific Plans. The City/USFWS MOUs documented agreement on land use plans and mitigation strategies for ESA compliance. Mitigation included avoidance, minimization, and preservation of wetland resources, specifically vernal pools, riparian areas, and other sensitive wetland habitat.

The USFWS Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon (Recovery Plan) (USFWS 2005), though not a regulatory document, is relevant when analyzing potential impacts on vernal pools and associated biota to ensure that projects do not prevent or impair the plan's future long-term implementation success. It is also used by the USFWS to determine recommendations and requirements during endangered species consultation for vernal pool dependent species. The plan focuses on vernal pool special-status plants and wildlife, and promotes natural ecosystem processes and functions by protecting and conserving intact vernal pools and vernal pool complexes. Portions of the northwestern section of the Planning Area, including parts of the Amoruso Ranch, Creekview, and West Roseville Specific Plan Areas, as well as the Al Johnson Wildlife Area and Reason Farms Environmental Preserve, are located in the USFWS Vernal Pool Recovery Plan Western Placer County Core Area (USFWS 2005). Special-status plants associated with the Recovery Plan and with potential to occur in these areas are the federally-listed slender Orcutt grass and Sacramento Orcutt grass, both of which are considered unlikely to occur in the Planning Area, as well as three other plant species of concern: Boggs Lake hedge-hyssop, a state-listed as endangered species; Ahart's dwarf rush (CRPR list 1B.2); and legenere (CRPR list 1B.1). Boggs Lake hedge hyssop is known to occur in the Planning Area, and suitable habitats are present for Ahart's dwarf rush and legenere; however, these species have not been found in the Planning Area. The overall recovery strategy for protected species in the Recovery Plan is habitat protection and management, including the establishment of conservation areas and reserves with adaptive habitat management, restoration, and monitoring. Consistent with this strategy, the City of Roseville has set aside numerous vernal pool preservation areas within the Planning Area, including lands situated within and adjacent to the Western Placer County Core Area, such as the 227-acre Reason Farms Environmental Preserve (PLT 2019). Furthermore, the four Specific Plan Areas that overlap with the Western Placer County Core Area include mitigation measures to preserve, maintain, and restore

vernal pool habitats through a combination of on-site preservation via the establishment of open space preserves and off-site compensatory mitigation (City of Roseville 2004, 2010, 2011, and 2016).

The following goals and policies related to special-status plant habitat and species would be revised as a part of the proposed General Plan Update, with additions shown in **bold, underlined** text and deletions shown in ~~strikethrough~~ text:

- **Policy OS1.6:** Take into account ~~consideration of~~ natural habitat areas ~~in developing~~ **when designating** linkages **access to**, and ~~in~~ preserving open space areas. Identify alternate sites **locations and design** for linkages **access** where sensitive habitat areas have the potential to be adversely impacted.

Goal OS2.2: Maintain healthy, ~~and~~ well-managed, **and connected** habitat areas ~~in conjunction with one another,~~ **that** maximizing the potential for ~~compatible open space~~ **habitat preservation and compatible** recreation, and visual experiences.

- **Policy OS2.2:** Preserve and ~~rehabilitate~~ **restore** continuous riparian corridors and adjacent habitat along the City's creeks and waterways.
- **Policy OS2.7:** Require **consistency with the City of Roseville Open Space Preserve Overarching Management Plan for dedication and management of on-site wetland** ~~cumulative mitigation plans for wetlands, where feasible, in association with~~ **as part of** Specific Plans **new development**.
- **Policy OS2.9:** Limit the access of pedestrians and cyclists to vernal pool and wetland areas so that access is compatible with long-term protection of these natural resource areas, **consistent with the City's Open Space Preserve Overarching Management Plan.**
- **Policy OS2.10:** Manage public **open space preserves** ~~lands with~~ **that can provide habitat for** special-status species to encourage propagation of the species and discourage **spread of** non-indigenous, invasive species, **consistent with the City's Open Space Preserve Overarching Management Plan.**
- **Policy OS1.12:** Consider the use of City property for habitat preservation and mitigation requirements resulting from **new** development proposals when such efforts do not conflict with existing resources, recreational opportunities, or other City goals, policies, or programs.

The proposed General Plan Update goal and policy changes listed above would help provide protection to biological resources and clarify existing policies. The revisions would not result in any adverse environmental impacts.

Conclusion

Implementation of existing General Plan Open Space System Goal 1 and Policy 7; Vegetation and Wildlife Goals 1 and 3 and Policies 4, 5, 11; and Groundwater Recharge and Water Quality Policy 3 (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Policy OS1.6; and Goal OS2.2 and Policies OS2.2, OS2.7, OS2.9, OS2.10, and OS1.12, listed above, combined with current laws, regulations, policies, and conservation plans such as the Reason Farms Environmental Preserve, and implementation of mitigation measures associated with existing Specific Plans within the Planning Area, the impact on special-status plants and plant habitat would be

reduced. However, buildout of the General Plan could result in direct removal of special-status plants and/or habitat modification that could degrade the quality of habitats suitable for special-status plant species, and indirect effects that may result from construction-related runoff, sedimentation and erosion, and introduction of invasive weeds; this impact is **potentially significant**.

Mitigation Measures

Mitigation Measure 4.8-1 – The proposed General Plan Update should be amended as follows:

Implementation Measure for Special-Status Plants and Habitat

As appropriate to each individual project or Specific Plan, the following actions or those determined to be equally as effective by the City shall be implemented where there may be an adverse impact on special-status plants or habitat:

- a. In conjunction with environmental review pursuant to CEQA, for projects that could directly affect special-status plants or habitat, the City shall require that resource field surveys, including special-status plant surveys, be submitted concurrent with development applications inventorying the type, quantity, and quality of existing open space resources and conditions. This requirement may be waived if determined by the City that the proposed project area is already sufficiently surveyed, is within an adopted specific plan area, or contains resources considered less than significant.
- b. The City and project proponents will identify feasible opportunities to preserve special-status plant species occurrences and sensitive habitats through design and planning.
- c. If the City determines it is reasonable and feasible to do so, the City will require preservation of occupied special-status plant species habitat and sensitive habitat types as a condition of project approval. If adverse effects cannot be avoided, project proponents shall be required to mitigate all adverse effects in accordance with guidance from the appropriate state or federal agency charged with the protection of the subject species and habitat, including surveys conducted according to applicable standards and protocols, where necessary, implementation of impact minimization measures based on accepted standards and guidelines and best available science, and compensatory mitigation for unavoidable loss of special-status plant species and sensitive habitats.
- d. If the project would result in take of state or federally listed species, the City will require project proponent/s to obtain take authorization from the USFWS and/or the CDFW, as appropriate, depending on species status, and comply with all conditions of the take authorization.
- e. The City will require project proponents to develop and implement a mitigation and monitoring plan reflective of permit conditions required by State and/or federal regulatory agencies, to compensate for effects to or loss of special-status species and sensitive habitats. The mitigation and monitoring plan will describe in detail how impacts to special-status species or sensitive habitats shall be avoided or offset, including details on restoration and creation of habitat, compensation for the temporal loss of habitat, management and monitoring to avoid indirect habitat degradation (e.g., management of invasive plant species, maintenance of required hydrology), success criteria ensuring that habitat function goals and objectives are met and target special-status species cover and density parameters are established, performance standards to ensure success, and remedial actions if performance

standards are not met. The plan will include detailed information on the habitats present within the preservation and mitigation areas, the long-term management and monitoring of these habitats, legal protection for the preservation and mitigation areas (e.g., conservation easement, declaration of restrictions), and funding mechanism information (e.g., endowment).

- f. If available, purchase of mitigation credits at an agency-approved mitigation bank (i.e., approved by the agency with jurisdiction over the affected species or habitat) in Placer County, will be acceptable for compensatory mitigation for special-status species.

Significance after Mitigation

With implementation of existing General Plan and proposed General Plan Update goals and policies, combined with current laws, regulations, and Mitigation Measure 4.8-1, impacts on special-status plants and plant habitat would be reduced because new development would be required to identify, avoid, and preserve special-status plant populations and their habitats to the extent feasible, and compensate for the loss of special-status plants through off-site preservation and/or the establishment of new populations or other appropriate measures in coordination with state and federal agencies. Therefore, with implementation of policies in the General Plan, current laws and regulations, and Mitigation Measure 4.8-1, the impact on special-status plants and plant habitat is considered **less than significant with mitigation**.

IMPACT 4.8-2 **Loss and Degradation of Habitat for Special-status Wildlife Species and Potential Direct Take of Individuals.** *Full buildout of the General Plan would involve conversion of habitat that may be suitable for special-status wildlife species to developed use. In addition to direct removal of special-status habitat, development would result in habitat modification that could degrade habitat quality to a degree that it is no longer suitable for special-status wildlife to reproduce, and these wildlife populations could eventually die out. Also, development would include construction activities that could result in direct take of individual special-status wildlife species. This impact is considered **potentially significant**.*

Full buildout of the General Plan could result in direct removal or degradation of up to 4,809 acres of potentially suitable habitat for special-status wildlife species, including 3,025 acres of annual grassland, 141 acres of oak woodland/savannah, 251 acres of riparian woodland/wetlands, 53 acres vernal pool complexes, 1,336 acres of agricultural lands, and 3 acres of open water/creek (see Table 4.8-4).

Special-status wildlife species could be affected directly during land conversion or indirectly through modification of suitable habitat, changes in vegetation as a result of land development or construction of public facilities and infrastructure, and habitat fragmentation. Wildlife could be killed or injured, and nests destroyed at the time of development. Wildlife could also be impacted by lighting, noise, human activity, and wildlife-human interactions adjacent to natural areas. Special-status species and habitat could be negatively impacted by the introduction of exotic and/or invasive species. Changes in drainage patterns and water quality within, upstream, and downstream of the Planning Area could occur, including changes in the volume, velocity, and frequency of existing and post-project surface flows; polluted runoff; and soil erosion and/or sedimentation in streams and water bodies. Special-status wildlife species that could be adversely affected by buildout of the General Plan and habitat conversion include the state and/or federally listed or candidate species vernal pool fairy shrimp, vernal pool tadpole shrimp, valley elderberry longhorn beetle, steelhead, tricolored blackbird, Swainson's hawk and California black rail. A fully protected species, white-tailed kite, also occurs within the Planning Area. These seven listed species and the 12 additional special-status wildlife species that are not officially listed under CESA

or FESA, could be affected by the potential impacts noted above. Some special-status species that occur regionally but are not known to occur within the Planning Area include conservancy fairy shrimp, foothill yellow-legged frog, California red-legged frog, and giant garter snake.

Most areas identified for new development are in the western portion of the Planning Area, including the Sierra Vista, Amoruso Ranch, Creekview, and West Roseville Specific Plan Areas (Exhibit 4.8-4). These areas consist of annual grassland, vernal pool, and agricultural habitats that have a high potential to support special-status plants. Previously adopted mitigation measures to avoid and reduce impacts on special-status wildlife as part of the Specific Plan EIRs would continue to apply, including requirements for special-status wildlife and habitat surveys; wetland, grassland, and special-status habitat avoidance; wetland and grassland habitat preservation and restoration; and off-site wetland and grassland habitat mitigation and monitoring. Thus, impacts on special-status wildlife and their habitat would be reduced in the areas where most of the development is planned to occur (i.e., within the western portion of the Planning Area).

Potential impacts on special-status wildlife species as a result of buildout of the General Plan are discussed in more detail below either individually or in related groups.

Valley Elderberry Longhorn Beetle

Elderberry shrubs that have potential to support valley elderberry longhorn beetle (VELB) may be present within the Planning Area along fence rows, roadways, around rural residential properties within agricultural lands, along drainage ditches and pond margins, or in other isolated locations. The VELB is particularly associated with riparian habitat, and up to 251 acres of riparian woodland/wetland could be converted to development as a result of the General Plan buildout. Elderberry shrubs within areas planned for development could be removed resulting in loss of valley longhorn beetle larvae and loss of habitat. Indirect impacts from use of herbicides could also result if the health of elderberry shrubs containing valley elderberry longhorn beetle larvae is adversely affected.

Vernal Pool Species

Full buildout of the General Plan would allow development of up to 53 acres of vernal pool complexes that have potential to support vernal pool fairy shrimp, vernal pool tadpole shrimp, and western spadefoot. Although the majority of potential habitat for vernal pool branchiopods would be preserved and/or mitigated under the Sierra Vista, Amoruso Ranch, Creekview, and West Roseville Specific Plan Areas, potential habitat may be present at other locations in the Planning Area that would be subject to development. There is also some potential for remnant vernal pools to be found in agricultural lands if the soils have not been deep-ripped. Conversion of vernal pool habitat to developed land uses could result in direct take of vernal pool branchiopods listed under the ESA and western spadefoot, a CDFW species of special concern. In addition, development in areas adjacent to vernal pool habitat could result in indirect impacts on vernal pool species through habitat degradation and fragmentation. The USFWS generally considers vernal pool habitats within 250 feet of development to be subject to indirect effects that could be deleterious to vernal pool branchiopods, such as hydromodification, loss of habitat connectivity, and degradation of water quality. The direct removal of habitat and potential degradation of retained habitat could have substantial adverse effects on listed vernal pool branchiopods and western spadefoot.

The Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon, although not a regulatory document, is relevant to the analysis of potential impacts on vernal pools and associated biota to ensure that projects do not prevent or impair the plan's future long-term implementation success. It is also used by the

USFWS to determine recommendations and requirements during endangered species consultation for vernal pool dependent species. The plan focuses on vernal pool special-status plants and wildlife and promotes natural ecosystem processes and functions by protecting and conserving intact vernal pools and vernal pool complexes. As discussed in the section above (Impacts on Special Status Plants), portions of the northwestern section of the Planning Area are in the USFWS Vernal Pool Recovery Plan Western Placer County Core Area. Special-status wildlife associated with the Recovery Plan and with potential to occur in these areas are the federally-listed conservancy fairy shrimp, considered unlikely to occur, and vernal pool fairy shrimp and vernal pool tadpole shrimp, both of which are known to occur in the Planning Area, as well as two species of concern: California fairy shrimp and western spadefoot toad (CDFW SSC).

Special-Status Fish

The Central Valley DPS of steelhead (federally-listed as threatened) and the fall/late fall run ESU of chinook salmon (NMFS species of concern and a CDFW species of special concern) are known to occur in the Dry Creek stream system in the Planning Area, which includes Dry Creek, Antelope Creek, Cirby Creek, Clover Valley Creek, Linda Creek, Miners Ravine, and Secret Ravine (PCCP 2018). Of these creeks, only Secret Ravine is considered to have high quality spawning and rearing habitat for special-status fish; other creeks in this system have low to moderate potential to support populations due to surrounding urban and agricultural development leading to degraded water quality, high sediment load, lack of pools, and various barriers to movement (e.g., rock and beaver dams, culverts, and low flows) (PCCP 2018). Nevertheless, Dry Creek is considered an important migration corridor to high-quality habitat upstream, which includes Secret Ravine. Urban development is the primary factor contributing to adverse conditions in these stream systems for special-status fish.

Compared to existing conditions, most new development under the General Plan would occur in the western portions of the Planning Area that surround Pleasant Grove Creek and Curry Creek, neither of which are part of the Dry Creek stream system and do not support populations of special-status fish (PCCP 2018). No direct impact on special-status fish habitat (i.e., removal) would occur. However, buildout of the General Plan would allow for some new residential, commercial, and parks/recreation development in vacant lands adjacent to existing development in the vicinity of Dry Creek, Antelope Creek, Linda Creek, Secret Ravine, and Miners Ravine. This would increase the density of development surrounding the Dry Creek stream system that could further degrade water quality and negatively affect habitat for special-status fish. Potential indirect impacts include sediment input into streams during construction that would increase turbidity and fill deep pools; and removal of vegetation along stream banks and upland areas that could lead to increased erosion and loss of shaded canopy resulting in increased water temperatures. In addition, increased urban runoff from installation of additional irrigation systems and hardened landscapes could result in an increased contaminant load in the nearby Dry Creek stream system.

Western Pond Turtle

Ponds, drainages, and marshes in and adjacent to the Planning Area provide suitable habitat for western pond turtle, and this species could nest in uplands up to 0.3 mile from aquatic habitat. However, there is only one record of this species occurring within 2 miles of the Planning Area in Granite Bay, and the likelihood of resident populations of this species occurring in the Planning Area is moderate to low.

Buildout of the General Plan would allow development in areas that support potential aquatic habitat and upland nesting habitat, including up to 251 acres of riparian woodland/wetlands and 3 acres of open water/creek habitat. Draining, grading, or filling aquatic habitat during construction could kill western pond turtles by hitting,

crushing, or smothering them if they are present. Development in nearby upland areas could result in direct destruction of eggs or death of hatchlings and overwintering juveniles. Indirect impacts include degradation of habitat from erosion and sedimentation caused by loss of vegetation, and adverse effects to water quality from urban runoff.

Special-Status and Migratory Birds

Several special-status bird species are known or have potential to nest and forage in the Planning Area, as noted in Table 4.8-3. Buildout of the General Plan would allow development in areas that currently support annual grassland and agricultural habitats, as well as scattered trees, that could support nesting birds. Special-status bird species potentially nesting in trees in the Planning Area include Cooper's hawk, ferruginous hawk, Swainson's hawk, white-tailed kite, and loggerhead shrike. Burrowing owl is a ground dwelling species that could be found in grassland, agricultural, and alkali prairie habitats. Tricolored blackbird and California black rail are marsh nesting species that could be present in the Planning Area. Northern harrier and long-billed curlew are ground nesting species that could be found in grassland, agricultural, or marsh habitats in or near the Planning Area, and grasshopper sparrow could nest on the ground in the grassland habitats. Purple martin could nest in highway overpasses or other man-made structures in the Planning Area. In addition to the habitat acreage presented in Table 4.8-4, up to 1,336 acres of agricultural habitat suitable for special-status and migratory birds could be converted to other habitat types with full buildout of the General Plan.

Portions of the Planning Area that would be opened to possible development include areas of annual grassland and agricultural habitat that are important foraging grounds for Swainson's hawk. Removal of substantial acreage of foraging habitat could reduce the small-mammal prey base for Swainson's hawks and other raptors. Large raptors generally require large areas of suitable foraging habitat, and a reduced prey base could eventually lead to displacement of some nesting Swainson's hawks if sufficient foraging habitat is no longer available to support current local population numbers. If all grassland, vernal pool, hayfields/row crops, and irrigated pasture totaling 4,515 acres of potential foraging habitat was converted to noncompatible habitat types due to development, this would increase the likelihood that Swainson's hawk pairs would be displaced from the area.

Construction resulting from buildout of the General Plan could disturb active bird nests, potentially resulting in nest abandonment by the adults and mortality of chicks and eggs. Tree removal and ground disturbances could result in the direct destruction of active nests of birds protected under the MBTA and California Fish and Game Code. As discussed above, indirect impacts from projects developed consistent with the General Plan, such as noise, lighting, and human activity adjacent to natural areas could negatively impact special-status avian species and nesting birds. Loss of common migratory birds and raptors (those not meeting the definition of special-status as provided above) would not be a significant impact under CEQA, but mitigation to avoid the loss of active nests of these species is required for compliance with the MBTA and California Fish and Game Code.

Special-Status Mammals

Buildout of the General Plan would allow development that could result in the removal of human-made structures that may support bat roosts, including those for pallid bat and Townsend's big-eared bat, both of which are CDFW species of special concern. If these structures are used by bats as a day roost, hibernation roost, or maternity colony roost, this could result in injury and mortality of pallid bat.

Destruction of suitable habitat and direct mortality could occur to American badger within the Planning Area as a result of construction of development projects and public facilities and infrastructure. Grading, grubbing of vegetation, and development would remove up to 3,025 acres of suitable grassland habitat, and construction activities could directly kill a badger by crushing or hitting an individual with heavy construction equipment. Indirect impacts could include degradation and fragmentation of continuous grassland habitat.

The following goals and policies related to special-status wildlife species and habitat would be revised as a part of the proposed General Plan Update, with additions shown in **bold, underlined** text and deletions shown in ~~strikethrough~~ text:

- ▶ **Policy OS1.6:** Take into account ~~consideration of~~ natural habitat areas ~~in developing~~ **when designating linkages access to**, and ~~in~~ preserving open space areas. Identify alternate sites **locations and design** for linkages **access** where sensitive habitat areas have the potential to be adversely impacted.

Goal OS2.2: Maintain healthy, ~~and~~ well-managed, **and connected** habitat areas ~~in conjunction with one another, that~~ maximizing the potential for compatible open space **habitat preservation and compatible** recreation, and visual experiences.

- ▶ **Policy OS2.1:** Incorporate existing trees into development projects, **with an Particular emphasis** ~~shall be placed on avoiding the removal of groupings or groves of trees.~~ ~~and w~~Where preservation is not feasible, continue to require mitigation for the loss of removed trees. ~~Particular emphasis shall be placed on avoiding the removal of groupings or groves of trees.~~
- ▶ **Policy OS2.2:** Preserve and ~~rehabilitate~~ **restore** continuous riparian corridors and adjacent habitat along the City's creeks and waterways.
- ▶ **Policy OS2.6:** Provide for **the** protection and enhancement of native fishery resources, **including as informed by** continued coordination with the California Department of Fish and Wildlife ~~to release water into Linda Creek.~~
- ▶ **Policy OS2.7:** Require **consistency with the City of Roseville Open Space Preserve Overarching Management Plan for dedication and management of on-site wetland** ~~cumulative mitigation plans for wetlands, where feasible, in association with~~ **as part of Specific Plans new development.**
- ▶ **Policy OS2.8:** Consider ~~substitute~~ **off**-site mitigation for federally non-regulated wetlands, provided that such mitigation will provide comparable habitat values.
- ▶ **Policy OS2.9:** Limit the access of pedestrians and cyclists to vernal pool and wetland areas so that access is compatible with long-term protection of these natural resource areas, **consistent with the City's Open Space Preserve Overarching Management Plan.**
- ▶ **Policy OS2.10:** Manage public **open space preserves** ~~lands with~~ **that can provide habitat for** special-status species to encourage propagation of the species and discourage **spread of** non-indigenous, invasive species, **consistent with the City's Open Space Preserve Overarching Management Plan.**

- **Policy OS1.12:** Consider the use of City property for habitat preservation and mitigation requirements resulting from new development proposals when such efforts do not conflict with existing resources, recreational opportunities, or other City goals, policies, or programs.

The proposed General Plan Update policy changes listed above would help provide protection to biological resources, would result in additional clarity, and would not result in any adverse environmental impacts.

Conclusion

Compliance with the federal ESA and CESA would reduce potential impacts on vernal pool fairy shrimp, vernal pool tadpole shrimp, valley elderberry longhorn beetle, steelhead, tricolored blackbird, Swainson's hawk and California black rail because it would require that these State and/or federally listed species be avoided or that any loss of these species be fully mitigated as a condition of take authorization. For projects with a federal nexus (e.g., receiving federal funding or requiring federal permits), federal agencies are required under Section 7 of the ESA to consult with USFWS to ensure that they are not undertaking, funding, permitting, or authorizing actions likely to jeopardize the continued existence of listed species. Section 10(a) of the ESA allows USFWS to permit the incidental take of listed species if such take is accompanied by a habitat conservation plan that ensures minimization and mitigation of impacts associated with the take. Under CESA, project-related impacts of the authorized take must be minimized and fully mitigated. Additionally, adequate funding must be ensured for implementation of those mitigation measures, monitoring compliance with mitigation measures, and evaluating the effectiveness of the measures.

The City and USFWS entered into MOUs for the Sierra Vista, West Roseville, Creekview, and Amoruso Ranch Specific Plans. The City/USFWS MOUs documented agreement on land use plans and mitigation strategies for ESA compliance. Mitigation included avoidance, minimization, and preservation of wetland resources, specifically vernal pools, riparian areas, and other sensitive wetland habitat.

The Recovery Plan also provides an overall recovery strategy for protected species, consisting of habitat protection and management, including the establishment of conservation areas and reserves with adaptive habitat management, restoration, and monitoring. Consistent with this strategy, the City of Roseville has set aside numerous vernal pool preservation areas within the Planning Area, including lands situated within and adjacent to the Western Placer County Core Area, such as the 227-acre Reason Farms Environmental Preserve (PLT 2019). Furthermore, the four Specific Plan Areas that overlap with the Western Placer County Core Area include mitigation measures to preserve, maintain, and restore vernal pool habitats through a combination of on-site preservation via the establishment of open space preserves and off-site compensatory mitigation (City of Roseville 2004, 2010, 2011, and 2016).

Compliance with the MBTA and Section 3503 of the California Fish and Game Code would ensure that nesting raptors and other birds are not adversely affected because this requires project applicants to avoid disturbing or destroying active bird nests either directly or indirectly. Project applicants would be required to conduct preconstruction nesting bird surveys for any work conducted during the nesting season, which is generally considered to be February 1-September 15, and avoid removing or destroying active nests, or disturbing nesting birds in such a way that it results in nest abandonment.

Implementation of existing General Plan Open Space System Goal 1 and Policy 7; Vegetation and Wildlife Goals 1 and 3 and Policies 3, 4, 5, 11, and 13; and Groundwater Recharge and Water Quality Policy 3 (listed previously

in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Policy OS1.6; and Goal OS2.2 and Policies OS2.1, OS2.2, OS2.7, OS2.9, OS2.10, and OS1.12 listed above, combined with current laws, regulations, policies, and conservation plans, and implementation of mitigation measures associated with existing Specific Plans within the Planning Area, the impact on special-status wildlife and their habitats would be reduced. However, buildout of the General Plan could result in direct impacts on special-status wildlife species and/or habitat modification that could degrade the quality of habitats suitable for special-status wildlife, and indirect effects that may result from construction-related runoff, sedimentation and erosion, introduction of invasive weeds, and new sources of noise and light; this impact is **potentially significant**.

Mitigation Measures

Mitigation Measure 4.8-2 – *The proposed General Plan Update should be amended as follows:*

Implementation Measure for Special-Status Wildlife

If feasible, the City will require preservation of occupied special-status wildlife species habitat and sensitive habitat types as a condition of project approval. If adverse effects cannot be avoided, project proponents shall be required to mitigate all adverse effects in accordance with guidance from the appropriate state or federal agency charged with the protection of the subject species and habitat, including surveys conducted according to applicable standards and protocols, where necessary, implementation of impact minimization measures based on accepted standards and guidelines and best available science, and compensatory mitigation for unavoidable loss of special-status wildlife species and sensitive habitats.

Significance after Mitigation

Because much of the sensitive habitat in the Planning Area is already designated for preservation as open space, implementation of goals and policies in the existing General Plan and the proposed General Plan Update, combined with current laws, regulations, and Mitigation Measure 4.8-2, will ensure impacts to special-status wildlife and associated habitat would be reduced to a **less-than-significant** level. These provisions would require development projects to identify and avoid special-status wildlife and wildlife habitat, preserve sensitive habitats (e.g., vernal pools, riparian areas, wetlands) that could support special-status wildlife, or provide compensation for loss of habitat in coordination with state and federal agencies.

| | |
|-------------------------|--|
| IMPACT 4.8-3 | Loss and Degradation of Riparian Habitat or Other Sensitive Natural Communities. <i>Buildout of the General Plan would involve conversion of riparian habitat and other sensitive natural communities to developed use. In addition to direct removal of habitat, buildout of the General Plan would result in habitat modification that could degrade habitat quality to a degree that it is no longer suitable for riparian plants or other sensitive natural communities to regenerate, and these habitats and communities could eventually die out. This impact is considered potentially significant.</i> |
|-------------------------|--|

This section discusses riparian and oak woodland habitats that contain native vegetation communities that would be considered sensitive natural communities. All other sensitive natural communities, including vernal pool habitats and other freshwater wetlands found in the Planning Area, are addressed under impacts on federally protected wetlands and are not discussed here.

Buildout of the General Plan could potentially result in the conversion of up to 251 acres of riparian woodland/wetlands and 141 acres of oak woodland/savannah to urban development throughout the Planning Area. Development in these areas could result in removal of vegetation or further habitat degradation from pollutants transported by urban runoff, changes in vegetation as a result of changes in land use and management practices, as well as altered site hydrology from the construction of adjacent urban development and roadways. Alterations to the flow, bed, channel, or bank of creeks and streams within the Planning Area would affect the ability of riparian corridors to provide habitat for wildlife species that utilize them for feeding, cover, and nesting, and thus could result in a loss of riparian habitat function. However, impacts related to erosion and runoff would be reduced by implementing BMPs, as required by the City's Improvement Standards and NPDES General Permit (see Chapter 4.13, "Hydrology and Water Quality," for a detailed discussion of these regulatory requirements). Installation of BMPs during construction activities could include fiber rolls and straw wattles, sandbags, silt fencing, hydroseed treatments, soil stabilizers, and housekeeping; and for permanent development could include grassy swales, detention ponds, and vegetative buffers.

Compliance with Section 1602 of the California Fish and Game Code would further reduce potential impacts on riparian habitat because it would require project applicants to notify CDFW if their project includes work on the bed and bank of a stream or other water body, including drainage canals and artificial lakes, and obtain a Lake and Streambed Alteration Agreement. The Lake and Streambed Alteration Agreement would include measures to avoid, minimize, or compensate for adverse effects to riparian habitat that must be implemented as a condition of the agreement.

City floodplain development regulations (see Chapter 4.13, "Hydrology and Water Quality" for a detailed discussion) would limit the type of activities that could occur within the riparian zone and the Roseville Creek and Riparian Management and Restoration Plan provides standards for riparian area management and enhancement. The City tree ordinance protects oak trees with a trunk equal to or greater than six inches DBH (as measured by a single trunk or a group of trunks). Water quality regulations and requirements, such as NPDES, would protect riparian zones by prohibiting fill or degradation to vegetation that could impede water quality and vegetation.

The City and USFWS entered into MOUs for the Sierra Vista, West Roseville, Creekview, and Amoruso Ranch Specific Plans. The City/USFWS MOUs documented agreement on land use plans and mitigation strategies for ESA compliance. Mitigation included avoidance, minimization, and preservation of wetland resources, specifically vernal pools, riparian areas, and other sensitive wetland habitat.

The following goals and policies related to riparian habitat and other sensitive natural communities would be revised as a part of the proposed General Plan Update, with additions shown in **bold, underlined** text and deletions shown in ~~striketrough~~ text:

- **Policy OS1.6:** Take into account ~~consideration of~~ natural habitat areas ~~in developing~~ **when designating** linkages **access to**, and ~~in~~ preserving open space areas. Identify alternate sites **locations and design** for linkages **access** where sensitive habitat areas have the potential to be adversely impacted.

Goal OS2.2: Maintain healthy, ~~and~~ well-managed, **and connected** habitat areas ~~in conjunction with one another,~~ **that** maximizing the potential for ~~compatible open space~~ **habitat preservation and compatible** recreation, and visual experiences.

- ▶ **Policy OS2.1:** Incorporate existing trees into development projects, with an Particular emphasis shall be placed on avoiding the removal of groupings or groves of trees. and ~~where preservation is not feasible, continue to require mitigation for the loss of removed trees. Particular emphasis shall be placed on avoiding the removal of groupings or groves of trees.~~
- ▶ **Policy OS2.2:** Preserve and ~~rehabilitate~~ **restore** continuous riparian corridors and adjacent habitat along the City's creeks and waterways.
- ▶ **Policy OS2.6:** Provide for the protection and enhancement of native fishery resources, including as informed by continued coordination with the California Department of Fish and Wildlife ~~to release water into Linda Creek.~~
- ▶ **Policy OS2.7:** Require consistency with the City of Roseville Open Space Preserve Overarching Management Plan for dedication and management of on-site wetland ~~cumulative mitigation plans for wetlands, where feasible, in association with~~ as part of Specific Plans new development.
- ▶ **Policy OS2.8:** Consider ~~substitute~~ **off**-site mitigation for federally non-regulated wetlands, provided that such mitigation will provide comparable habitat values.
- ▶ **Policy OS2.9:** Limit the access of pedestrians and cyclists to vernal pool and wetland areas so that access is compatible with long-term protection of these natural resource areas, consistent with the City's Open Space Preserve Overarching Management Plan.
- ▶ **Policy OS2.10:** Manage public open space preserves ~~lands with~~ that can provide habitat for special-status species to encourage propagation of the species and discourage spread of non-indigenous, invasive species, consistent with the City's Open Space Preserve Overarching Management Plan.
- ▶ **Policy OS1.12:** Consider the use of City property for habitat preservation and mitigation requirements resulting from new development proposals when such efforts do not conflict with existing resources, recreational opportunities, or other City goals, policies, or programs.

The proposed General Plan Update policy changes listed above would help provide protection to biological resources, would result in additional clarity, and would not result in any adverse environmental impacts.

Conclusion

Implementation of existing General Plan Open Space System Goal 1 and Policy 7; Vegetation and Wildlife Goals 1 and 3 and Policies 3, 4, 5, 11, and 13; and Groundwater Recharge and Water Quality Policies 2 and 3 (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Policy OS1.6; and Goal OS2.2 and Policies OS2.1, OS2.2, OS2.7, OS2.9, OS2.10, and OS1.12 listed above,, combined with current laws, regulations, and policies, the impact on riparian habitat and other sensitive natural communities would be reduced. However, full buildout of the General Plan could result in development of up to 392 acres of riparian and oak woodland habitats, which contain sensitive natural communities; this impact is **potentially significant**.

Mitigation Measures

Mitigation Measure 4.8-3 – *The proposed General Plan Update should be amended as follows:*

Implementation Measure for Riparian Habitat and Sensitive Natural Communities

If a proposed project would result in fill or alteration of a waterway or any body of water supporting riparian forest habitat, the City will require project proponent/s to notify the California Department of Fish and Wildlife, obtain a Lake and Streambed Alteration Agreement if determined necessary by the California Department of Fish and Wildlife, and comply with all conditions of the Lake and Streambed Alteration Agreement. Measures for riparian habitat and sensitive natural communities protection include, but are not limited to, avoid impacts by establishing a buffer zone between adjacent land uses and riparian habitat and sensitive natural communities; protect and preserve riparian habitat and sensitive natural communities to the extent feasible; and compensate for loss of riparian habitat and sensitive natural communities by creating, restoring, or preserving off-site habitat in coordination with the applicable resource agencies.

Implement Mitigation Measure 4.8-1 (Implementation Measure for Special-Status Plants and Habitat)

Implement Mitigation Measure 4.8-2 (Implementation Measure for Special-Status Wildlife)

Significance after Mitigation

Because much of the sensitive habitat in the Planning Area is already designated for preservation as open space, and with implementation of goals and policies in the existing General Plan and the proposed General Plan Update, combined with current laws, regulations, and Mitigation Measures 4.8-1, 4.8-2, and 4.8-3, impacts on riparian habitat and sensitive natural communities would be reduced to a **less-than-significant** level because these provisions would require development projects to identify, avoid, and preserve riparian habitats and sensitive natural communities (oak woodland) that could support special-status wildlife, or provide compensation for loss of habitat in coordination with state and federal agencies.

IMPACT 4.8-4 **Loss and Degradation of Protected Wetlands and Other Waters.** *Buildout of the General Plan would involve conversion of wetlands and other waters to developed use. In addition to direct removal of wetlands and other waters, buildout of the General Plan would result in wetlands modification that could degrade habitat quality. This impact is considered **potentially significant**.*

Implementing the General Plan would allow development in areas that currently support, or may support, state or federally protected wetlands and other waters, including vernal pools and other freshwater wetlands, ponds, and drainage canals. Impacts on wetlands and other waters could occur through habitat conversion, encroachment, routine maintenance, or other activities in the immediate vicinity of waterways and in habitat supporting wetlands. Land conversion could result in direct fill of wetlands and other waters of the United States and/or waters of the state. Indirect impacts could result from adjacent development that leads to habitat modifications such as changes in hydrology and reduction in water quality caused by urban runoff, erosion, and siltation. Any wetlands or other jurisdictional waters by the USACE would still be subject to regulation by Central Valley RWQCB as waters of the state and impacts on waters of the state would require mitigation. However, as shown in Exhibit 4.8-4, much

of the open water/creeks and vernal pool complexes in the Planning Area is designated for Open Space and would therefore be protected from direct removal, reducing the potential impact.

Compliance with Section 404 of the Clean Water Act would reduce potential impacts on federally protected wetlands because it would require project applicants to obtain a permit from the USACE for any activity resulting in fill of wetlands and other waters of the United States. A wetland mitigation plan that satisfies USACE requirements will be needed as part of the permit application. Project applicants that obtain a Section 404 permit will also be required to obtain water quality certification from the Central Valley RWQCB pursuant to Section 401 of the CWA. If the project involves work in areas containing jurisdictional waters by the USACE, project applicants would be required to obtain a Waste Discharge Requirement permit from the Central Valley RWQCB pursuant to the Porter Cologne Act. In accordance with these state and federal regulations, mitigation resulting in no net loss of functions and values of affected wetlands and waters is required.

The City and USFWS entered into MOUs for the Sierra Vista, West Roseville, Creekview, and Amoruso Ranch Specific Plans. The City/USFWS MOUs documented agreement on land use plans and mitigation strategies for ESA compliance. Mitigation included avoidance, minimization, and preservation of wetland resources, specifically vernal pools, riparian areas, and other sensitive wetland habitat.

The following proposed General Plan Update goals and policies related to wetlands and other waters are proposed for revision, with additions shown in **bold, underlined** text and deletions shown in ~~striketrough~~ text:

- **Policy OS1.6:** Take into account ~~consideration of~~ natural habitat areas ~~in developing~~ **when designating** linkages **access to**, and ~~in~~ preserving open space areas. Identify alternate sites **locations and design** for linkages **access** where sensitive habitat areas have the potential to be adversely impacted.

Goal OS2.2: Maintain healthy, ~~and~~ well-managed, **and connected** habitat areas ~~in conjunction with one another,~~ **that** maximizing the potential for ~~compatible open space~~ **habitat preservation and compatible** recreation, and visual experiences.

- **Policy OS2.1:** Incorporate existing trees into development projects, **with an Particular emphasis** ~~shall be placed on avoiding the removal of groupings or groves of trees.~~ ~~and w~~Where preservation is not feasible, continue to require mitigation for the loss of removed trees. ~~Particular emphasis shall be placed on avoiding the removal of groupings or groves of trees.~~
- **Policy OS2.2:** Preserve and ~~rehabilitate~~ **restore** continuous riparian corridors and adjacent habitat along the City's creeks and waterways.
- **Policy OS2.6:** Provide for **the** protection and enhancement of native fishery resources, **including as informed by** continued coordination with the California Department of Fish and Wildlife ~~to release water into Linda Creek.~~
- **Policy OS2.7:** Require **consistency with the City of Roseville Open Space Preserve Overarching Management Plan for dedication and management of on-site wetland** ~~cumulative mitigation plans for wetlands, where feasible, in association with~~ **as part of Specific Plans new development.**

- ▶ **Policy OS2.8:** Consider ~~substitute~~ **off**-site mitigation for federally non-regulated wetlands, provided that such mitigation will provide comparable habitat values.
- ▶ **Policy OS2.9:** Limit the access of pedestrians and cyclists to vernal pool and wetland areas so that access is compatible with long-term protection of these natural resource areas, **consistent with the City's Open Space Preserve Overarching Management Plan.**
- ▶ **Policy OS2.10:** Manage public **open space preserves** ~~lands with~~ **that can provide habitat for** special-status species to encourage propagation of the species and discourage **spread of** non-indigenous, invasive species, **consistent with the City's Open Space Preserve Overarching Management Plan.**
- ▶ **Policy OS1.12:** Consider the use of City property for habitat preservation and mitigation requirements resulting from **new** development proposals when such efforts do not conflict with existing resources, recreational opportunities, or other City goals, policies, or programs.

The proposed General Plan Update policy changes listed above would help provide protection to biological resources, would result in additional clarity, and would not result in any adverse environmental impacts.

Conclusion

With implementation of existing General Plan Open Space System Goal 1 and Policy 7; Vegetation and Wildlife Goals 1 and 3 and Policies 3, 4, 5, 11, and 13; and Groundwater Recharge and Water Quality Policies 2 and 3 (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Policy OS1.6; and Goal OS2.2 and Policies OS2.2, OS2.6, OS2.7, OS2.8, OS2.9, OS2.10, and OS2.12 listed above, combined with current laws, regulations, and policies, the impact on federally protected wetlands and other waters of the United States and the state would be reduced. However, buildout of the General Plan could result in direct removal of wetlands or other waters and/or habitat modification that could degrade the quality of habitats, and indirect effects that may result from construction-related runoff, sedimentation and erosion, changes in hydrology, and introduction of invasive weeds; this impact is **potentially significant**.

Mitigation Measures

Mitigation Measure 4.8-4 – *The proposed General Plan Update should be amended as follows:*

Implementation Measure for Wetlands and Other Waters

If a project would result in ground disturbance on sites containing waterways or other aquatic habitats, the City will require project proponent/s to complete a delineation of waters of the United States according to U.S. Army Corps of Engineers' methods, and to submit the completed delineation to the U.S. Army Corps of Engineers for jurisdictional determination. If the project would result in fill of wetlands or other waters of the United States, the City will require project proponent/s to obtain a Section 404 Clean Water Act permit from the U.S. Army Corps of Engineers and water quality certification from the Regional Water Quality Control Board pursuant to Section 401 of the Clean Water Act. If the project involves work in areas containing waters disclaimed by the USACE, project applicants shall obtain a Waste Discharge Requirement permit from the Regional Water Quality Control Board pursuant to the Porter Cologne Act. Project applicants shall be required to obtain all needed permits prior to project implementation, to abide

by the conditions of the permits, including all mitigation requirements, and to implement all requirements of the permits in the timeframes required therein.

Implement Mitigation Measure 4.8-1 (Implementation Measure for Special-Status Plants and Habitat)

Implement Mitigation Measure 4.8-2 (Implementation Measure for Special-Status Wildlife)

Implement Mitigation Measure 4.8-3 (Implementation Measure for Riparian Habitat and Sensitive Natural Communities)

Significance after Mitigation

Because much of the sensitive habitat in the Planning Area is already designated for preservation as open space, implementation of goals and policies in the existing General Plan and the proposed General Plan Update, combined with current laws, regulations, and Mitigation Measures 4.8-1, 4.8-2, 4.8-3, and 4.8-4, will ensure impacts to wetlands and other waters would be reduced to a **less-than-significant** level. These provisions would require development projects to identify, avoid, and preserve wetlands and waters of the U.S. and state, or provide compensation for loss of habitat in coordination with state and federal agencies. Policies requiring protection of special-status species and their habitats also protect wetlands and drainages because these include special-status species such as vernal pool branchiopods, vernal pool plants, western spadefoot, and western pond turtle that are associated with aquatic habitats.

IMPACT 4.8-5 **Substantial Interference with Wildlife Movement Corridors and Nursery Sites.** *Buildout of the General Plan would involve conversion of habitat to developed use that could provide wildlife movement corridors and nursery sites. In addition to direct removal of habitat, buildout of the General Plan would result in habitat modification that could degrade habitat quality to a degree that it is no longer suitable for use as wildlife movement corridors and/or nursery sites. This impact is considered **potentially significant**.*

Wildlife corridors link areas of suitable wildlife habitat that are otherwise separated by changes in vegetation or human disturbance. The fragmentation of open space areas by urbanization creates isolated islands of wildlife habitat. In the absence of habitat linkages that allow movement to adjoining open space areas, various studies have concluded that some wildlife species, especially the larger and more mobile mammals, would not likely persist over time because fragmentation prohibits the infusion of new individuals and genetic information.

Corridors mitigate the effects of this fragmentation by: (1) allowing animals to move between remaining habitats, thereby permitting depleted populations to be replenished and promoting genetic exchange; (2) providing escape routes from fire, predators, and human disturbances, thus reducing the risk of catastrophic events; and (3) serving as travel routes for individual animals as they move within their home ranges in search of food, water, and other needs (City of Roseville 2016).

Wildlife movement activities generally fall into one of three movement categories: (1) dispersal (e.g., of juvenile animals from natal areas or individuals extending range distributions); (2) seasonal migration; and (3) movement related to home range activities (foraging for food or water, defending territories, or searching for mates, breeding areas, or cover) (City of Roseville 2016).

Development of the Planning Area could impede the movement of wildlife by disturbing and/or blocking local movement corridors. Many of the species that would normally use annual grasslands and vernal pool complexes as foraging areas would not as easily move across the future urbanized landscapes planned for development. The General Plan includes areas designated for Open Space, including creek and riparian areas and vernal pool complexes, which would become the primary wildlife corridors through the urbanized landscape. Construction of stream crossings and other activities could alter the corridors and disturb wildlife using these areas.

Roseville is located within the Pacific flyway, which is a major north-south route for migratory birds in western North America. Large numbers of waterfowl and shorebirds may move through the area seasonally and may congregate and forage in wetlands, grasslands, and agricultural fields during winter or use them as resting grounds during longer migrations from the Arctic to Central or South America. Some planned development would occur in agricultural habitats within the Pacific flyway and displace migratory birds. However, this development would not create a barrier to movement of migratory species or alter the character of existing habitat available to migrating birds such that it would no longer function as a migratory corridor because there still would be abundant agricultural habitat of equal or better value to migrating birds surrounding the Planning Area and this agricultural habitat, along with annual grasslands and riparian areas, would continue to support the needs of migratory birds and provide wildlife movement opportunities for other native resident or migratory wildlife species in the area.

The Planning Area does not currently provide an important connection between any areas of natural habitat that would otherwise be isolated. The Planning Area is not located within any of the ecological corridors identified in the Placer HCP/NCCP as important to maintaining connectivity between communities, habitat patches, species populations, or the Placer HCP/NCCP proposed reserve system (PCCP 2018). Several heron, egret, and cormorant rookeries are present in the surrounding region, but are limited to dense riparian habitats in the vicinities of Folsom Lake, the American River, and Sacramento River well outside of the Planning Area (CDFW 2019b). The only wildlife nursery site identified in the Planning Area is a nesting colony of purple martin in the State Route 65 overpass (CDFW 2019b). State Route 65 is on property owned by the State of California, where the City does not have development authority, and no changes to this facility are proposed by the City. Therefore, there would be no direct impact on the purple martin nesting colony as a result of project implementation.

The City's Floodplain Development Regulations (discussed in detail in Chapter 4.13, "Hydrology and Water Quality") would reduce impacts associated with floodplains and stream channels. Most of the stream channels in the Planning Area would remain as open space, which would preserve movement corridors in the Planning Area. Also, much of the vernal pool complexes in the Planning Area would be preserved and provide linkages for movement of animals. In addition, if there are activities in the Planning Area that could affect stream corridors, this would require a Section 1600 Streambed Alteration Agreement from CDFW. Specific measures would be developed during discussions with CDFW, but may include avoidance and minimization measures, use of erosion control and bank stabilization measures, and restoration of stream corridor habitat that has been damaged during the construction of the proposed project.

The City and USFWS entered into MOUs for the Sierra Vista, West Roseville, Creekview, and Amoruso Ranch Specific Plans. The City/USFWS MOUs documented agreement on land use plans and mitigation strategies for ESA compliance. Mitigation included avoidance, minimization, and preservation of wetland resources, specifically vernal pools, riparian areas, and other sensitive wetland habitat that could be used as wildlife corridors.

The following goal and policies related to wildlife movement corridors and nursery sites are proposed for revision as a part of the proposed General Plan Update, with additions shown in **bold**, **underlined** text and deletions shown in ~~striketrough~~ text:

- ▶ **Policy OS1.6:** Take into account ~~consideration of~~ natural habitat areas ~~in developing~~ **when designating** ~~linkages~~ **access to**, and ~~in~~ preserving open space areas. Identify alternate ~~sites~~ **locations and design** for ~~linkages~~ **access** where sensitive habitat areas have the potential to be adversely impacted.

Goal OS2.2: Maintain healthy, ~~and~~ well-managed, **and connected** habitat areas ~~in conjunction with one another,~~ **that** maximizing the potential for ~~compatible open space~~ **habitat preservation and compatible** recreation, and visual experiences.

- ▶ **Policy OS2.1:** Incorporate existing trees into development projects, **with an** ~~Particular~~ **emphasis** ~~shall be placed~~ **on avoiding the removal of groupings or groves of trees.** ~~and w~~Where preservation is not feasible, continue to require mitigation for the loss of removed trees. ~~Particular emphasis shall be placed on avoiding the removal of groupings or groves of trees.~~
- ▶ **Policy OS2.2:** Preserve and ~~rehabilitate~~ **restore** continuous riparian corridors and adjacent habitat along the City's creeks and waterways.
- ▶ **Policy OS2.6:** Provide for **the** protection and enhancement of native fishery resources, ~~including~~ **as informed by** continued coordination with the California Department of Fish and Wildlife ~~to release water into Linda Creek.~~
- ▶ **Policy OS2.9:** Limit the access of pedestrians and cyclists to vernal pool and wetland areas so that access is compatible with long-term protection of these natural resource areas, **consistent with the City's Open Space Preserve Overarching Management Plan.**
- ▶ **Policy OS2.10:** Manage public **open space preserves** ~~lands with~~ **that can provide habitat for** special-status species to encourage propagation of the species and discourage **spread of** non-indigenous, invasive species, **consistent with the City's Open Space Preserve Overarching Management Plan.**
- ▶ **Policy OS1.12:** Consider the use of City property for habitat preservation and mitigation requirements resulting from **new** development proposals when such efforts do not conflict with existing resources, recreational opportunities, or other City goals, policies, or programs.

The proposed General Plan Update policy changes listed above would help provide protection to biological resources, would result in additional clarity, and would not result in any adverse environmental impacts.

Conclusion

With implementation of existing General Plan Open Space System Goal 1 and Policy 7; Vegetation and Wildlife Goals 1 and 3 and Policies 3, 4, 5, and 11; and Groundwater Recharge and Water Quality Policies 2 and 3 (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Policy OS1.6; and Goal OS2.2 and Policies OS2.1, OS2.2, OS2.6, OS2.7, OS2.8, OS2.9 and OS2.12 listed above, combined with current laws, regulations, and policies, the impact on wildlife movement corridors and nursery sites would be reduced. However,

implementation of the General Plan could result in direct removal of wildlife movement corridors and nursery sites and/or habitat modification that could degrade the quality of habitats, and indirect effects that may result from construction-related runoff, sedimentation and erosion, introduction of invasive weeds, this impact is **potentially significant**.

Mitigation Measures

Implement Mitigation Measure 4.8-1 (Implementation Measure for Special-Status Plants and Habitat)

Implement Mitigation Measure 4.8-2 (Implementation Measure for Special-Status Wildlife)

Implement Mitigation Measure 4.8-3 (Implementation Measure for Riparian Habitat and Sensitive Natural Communities)

Implement Mitigation Measure 4.8-4 (Implementation Measure for Wetlands and Other Waters)

Significance after Mitigation

With implementation of goals and policies in the existing General Plan and the proposed General Plan Update, combined with current laws, regulations, and Mitigation Measures 4.8-1, 4.8-2, 4.8-3, and 4.8-4, impacts to wildlife corridors and nursery sites would be reduced to a **less-than-significant** level because these provisions would require projects to identify, avoid, and preserve habitats that function as wildlife migration corridors, including riparian areas and wetlands, or provide compensation for loss of habitat in coordination with state and federal agencies. In addition, proposed General Plan Update policies that require protection of special-status species and their habitats also protect riparian areas, wetlands, and drainages that can be used as wildlife corridors. Finally, implementation of Mitigation Measure 4.8-2 will ensure protection of nesting colonies of purple martin, a CDFW special-status species.

IMPACT 4.8-6 **Conflict with Local Ordinances Protecting Biological Resources.** *Buildout of the General Plan would involve conversion of habitat to developed use that will require oak tree removal, which would be subject to the City's ordinances and policies regarding oak tree preservation and mitigation. The City of Roseville Tree Preservation Ordinance requires a permit and mitigation for all oak trees removed. Therefore, this impact is considered less than significant.*

Buildout of the General Plan would allow development in areas containing trees protected under the City of Roseville Tree Preservation Ordinance (Municipal Code Chapter 19.66, Tree Preservation). The Tree Preservation Ordinance defines protected trees as a native oak tree, defined as any tree of the genus *Quercus* and species *lobata* (valley oak), *douglasii* (blue oak), *wislizeni* (interior live oak) or hybrids thereof, equal to or greater than six inches diameter at breast height (DBH) measured as a total of a single trunk or multiple trunks. Activities that may harm, destroy, kill, or remove a protected tree, or any activities within the protected zone (i.e., a circle equal to the largest radius of a protected tree's dripline plus one foot) of a protected tree that may adversely impact its health, including, but not limited to, cutting, grading, irrigating and trenching, are prohibited unless authorized by a Tree Permit.

In accordance with 19.66.040 of the Tree Preservation Ordinance, applications for Tree Permits for regulated activities associated with a discretionary project must be included as part of the land use permit and/or subdivision

application for the discretionary project. All Tree Permit applications are required to use the forms provided by the Planning Division and must include an arborist's report as specified by Section 19.66.050 of the Tree Preservation Ordinance, and a site plan with information as deemed necessary by the Planning Manager.

Project applicants would be required to obtain a permit from the Planning Manager for any proposed tree removal or work within the protected zone of a protected tree, and as a condition of the tree permit, applicants would be required to develop a program for the replacement of any trees proposed to be removed. The project applicant would be required to replace protected trees according to the ordinance.

The following proposed General Plan Update policies related to conflicts with local ordinances that protect biological resources are proposed for revision, with additions shown in **bold, underlined** text and deletions shown in ~~striketrough~~ text:

- ▶ **Policy OS2.1:** Incorporate existing trees into development projects, **with an Particular emphasis** ~~shall be placed on avoiding the removal of groupings or groves of trees.~~ and ~~where~~ **Where** preservation is not feasible, continue to require mitigation for the loss of removed trees. ~~Particular emphasis shall be placed on avoiding the removal of groupings or groves of trees.~~
- ▶ **Policy OS2.2:** Preserve and ~~rehabilitate~~ **restore** continuous riparian corridors and adjacent habitat along the City's creeks and waterways.

The proposed General Plan Update policy changes listed above would help provide protection to biological resources, would improve clarity, and would not result in any adverse environmental impacts.

Conclusion

The proposed General Plan Update does not propose to change the City's existing tree ordinance. With implementation of existing Vegetation and Wildlife Goal 1 and Policy 11 (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Policies OS2.1 and OS2.2 listed above, combined with current laws, regulations, and policies such as the City's Tree Ordinance, the impact on protected trees would be reduced. The impact is considered **less than significant**.

Mitigation Measures

No mitigation is required.

| | |
|-------------------------|---|
| IMPACT 4.8-7 | Conflict with Provisions of an Adopted Habitat Conservation Plan, Natural Conservation Community Plan, or Other Approved Conservation Plan. <i>There is no adopted HCP, NCCP, or other approved local, regional, or State HCP that applies to the Planning Area. This impact is considered less than significant.</i> |
|-------------------------|---|

There is no adopted HCP, NCCP, or other approved local, regional, or State HCP that applies to the Planning Area. The County is currently preparing the PCCP described in Section 4.8.3.3; however, this plan is in draft form and has not been adopted. The City of Roseville is not a current participant in the PCCP process. If and when the County's PCCP is adopted, however, the City may choose to participate and may be included in the PCCP as a special entity.

For the Sierra Vista, West Roseville, Creekview, and Amoruso Ranch Specific Plans, the City entered into MOUs with USFWS to prepare an HCP or equivalent, as discussed in Section 4.8.3.1. The City worked with the USFWS to assess the status of remaining vernal pool resources within the City. This included several mapping efforts to identify current development trends and remaining vernal pool resources. The USFWS concurred that nearly all remaining undeveloped land containing vernal pools had received federal permits for development through the Clean Water Act 404 process; therefore, preparation of an HCP or equivalent to address remaining development would not be necessary. The USFWS further determined that the conservation strategy could be developed and approved through Section 7 consultation process in the context of permitting pursuant to Section 404 of the Clean Water Act.

Compliance with the federal ESA and CESA along with Section 404 of the Clean Water Act would reduce impacts to biological resources.

The following goal and policies related to HCPs and NCCPs would be revised as a part of the proposed General Plan Update, with additions shown in **bold, underlined** text and deletions shown in ~~striketrough~~ text:

Goal OS2.2: Maintain healthy, ~~and well-managed,~~ **and connected** habitat areas ~~in conjunction with one another,~~ **that** maximizing the potential for ~~compatible open space~~ **habitat preservation and compatible** recreation, and visual experiences.

- ▶ **Policy OS2.2:** Preserve and ~~rehabilitate~~ **restore** continuous riparian corridors and adjacent habitat along the City's creeks and waterways.
- ▶ **Policy OS2.6:** Provide for **the** protection and enhancement of native fishery resources, ~~including as informed by~~ **as informed by** continued coordination with the California Department of Fish and Wildlife ~~to release water into Linda Creek.~~
- ▶ **Policy OS2.7:** Require **consistency with the City of Roseville Open Space Preserve Overarching Management Plan for dedication and management of on-site wetland** ~~emulative mitigation plans for wetlands, where feasible, in association with~~ **as part of Specific Plans new development.**
- ▶ **Policy OS2.8:** Consider ~~substitute~~ **off**-site mitigation for federally non-regulated wetlands, provided that such mitigation will provide comparable habitat values.
- ▶ **Policy OS2.9:** Limit the access of pedestrians and cyclists to vernal pool and wetland areas so that access is compatible with long-term protection of these natural resource areas, **consistent with the City's Open Space Preserve Overarching Management Plan.**
- ▶ **Policy OS2.10:** Manage public **open space preserves** ~~lands with~~ **that can provide habitat for** special-status species to encourage propagation of the species and discourage **spread of** non-indigenous, invasive species, **consistent with the City's Open Space Preserve Overarching Management Plan.**
- ▶ **Policy OS1.12:** Consider the use of City property for habitat preservation and mitigation requirements resulting from **new** development proposals when such efforts do not conflict with existing resources, recreational opportunities, or other City goals, policies, or programs.

The proposed General Plan Update policy changes listed above would help provide protection to biological resources, would improve clarity, and would not result in any adverse environmental impacts.

Conclusion

There is no adopted HCP, NCCP, or other approved local, regional, or State HCP that applies to the Planning Area. If/when the County's PCCP is adopted, the City may choose to participate and may be included in the PCCP as a special entity. As previously discussed, the USFWS concurred that nearly all remaining undeveloped land in the City's western development areas containing vernal pools had received federal permits for development through the Clean Water Act 404 process and, therefore, preparation of an HCP or equivalent to address remaining development in the City would not be necessary. The USFWS further determined that the conservation strategy could be developed and approved through Section 7 consultation process in the context of permitting pursuant to Section 404 of the Clean Water Act.

Existing General Plan Open Space System Policy 7; Vegetation and Wildlife Goals 1 and 3 and Policies 3, 4, 5, 11, and 13; and Groundwater Recharge and Water Quality Policies 2 and 3 (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Goal OS2.2 and Policies OS2.2, OS2.6, OS2.7, OS2.8, OS2.9, OS2.10, and OS2.12 listed above, would help protect biological resources throughout the Planning Area, including resources associated with the proposed Western Placer County HCP/NCCP, if and when it is adopted. The impact is considered **less than significant**.

Mitigation Measures

No mitigation is required.

4.9 CULTURAL AND TRIBAL CULTURAL RESOURCES

4.9.1 INTRODUCTION

This chapter describes potential impacts related to cultural and tribal resources in the Planning Area associated with the proposed General Plan Update, including archaeological resources and human remains. To provide context for the impact analysis, this chapter begins with an environmental setting describing the cultural context for the prehistoric, ethnographic, and historic-era background of the Planning Area. Next, the regulatory framework is described, which informs the selection of the significance thresholds used in the impact analysis. The regulatory framework also includes existing General Plan policies related to the impact analysis of this chapter. The chapter concludes with the applicable significance thresholds, the impacts of the proposed changes to adopted General Plan policies, recommended mitigation measures, and the significance conclusions.

As part of the impact analysis, Notice of Preparation (NOP) comments were reviewed to help guide the analysis, and any comments were integrated into the analysis. One response was received from the Native American Heritage Commission (NAHC) summarizing the existing requirements contained in Assembly Bill (AB) 52, Senate Bill (SB) 18, and suggestions for early tribal consultation. The City reviewed and considered this information during preparation of this chapter.

Cultural resources include districts, sites, buildings, structures, or objects generally older than 50 years and considered important to a culture, subculture, or community for scientific, traditional, religious, or other reasons. They include prehistoric, historic-era, and tribal cultural resources (TCRs) (the latter as defined by AB 52, Statutes of 2014, in Public Resources Code Section 21074).

Archaeological resources are locations where human activity has measurably altered the earth or left deposits of prehistoric or historic-era physical remains (e.g., stone tools, bottles, former roads, house foundations). Historical resources include standing buildings (e.g., houses, barns, outbuildings, cabins), intact structures (e.g., dams, bridges, wells), or other remains of humans' alteration of the environment (foundation pads, remnants of rock walls). TCRs were added as a distinct resource subject to review under CEQA, effective January 1, 2015, under AB 52. This is a new category of resources under CEQA and includes site features, places, cultural landscapes, and sacred places or objects, which are of cultural value to a tribe.

4.9.2 ENVIRONMENTAL SETTING

The natural and geographical settings of the City's Planning Area are described in other sections of this EIR, particularly Section 4.9 "Biological Resources," and Section 4.7, "Geology, Soils, and Paleontological Resources." The reader is referred to these sections for a more in-depth description of those aspects of the environment that were instrumental in the settlement patterns of this region.

Following is a discussion intended to provide a context for prehistoric and historic resources that could be found within the City's Planning Area. While some of the material relates to other portions of northern California and the Central Valley, information on Placer County and the Roseville area is provided, as available.

4.9.1.1 PREHISTORIC SETTING

The archaeology of Placer County is included within the broad framework established by archaeologists for the Sacramento Valley. Although human occupation of the northern Sacramento Valley may extend back 10,000

years or more, reliable evidence of the presence of such an early human presence is lacking. Early archaeological sites bearing evidence of these Paleo-Indian populations may be present in the valley, but deeply buried under alluvium (Moratto 1984).

The following discussion of the prehistoric background is adapted from Rosenthal, et al. (2007). The region and its prehistory can be broken into local districts and phases (Elsasser 1978). New radiocarbon determinations adjusted with modern calibration curves are now used for a more precise time frame (Rosenthal, et al: 2007: 147-153). These different cultural patterns are characterized as:

- ▶ The **Paleo-Indian Period (12,000 to 10,500 Before Present [B.P.]**) saw the first demonstrated entry and spread of humans into California. Characteristic artifacts recovered from archaeological sites of this time period have included fluted projectile points (often compared to Clovis points), cobble cores, and biface rough-outs.
- ▶ The beginning of the **Lower Archaic Period (10,500 to 7500 B.P.)** coincides with that of the Middle Holocene climatic change which resulted in widespread floodplain deposition. This episode resulted in burial of most of the early archaeological deposits. Most tools were manufactured of local materials, and distinctive artifact types include large dart points and the milling slab and handstone.
- ▶ The **Middle Archaic Period (7500 to 2500 B.P.)** is characterized by warm, dry conditions which brought about the drying up of pluvial lakes. Economies were more diversified and may have included the introduction of acorn processing technology, although hunting remained an important source of food. Characteristic artifacts include milling stones and pestles and continued use of a variety of implements interpreted as large dart points.
- ▶ The **Upper Archaic Period (2500 to 850 B.P.)** corresponds with a sudden turn to a cooler, wetter, and more stable climate. The development of status distinctions based upon wealth is well documented in the archaeological record. The development of specialized tools, such as bone implements and stone plummets as well as manufactured goods (e.g., Olivella saucer and saddle beads, Haliotis ornaments) were prolific during this time. The regional variance of economies was largely due to the seasonality of resources, which were harvested and processed in large quantities.
- ▶ Several technological and social changes distinguish the **Emergent Period (850 B.P. to Historic)** from earlier cultural manifestations. The bow and arrow were introduced, ultimately replacing the dart and atlatl, and territorial boundaries between groups became well established. In the latter portion of this Period (450 to 1800 B.P.), exchange relations became highly regularized and sophisticated. The clam disk bead developed as a monetary unit of exchange, and increasing quantities of goods moved greater distances. It was at the end of this Period that contact with Euroamericans became commonplace, eventually leading to intense pressures on Native American populations.

4.9.1.2 ETHNOGRAPHIC SETTING

The Planning area is situated within the traditional territory of the Nisenan. The language of the Nisenan, which includes several dialects, is classified within the Maiduan family of the Penutian linguistic stock. Kroeber (1925) recognized three Nisenan dialects: Northern Hill, Southern Hill, and Valley. The Nisenan territory included the drainages of the Yuba, Bear, and American rivers, and the lower drainages of the Feather River, extending from the crest of the Sierra Nevada to the banks of the Sacramento River. According to Bennyhoff (1961:204–209), the

southern boundary with the Miwok was probably a few miles south of the American River, bordering a shared area used by both Miwok and Nisenan groups that extended to the Cosumnes River. It appears that the foothills Nisenan distrusted the valley peoples but had a mostly friendly relationship with the Washoe to the east. Elders recall intergroup marriage and trade, primarily involving the exchange of acorns for fish procured by the Washoe (Wilson 1972:33). The northern boundary has not been clearly established due to similarities in language with neighboring tribes (Wilson and Towne 1978:387 - 389).

Nisenan settlement locations depended primarily on elevation, exposure, and proximity to water and other resources. Permanent villages were usually located on low rises along major watercourses. Houses were domed structures measuring 10 to 15 feet in diameter and covered with earth and tule reeds or grass. Brush shelters were used in the summer and at temporary camps during food-gathering rounds. Larger villages often had semi-subterranean dance houses that were covered in earth and tule reeds or brush, with a central hole at the top to allow the escape of smoke, and an east-facing entrance. Another common village structure was the granary, which was used for storing acorns.

Several political divisions in the Nisenan territory, constituting tribelets, had headmen in the larger villages. However, the relative levels of influence in these larger population centers are unknown. All of these larger villages were located in the foothills. More substantial and permanent Nisenan villages generally were not established on the valley plain between the Sacramento River and the foothills, although this area was used as a rich hunting and gathering ground. One tribelet consisted of people occupying the territory between the Bear River and the Middle Fork American River (Wilson and Towne 1978). According to Kroeber (1925:831), the larger villages could have had populations exceeding 500 individuals, although small settlements consisting of 15–25 people and extended families were common.

The Nisenan occupied permanent settlements from which specific task groups set out to harvest the seasonal bounty of flora and fauna that the rich valley environment provided. The Valley Nisenan economy involved riparian resources, in contrast to the Hill Nisenan, whose resource base consisted primarily of acorn and game procurement. The only domestic plant was native tobacco (*Nicotiana* sp.), but many wild species were closely husbanded. The acorn crops from the blue oak (*Quercus douglasii*) and black oak (*Q. kelloggii*) were carefully managed resources. Acorns were stored in granaries in anticipation of winter. Deer, rabbit, and salmon were the chief sources of animal protein in the aboriginal diet, but many insect and other animal species were taken when available (Wilson and Towne 1978:389).

The decimation of the Nisenan culture in the 19th century as a result of European colonization, coupled with a reluctance to discuss Nisenan spiritual beliefs and practices, makes it difficult to describe these practices in any detail. However, historic records document a number of observances and dances, some of which are still performed today, that were important ceremonies in early historic times. The Kuksu Cult, the basic religious system noted throughout Central California, appeared among the Nisenan. Cult membership was restricted to those initiated in its spirit and deity-impersonating rites. However, the Kuksu Cult was only one of several levels of religious practice among the Nisenan. Various dances associated with mourning and the change of seasons were also important. One of the last major additions to Nisenan spiritual life occurred sometime shortly after 1872 with a revival of the Kuksu Cult as an adaptation to the Ghost Dance religion (Wilson and Towne 1978). Today, Nisenan descendants are reinvesting in their traditions, and represent a growing and thriving community.

4.9.1.3 HISTORIC SETTING

The following section provides an overview of historic-era development, trends, and events that contributed to the growth and development of the built environment within the Planning Area. Unless stated otherwise, this overview is taken from the EDAW (2008) Downtown Roseville Specific Plan Draft EIR prepared for the City of Roseville.

Roseville, 1850–1900

The first Euro-Americans to settle in the area now known as Roseville were gold seekers who left the placer mining fields to farm on the plains region of southwestern Placer County. Many of these pioneering farmers formed the nucleus of what would become a bustling railroad town.

The first railroad to pass through this rich farming region was the California Central, an extension of the Sacramento Valley Railroad. Construction of the rail line through this area began in late August/early September of 1861. The route of this rail line was circuitous, passing through present-day Roseville Square Shopping Center, then crossing Dry Creek at Folsom Road where it proceeded northerly to the towns of Lincoln and Marysville. In 1864, track-laying crews from the Central Pacific pushed eastward from Sacramento across the plains on their way to building what would become the western half of the Transcontinental Railroad. In Roseville, the rails of the Central Pacific intersected with those of the California Central. The location of this meeting of the rails was simply labeled as “Junction” on early railroad maps. A small freight and passenger center, soon to be known as Roseville, developed around this junction.

The favorable location of the junction in the heart of a rich agricultural area would make it an important shipping and trading center in years to come. One of the first individuals to capitalize on this was O.D. Lambard, who, in 1864, platted the town-site of a city to be called Roseville. The name Roseville is purported to have been conferred because of the many wild roses growing profusely in and around the area. For the next four decades, Roseville remained a small railroad shipping point of approximately 250 inhabitants, catering to the needs of area farmers and ranchers. The town centered on the railroad depot and a few small businesses which lined the two principal streets of Atlantic and Pacific.

Roseville, Early 1900s–Present

By the turn of the century, Roseville’s population was still largely made up of ranchers. However, this setting abruptly changed in 1906 when the railroad roundhouse and repair facilities moved to Roseville from nearby Rocklin which had been the area’s major railroad service center. Almost overnight, the quiet ranching town evolved into a bustling city of approximately 3,000 people.

New subdivisions accommodated the new residents. Business and commercial growth during this time was extensive and caused the town to expand outward in all directions. Atlantic Street, which has been one of Roseville’s two principal business thoroughfares, was moved back approximately 100 feet to accommodate the laying of new track for roundhouse and repair facilities. The business section, which had been limited to Atlantic and Pacific streets, expanded along Lincoln, Main, Church, and later, Vernon streets. A Chamber of Commerce was organized to provide need municipal services such as water, electricity, police, and fire protection.

In 1909, the town was incorporated and steadily grew until it became Placer County’s largest city. In one three-year period (1911–1914), more than 110 new buildings were constructed. The population increased from 2,608 in

1910 to 4,477 in 1920, by which time Roseville was divided into two main sections including the North Side centered along Lincoln Street and extending back to and including Church and Main streets and the rapidly expanding South Side centered along Vernon Street.

The buildings during this time period in what would become “downtown” consisted mostly of commercial properties with the occasional modest-sized dwelling. Roseville continued as a major railroad center well into the post-World War II years; however, by the 1950s, interstate trucking and airlines provided stiff competition. The introduction of jet aircraft and the completion of Interstate 80 (I-80) through Roseville in 1956 saw the abrupt decline of the once booming passenger train service.

The town slowly expanded easterly with the competition of I-80. This led to the eventual decline of the Lincoln-Church-Main Street business center and the Vernon Street area. The town’s commercial center shifted from downtown to what became known as “East Roseville.” By 1968, a significant portion of business activity centered in the Roseville Square-Harding Way and Sunrise Boulevard areas.

A revitalization movement, began in 1977, aimed to restore the physical and economic prominence of Roseville’s downtown area to its heyday of the 1920s. Buildings were painted, facades reconstructed, and awnings and overhangs were installed. As part of the revitalization effort, the old downtown also saw new business development and reconstruction efforts during this time. Roseville continues to grow today and has a population of over 130,000 people (City of Roseville 2019). The meager beginnings of this ranching village—turned railroad town—blossomed into a vital economic center within Placer County.

4.9.3 REGULATORY FRAMEWORK

Cultural resources in California are protected by a number of federal, state, and local regulations and ordinances. The following provides a brief outline of the regulations, policies, and ordinances that are applicable to the proposed General Plan Update.

4.9.2.1 FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

Section 106 of the National Historic Preservation Act

National Historic Preservation Act (NHPA) Section 106 and accompanying regulations (Title 36, Part 800 of the Code of Federal Regulations [36 CFR 800]), the main federal regulatory framework guiding cultural resources investigations, require consideration of effects on properties that are listed in or may be eligible for listing in the National Register of Historic Places (NRHP). The NRHP, administered by the National Park Service, is the nation’s master inventory of known historic properties. It includes listings of buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, and cultural characteristics that are considered significant at the national, state, or local level.

The formal criteria (36 CFR 60.4) for determining NRHP eligibility are as follows:

1. The property is at least 50 years old. (However, properties under 50 years of age that are of exceptional importance or are contributors to a district can also be included in the NRHP.)
2. It retains integrity of location, design, setting, materials, workmanship, feeling, and associations.

3. It possesses at least one of the following criteria:

- A. Association with events that have made a significant contribution to the broad patterns of history (events).
- B. Association with the lives of persons significant in the past (persons).
- C. Distinctive characteristics of a type, period, or method of construction, or represents the work of a master, or possesses high artistic values, or represents a significant, distinguishable entity whose components may lack individual distinction (architecture).
- D. Has yielded, or may be likely to yield, information important to prehistory or history (information potential).

A property may be listed in the NRHP if it has both significance and integrity as defined in 36 CFR 60.4.

Significance is present if the resource meets one or more of the following significance criteria:

- (a) the resource has an association with events that have made a significant contribution to the broad patterns of our history; or,
- (b) the resource has an association with the lives of persons significant in our past; or;
- (c) the resource embodies the distinctive characteristics of a type, period or method of construction, or represents the work of a master, possesses high artistic values, or represents a significant and distinguishable entity whose components may lack individual distinction; or,
- (d) the resource has yielded, or may be likely to yield, information important in prehistory or history.

Integrity requires that the resource possess integrity of location, design, setting, materials, workmanship, feeling, and association (36 CFR 60.4).

Listing in the NRHP does not entail specific protection of, or assistance for a property. However, listing does guarantee the property's recognition during planning for federal or federally assisted projects, eligibility for federal tax benefits, and qualification for federal historic preservation assistance. Additionally, project effects on properties listed in the NRHP must be evaluated under CEQA.

Traditional Cultural Properties

Traditional Cultural Properties (TCPs) are resources eligible for the NRHP based on cultural significance derived from the "beliefs, customs, and practices of a living community of people that have been passed down through the generations" ([NPS] 1998:1). TCPs embrace a wide range of historic properties, such as the location associated with a Native American group's origin or the origin of the world (cosmogony), or an urban neighborhood that is the traditional home of a particular cultural group and that still reflects and is associated with their beliefs and practices. Other examples include places where traditional people historically have gone and continue to visit for ceremonial practices. These examples are not intended to be exhaustive, but instead to illustrate the range of possible TCPs. The NPS National Register Bulletin 38 defines a historical property as a place that is eligible for NRHP inclusion "because of its association with cultural practices or beliefs of a living community that (a) are

rooted in the community's history and (b) are important in maintaining the continuing cultural identity of the community" (NPS 1998:1). The identification and evaluation of TCPs can be conducted only by consultation with members of the relevant group of people that ascribe value to the resource, or through other forms of ethnographic research.

Evaluation of TCPs

Federal agencies must evaluate TCPs for eligibility for listing in the NRHP to determine if they are historic properties subject to management as required under Section 106 of the NHPA. Evaluation of TCPs requires two major steps: first the Federal agency evaluates the integrity of the resource as a TCP, then evaluates the resource for eligibility listing on the NRHP under the process for assessing significance and integrity of historic properties. As with any resource that is evaluated for listing in the NRHP, the TCP must be a tangible district, site, building, structure, or object (NPS 1998:11).

These terms are not meant to limit or exclude places from evaluation as a TCP; for instance, a bare grassy expanse at Mt. Tonaachaw on Weno, an island that is part of the Federated States of Micronesia, has been evaluated as a component of a TCP (NPS 1998:20) because it is associated with at least two different spirits who reside on or are represented by the mountain. This consideration requires merely that the TCP be a physical place or tangible object, in the broadest sense, rather than the intangible beliefs or values alone.

Integrity of TCPs

The TCP must have integrity, like any property eligible for listing in the NRHP. For traditional cultural resources, this means that they must have "integrity of relationship" and "integrity of condition" (NPS 1998:11–12). Integrity of relationship means simply that the specific place is integral and necessary to a traditional cultural group's beliefs or specific practices (NPS 1998:11). National Register Bulletin 38 gives the example of two different cultures, one that believes that baptism at a specific river is necessary to accept individuals as members, and another that simply requires baptism in any body of water. For the first example, the river is integrated into beliefs and practices of a traditional culture and thus has integrity of relationship.

Integrity of condition requires simply that the TCP has not been altered in such a way that it no longer can serve its function for the traditional cultural group. For example, a pilgrimage route to a sacred site would no longer have integrity of condition if modern construction had physically interrupted the route and thus made it unusable. This requirement does not mean that the TCP must be completely intact without any changes to the setting or features of the resource; rather, the test is whether the resource can still function for traditional cultural purposes or whether the presence of new elements disrupts the function. National Register Bulletin 38 offers an example of a resource that has integrity despite changes to the setting. One reach of the Klamath River in northern California is within the ancestral and present territory of the Karuk people, and is the place where they carry out world renewal ceremonies and other rituals despite the presence of a modern highway, a U.S. Forest Service ranger station, and modern residences (NPS 1998:12).

If the TCP has integrity of relationship and integrity of condition, evaluation progresses to the second step of evaluating the resource for eligibility for listing in the NRHP, as described above.

4.9.2.2 STATE PLANS, POLICIES, REGULATIONS, AND LAWS

California Register of Historical Resources

The California Register of Historical Resources (CRHR) established a list of properties that are to be protected from substantial adverse change (Public Resources Code Section 5024.1). A historical resource may be listed in the CRHR if it meets any of the following criteria:

1. It is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
2. It is associated with the lives of persons important in California's past.
3. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic value.
4. It has yielded or is likely to yield information important in prehistory or history.

The CRHR includes properties that are listed or have been formally determined to be eligible for listing in the NRHP, State Historical Landmarks, and eligible Points of Historical Interest. Other resources require nomination for inclusion in the CRHR. These may include:

- ▶ resources contributing to the significance of a local historic district,
- ▶ individual historical resources,
- ▶ historical resources identified in historic resource surveys conducted in accordance with State Historic Preservation Office procedures,
- ▶ historic resources or districts designated under a local ordinance consistent with Commission procedures, and
- ▶ local landmarks or historic properties designated under local ordinance.

California Environmental Quality Act

CEQA requires public agencies to consider the effects of their actions on historical resources, unique archaeological resources, and TCRs. Under Public Resources Code Section 21084.1, a “project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment.” Under Public Resources Code Section 21084.2, 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.” Section 21083.2 requires agencies to determine whether projects would have effects on unique archaeological resources.

Historical Resources

“Historical resource” is a term with a defined statutory meaning (Public Resources Code Section 21084.1). The determination of significant impacts on historical and archaeological resources is described in Sections 15064.5(a) and 15064.5(b) of the State CEQA Guidelines. Section 15064.5(a) states that historical resources include the following:

1. A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the CRHR (Public Resources Code Section 5024.1).
2. A resource included in a local register of historical resources, as defined in Section 5020.1(k) of the Public Resources Code or identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g) of the Public Resources Code, will be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
3. Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource will be considered by the lead agency to be historically significant if the resource meets the criteria for listing in the CRHR (Public Resources Code Section 5024.1).
4. The fact that a resource is not listed in or determined to be eligible for listing in the CRHR, not included in a local register of historical resources (pursuant to Section 5020.1[k] of the Public Resources Code), or identified in a historical resources survey (meeting the criteria in Section 5024.1[g] of the Public Resources Code) does not preclude a lead agency from determining that the resource may be an historical resource as defined in Public Resources Code Section 5020.1(j) or 5024.1.

Unique Archaeological Resources

CEQA also requires lead agencies to consider whether projects will affect unique archaeological resources. Public Resources Code Section 21083.2(g) states that a "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 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.

Tribal Cultural Resources

CEQA also requires lead agencies to consider whether projects will affect TCRs. TCRs may or may not manifest as archaeological sites. In some cases, TCRs are viewsheds, plant gathering areas, or other sacred spaces that are not readily identifiable to non-tribal members. In many cases, TCRs also include an archaeological component, such as artifacts, features, and sites (with or without human remains). Public Resources Code Section 21074 states the following:

- (a) "Tribal cultural resources" are either of the following:

- (1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
 - (A) Included or determined to be eligible for inclusion in the California Register of Historical Resources.
 - (B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.
 - (2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.
- (b) A cultural landscape that meets the criteria of subdivision (a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.
 - (c) A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a “nonunique archaeological resource” as defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms with the criteria of subdivision (a).

Health and Safety Code, Section 7052 and 7050.5

Section 7052 of the Health and Safety Code states that the disturbance, mutilation, or removal of interred human remains is a felony if the remains are within a dedicated cemetery and a misdemeanor if interred outside of a dedicated cemetery. Section 7050.5 requires that construction or excavation be stopped in the vicinity of discovered human remains until the coroner examines the find and determines whether the remains are subject to various laws, including recognizing whether the remains are or may be those of a Native American. If determined to be Native American, the coroner must contact the California Native American Heritage Commission (NAHC).

California Native American Graves Protection and Repatriation Act, Health and Safety Code Section 8010 through 8030

In the California Health and Safety Code, Division 7, Part 2, Chapter 5 broad provisions are made for the protection of Native American cultural resources. The Act sets the state policy to ensure that all California Native American human remains and cultural items are treated with due respect and dignity. The Act also provides the mechanism for disclosure and return of human remains and cultural items held by publicly funded agencies and museums in California. Likewise, the Act outlines the mechanism with which California Native American tribes not recognized by the federal government may file claims to human remains and cultural items held in agencies or museums.

California Native American Historical, Cultural, and Sacred Sites Act

The California Native American Historical, Cultural, and Sacred Sites Act applies to both state and private lands. This law requires that if human remains are discovered, construction or excavation activity must cease and the county coroner must be notified. If the remains are of a Native American, the coroner must notify the NAHC. The NAHC then notifies those persons most likely to be descended from the Native American whose remains were discovered. The California Native American Historical, Cultural, and Sacred Sites Act stipulates the procedures the descendants may follow for treating or disposing of the remains and associated grave goods.

Public Resources Code, Section 5097

Public Resources Code Section 5097 specifies the procedures to follow 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. Public Resources Code Section 5097.5 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.

Senate Bill 18, Chapter 905, Statutes of 2004

California State SB 18, signed into law in September 2004 and implemented March 1, 2005, requires cities and counties to notify and consult with California Native American Tribes about proposed local land use planning decisions for the purpose of protecting Traditional Tribal Cultural Places (also referred to as Traditional Cultural Properties). This law directed an amendment to the General Plan Guidelines to require consultation with, and advice from California Native American Tribes. According to the Tribal Consultation Guidelines, SB 18 “requires local governments to involve California Native Americans in early stages of land use planning, extends to both public and private lands, and includes both federally recognized and non-federally recognized tribes.”

Assembly Bill 52, Public Resources Code Section 21074

California State AB 52 added Public Resources Code Sections 21080.3.4, 21080.3.2, and 21082.3 to CEQA. These sections require that upon written request by a California Native American Tribe, a CEQA lead agency must begin consultation once it determines that the project application is complete, before the agency issues a notice of preparation (NOP) of an EIR or notice of intent to adopt a negative declaration or mitigated negative declaration.

As defined in Public Resources Code Section 21074, TCR are either of the following:

1. listed or determined to be eligible for listing, on the national, state, or local register of historical resources; or
2. a resource that the lead agency determines, in its discretion and supported by substantial evidence, to treat as a tribal cultural resource pursuant to the criteria in Public Resources Code Section 5024.1(c). Public Resources Code Section 5024.1(c) provides that a resource meets criteria for listing as an historical resource in the California Register if any of the following apply:
 - (1) It is associated with events that have made a significant contribution to the broad patterns of California’s history and cultural heritage.
 - (2) It is associated with the lives of persons important in our past.
 - (3) It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
 - (4) It has yielded, or may be likely to yield, information important in prehistory or history.

4.9.2.3 REGIONAL AND LOCAL PLANS, POLICIES, REGULATIONS AND ORDINANCES

City of Roseville's Existing General Plan

The City of Roseville's existing General Plan (City of Roseville, Last Amended August 17, 2016) list the following goal and policies related to the City's archaeological, historic, and cultural resources.

Archaeological, Historic and Cultural Resources Goal: Strengthen Roseville's unique identity through the protection of its archaeological, historic and cultural resources.

- ▶ **Policy 1:** When items of historical, cultural or archaeological significance are discovered within the City, a qualified archaeologist or historian shall be called to evaluate the find and to recommend proper action.
- ▶ **Policy 2:** When feasible, incorporate significant archaeological sites into open space areas.
- ▶ **Policy 3:** Subject to approval by the appropriate federal, state, local agencies, and Native American Most Likely Descendant (MLD), artifacts that are discovered and subsequently determined to be "removable" should be offered for dedication to the Maidu Interpretive Center.
- ▶ **Policy 4:** Preserve and enhance Roseville's historic qualities through the implementation of the Downtown and Riverside Gateway Specific Plans.
- ▶ **Policy 5:** Establish standards for the designation, improvement and protection of buildings, landmarks, and sites of cultural and historic character.
- ▶ **Policy 6:** Participate in the completion of a countywide inventory of historical sites.
- ▶ **Policy 7:** Encourage public activities, including the placement of monuments or plaques, that recognize and celebrate historic sites, structures, and events.
- ▶ **Policy 8:** Explore funding for cultural, archaeological and historic programs and activities.
- ▶ **Policy 9:** Provide opportunities to public awareness and education through coordination with the Historical Society and local schools.

Existing General Plan Implementation Measures

Development Review Process

Refer any development proposal that may have an impact on archaeological, historic or cultural resources to the appropriate federal, state or local agency for comment, including the State Office of Historic Preservation and the Native American Heritage Commission. Consider the comments of the agencies in the development review process.

In association with environmental review per CEQA, the City shall require that an archaeological survey be prepared by a qualified archaeologist for projects for which it is determined that there is a reasonable probability that archaeological or historic resources exist. If such resources are identified, a plan for their disposition shall be

prepared. This may include designation as open space, excavation, capping, or donation to the Maidu Interpretive Center.

If archaeological or historic resources are discovered during project development, halt construction activity in the vicinity of the resource, contact a qualified archaeologist for determination of resource significance, and notify the State Office of Historic Preservation. Monitor projects during construction to ensure crews follow proper reporting, safeguards, and procedures.

Information identifying specific locations of archaeological and historic sites shall be kept confidential to prevent illegal removal or vandalism of artifacts.

Specific Plans

Ensure that new or revised specific plans are consistent with the goals and policies of the General Plan. The specific plans shall incorporate a comprehensive inventory, analysis, and mitigation plan for archaeological and historic resources. Where feasible, significant archaeological resources shall be incorporated into park or other open space areas. All significant archaeological sites located in parks and other open space areas should be protected and left in an undisturbed state. Development agreements should be utilized to ensure preservation, maintenance, and management techniques.

Land Use Designation

Designate all areas identified for open space use with the appropriate open space land use designation as defined in the Land Use Element. This will, where feasible, include areas identified as having significant archaeological resources.

Zoning Ordinance

Continue to implement the Zoning Ordinance's open space land use and development regulations for consistency with the goals and policies of the open space and land use elements.

Downtown and Riverside Gateway Specific Plans

Continue to implement the Downtown and Riverside Gateway Specific Plans. These specific plans identify significant historic structures, provisions to preserve and/or enhance existing buildings, and guidelines for compatibility of new and existing development. Coordinate these specific plans with revitalization and development efforts to promote the preservation and enhancement of the areas.

Interagency Cooperation

Cooperate with other state, federal and local agencies in the identification and preservation of archaeological and historic resources. This will include working with Placer County and the Roseville Historical Society on the inventory of historic sites.

Community Organizations

Continue to encourage, support and cooperate with various community organizations, including the Roseville Historical Society, in recognizing significant places and events in Roseville's past.

Adopted Specific Plans

Currently, the City has adopted 14 Specific Plans. A Specific Plan is a comprehensive planning and zoning document that implements the General Plan by providing development and conservation standards for a defined geographic location within the Planning Area. Each Specific Plan has developed guidelines for site, architectural, landscaping, lighting, roadway networks, pedestrian/bicycle paths, open space corridors, parks, and other aspects of design. Each adopted Specific Plan included an EIR, which evaluated potential impacts to cultural resources. Where appropriate, mitigation measures were adopted to reduce the level of impact to cultural resources, and these measures are required to be implemented in the respective Specific Plan Areas. Adopted mitigation measures for cultural resources include requirements to conduct site-specific archaeological surveys; avoid archaeological sites if feasible and if not, record resources and consult with the SHPO; stop construction work in the vicinity of any materials that may be encountered; and perform a consultation with a qualified archaeologist who will prepare a treatment plan for implementation during further construction activities. Copies of the adopted Specific Plans and their associated EIRs are available upon request from the City of Roseville Development Services Department, Planning Division.

City of Roseville 2009 Downtown Specific Plan

The City of Roseville's 2009 Downtown Specific Plan (City of Roseville, Adopted April 1, 2009) included policies and strategies for identification and treatment of historic buildings within the Downtown Specific Plan Planning area as part of the Land Use Plan.

- **Land Use Policy 4.5.2:** Where possible, preserve and restore historic buildings.

While higher intensity developments should be encouraged, it is equally important to ensure that existing, significant historic buildings and resources are considered for re-use when appropriate. When reviewing potential new development in the Downtown, historic resources need to be identified.

Strategy 4.5.2a: As part of the Specific Plan Environmental Impact Report, complete an in-depth study to identify the significant historic resources. Provide an architectural inventory and evaluation of historic-era buildings in compliance with the California Environmental Quality Act Guidelines:

In order to assist the property owners and future developers, the City will complete a full architectural inventory of the existing historical resources in the Plan area. This inventory will identify buildings that are 45 years of age and are, therefore, eligible to be considered for the California Register of Historical Resources (CRHR).

The inventory will be documented on the appropriate California Department of Parks and Recreation (DPR) forms. It will conclude which buildings are eligible for listing on the CRHR. The intent of this is to remove some of the burden from the property owners or future developers of property when they bring a development project forward in the future. By performing this analysis, the City is creating an incentive since future development will not be required to provide this information. This is an action that the City is taking in order to facilitate the redevelopment process. *[Note: Results of this inventory are reported in section 4.9.3.]*

Strategy 4.5.2b: Extend the provisions of the State Historic Building Code to include all eligible structures within the Specific Plan Area.

The designation as “Historic” area or district, by a local jurisdiction allows for the use of the State Historic Building Code to guide future rehabilitation work. The State Historic Building Code is contained as part of the City’s Building Code and administered based on the interpretations of the City’s Chief Building Inspector. “Eligible” structures will be identified within the architectural inventory contained as part of the Environmental Impact Report.

By implementing this section of the building code, it provides relief to certain current building codes that would otherwise constrain or act as a disincentive for the re-use of older buildings. The State Historic Building Code is written acknowledging the design, structural, and site issues typically associated with older structures.

Strategy 4.5.2c: Consider incorporating incentives to facilitate historic preservation.

The City should consider appropriate incentives for property owners with historically significant buildings. A program such as a Transfer of Development Rights (TDR) should be studied as a potential incentive. Such a program will enable the development potential on properties with historic buildings to be transferred to other properties in Downtown.

City of Roseville Downtown Code, Adopted April 1, 2009 Ordinance #4728, Resolution #09-122

The purpose of the Downtown Roseville Specific Plan Downtown Code is to direct public and private development consistent with the community vision for the City of Roseville’s 2009 Downtown Specific Plan Area (City of Roseville, Adopted April 1, 2009). The goal is to ensure that the history of Roseville is honored, while balancing the desire for connectivity, pedestrian accessibility, a dynamic environment, and enhancement of amenities within the Downtown Specific Plan area. The Downtown Code will be provided to individuals interested in developing a new project or reuse of an existing building within the Specific Plan Area.

► **7.12 Additional Downtown Provisions**

A. Purpose

The Downtown has been recognized as being a “unique” area within the Community. In order to preserve the unique character of the Downtown, the size, appearance of storefronts during vacancies, application of the state Historic Building Code and noise provisions are addressed in Sections 7.2 B-E of the Downtown Code.

C. California State Historic Building Code

The City shall apply the California State Historic Building Code for use in historic structures as described and identified as “Eligible” structures by the architectural inventory contained as part of the Environmental Impact Report (EIR) [City of Roseville’s 2009 Downtown Specific Plan EIR]. By implementing this section of the building code, it provides relief to certain current building codes that would otherwise constrain or act as a disincentive for the re-use of older buildings. The State Historic Building Code is written acknowledging the structural, design and site issues typically associated with older structures. Eligible structures and potential eligible structures, as determined in the EIR, are shown in Downtown Specific Plan EIR Exhibit 7.2 and

Table 7.1. The City may also extend this designation to other structures within the Plan when deemed necessary. Determination of application shall be granted by the Director.

D. Potentially Significant Building

Prior to the approval of demolition or building permits that would result in substantial alteration of any of the potentially significant buildings, as shown in Downtown Specific Plan EIR Exhibit 7.2, an evaluation of significance in accordance with the California Register of Historic[al] Resources (CRHR) criteria shall be performed. If the evaluation indicates the property is not eligible for listing in the CRHR, no further action is required. If any of these buildings are found to be eligible for CRHR listing, renovations to retained structures shall be consistent with the Secretary of Interior’s standards for the treatment of historic properties. If the structure is being demolished, documentation of the structure, consistent to the Historic American Building Survey (HABS), shall first be conducted. Additionally, buildings that have been identified in the City’s Zoning Ordinance, Chapter 19.61, Significant Buildings, will be subject to the provisions contained within the ordinance. Similar to these provisions, City owned significant buildings will require Council approval of a development plan prior to their demolition.

City of Roseville Municipal Code, Title 19 Zoning, Chapter 19.61 Significant Buildings

Chapter 19.61 of the City of Roseville’s Zoning Ordinance is intended to prevent demolition of identified buildings that have historic, cultural, or aesthetic interest, which may have significant value to the community, identified as “Significant Buildings.” These buildings cannot be demolished unless it is needed for the development of a new building and after having a noticed public hearing and a discretionary approval. (Ord. 5428 § 1, 2014.).

Definitions:

- A. “Significant Building” shall be characterized by one or more of the following:
 - (1) a building of at least fifty (50) years old;
 - (2) a building listed on the National Register of Historic Places or California Register of Historic Places¹; or
 - (3) a building determined by the City Council to be notably associated with one or more historic persons or events, or with the broad architectural, cultural, political, economic or social history of Roseville.”
- B. “Demolition” means the intentional, physical act or process which removes or destroys a building, either in part or in whole. However, interior and exterior remodeling are not considered demolition and are not restricted by this Chapter.

City of Roseville Municipal Code, Title 19 Zoning, Chapter 19.12 Commercial Zones

Chapter 19.12 of the City of Roseville’s Zoning Ordinance established a number of commercial zoning districts, including the “Old Town Historic District.” The Old Town historic district is intended to be applied to the original commercial core of Roseville to acknowledge its historic and architectural significance. The HD zoning district is intended to ensure that new land uses and development within the district further the rehabilitation, revitalization, and preservation of the architectural, aesthetic, historic and economic health of the district. Each parcel within the

¹ Note: The correct name for the State register is the California Register of Historical Resources.

historic district shall be subject to the specific historic district design guidelines contained within the Downtown Code which has been adopted in Chapter 19.31 of the Roseville Municipal Code. (Ord. 5428 § 1, 2014.)

4.9.4 RESEARCH METHODOLOGY

Research included examination of data collected from previous studies, as described below, and consultation conducted by the City of Roseville with local Native American groups.

4.9.3.1 BACKGROUND RESEARCH

In order to identify known and potential historical resources to determine whether any buildings, structures, objects, districts, or sites had been previously recorded or evaluated in the Planning Area, AECOM examined the Historic Property Data File for Placer County (OHP 2012 April 05), the current and previous General Plan, various Specific Plans and their environmental documents and technical appendices, and the City Municipal Code. In addition to these standard sources of information, the City also provided AECOM with summaries of Record Search results for selected specific plans and projects:

- ▶ Amoruso Ranch Specific Plan (2016) – Record search in 2008 identified a single archaeological resource, an isolated mano (a hand-held seed or plant grinding tool) found within the project site, and three historic-period architectural resources found outside the project site within a 0.5-mile radius. These three historic-period architectural resources included a lambing barn, a sheep-shearing barn, and the Fiddymment Ranch Complex. The Fiddymment Ranch was later nominated and added to the National Register of Historic Places (NRHP).
- ▶ Cirby Creek Cultural Resources Survey (2003) – Record search in 2003 identified a single archaeological resource consisting of a historic-period trash dump.
- ▶ Cultural Resources Assessment for the Creekside Ridge Drive (2018) – Record search in 2018 identified a single archaeological resource consisting of a historic-period rock wall. Pedestrian survey revealed that the rock wall had been destroyed. The record search summary by the report authors stated that 33 cultural resources had been previously recorded within a one-mile radius of the project Area of Potential Effects (APE).
- ▶ Creekview Specific Plan (2011) – Record searches in 2006 and 2010 identified a single archaeological resource consisting of an archaeological site that was first recorded in 1961(CA-PLA-137). It consisted of several artifacts (mortar and pestle and fragments made of ground stone). Surveys in 2001 and 2006 could not relocate this site.
- ▶ Louis/Orland Transfer Point Improvement Project Initial Study/Mitigated Negative Declaration (2012) – Record search in 2012 did not identify any previously recorded archaeological or architectural resources within the project Area of Potential Effects (APE). A historic-period architectural property that consisted of a 1965-built church and a 1950s residence were identified within 0.5-miles of the project APE.
- ▶ Cultural Resources Inventory and Evaluation for the Shadowbrook Lift Station and Force Main Project (2015) – Record search in 2015 identified two archaeological resources located in the project APE or within 0.25-miles of the project APE.

- ▶ Washington Bridge Project (2005) – Record search in 2005 identified 34 previously recorded historic-period architectural resources and three archaeological resources located in the project APE or within 0.25-miles of the project APE. Most of the architectural resources were recorded by PAR Environmental Services Inc. in 2000 for the Vernon Streetscape Project.
- ▶ Westpark/Fiddymment Ranch Development Project (2001) – Record search in 2001 identified four archaeological sites within or adjacent to the project APE. Two sites were pre-historic, the third was a foundation of the old Pleasant Grove School that was outside the project APE, and the fourth was a historic archaeological site referred to as the Red Barn site. A bridge was also identified in the project APE (Bridge 19C00063) that was previously recommended ineligible for the NRHP.

4.9.3.2 NATIVE AMERICAN CONSULTATION

The City of Roseville contacted the NAHC, pursuant to SB 18 and AB 52 consultation requirements, asking for a list of individuals that might have knowledge of the Planning Area. The City received a response from the NAHC in March of 2017 identifying potential contacts. The City used this list to circulate a letter dated April 3, 2017 providing the opportunity to participate in the Citywide General Plan Update, Qualified Climate Action Plan and Environmental Impact Report to ensure consideration of Tribal Cultural Resources in the context of local land use policy. United Auburn Indian Community (UAIC) requested consultation in an email message dated May 2, 2017. They also requested:

- ▶ that a UAIC Tribal Monitor for this project, and
- ▶ copies of all existing cultural resource assessments, as well as requests for, and the results of, any records searches that may have been conducted.

UAIC stated that there are Tribal Cultural Resources, which are also historic resources, within the Planning Area, and they requested that the following recommendations should be incorporated into any mitigation measures that are developed:

- ▶ UAIC tribal representatives should be allowed to observe and participate in all cultural resource surveys, including initial pedestrian surveys for the project.
- ▶ When tribal cultural resources are identified within the project area tribal monitors must be present for all ground disturbing activities.
- ▶ UAIC's strong preference is to preserve tribal cultural resources in place and avoid them whenever possible.
- ▶ Subsurface testing and data recovery must not occur without first consulting with UAIC and receiving UAIC's written consent.
- ▶ Additional information about the nature and location of the Tribal Cultural Resources can be obtained via a Records Search Request of the UAIC Tribal Historical Resources Information System (THRIS).

The City of Roseville consulted with UAIC and incorporated their recommendations in the Open Space and Conservation Element of the proposed General Plan Update and the City's draft Internal Guidance for Management of Tribal Cultural Resources and Consultation (Internal Guidance). This Internal Guidance is

organized into two parts. First is the City’s position on tribal participation during the project planning and approval process for discretionary projects. This includes both private sector and public (City) projects, which are subject to state and local laws and regulations that are under the jurisdiction of the City. It also includes guidance for City planners on determining when mitigation measures related to Native American participation are warranted under CEQA, standard treatment and mitigation measures that can be used consistently in project planning, and guidance on the City’s use of public funding when conducting consultation. Second, this guidance document also provides information and guidance for City staff and contractors during the project construction and implementation phases. This includes guidance for payment for tribal participation, instructions for contractors in the event of an unanticipated discovery, and guidance for City staff in assessing and acting upon unanticipated discoveries. The City may update this guidance periodically, as appropriate.

4.9.3.3 ARCHAEOLOGICAL RESOURCES

Previous archaeological investigations conducted for various projects and specific plans have resulted in the identification of historic-era and prehistoric archaeological sites. Surveys conducted between 1979 and 1982 for the North Central Roseville Specific Plan identified seven prehistoric sites, six of which are food processing locations and one lithic scatter, and an unmortared rock wall built by immigrants during the historic period. Investigations for the Northwest Roseville Specific Plan identified four historic-era and four prehistoric isolated artifacts or features. Several prehistoric and historic-era sites were identified for the Southeast Roseville Specific Plan including those preserved within the Maidu Regional Park.

4.9.3.4 HISTORIC ARCHITECTURAL RESOURCES

The City of Roseville does not have a formal citywide historic resources inventory. At the time of this document’s preparation, the Roseville Historical Society is conducting a countywide inventory of historic sites.

Properties Previously Designated by the City of Roseville as Historic

Before adopting zoning ordinances to identify historically significant properties, the City designated a small number of properties/resources as “Historic” through property owners’ requests. The three properties that appear to have received this designation are listed in Table 4.9-1 below:

| Table 4.9-1 Properties Previously Designated by the City of Roseville as Historic | | |
|--|---|---|
| Property Name | Address | Notes added by AECOM |
| Tower Theatre | 417 Vernon Street | |
| Vernon Street Hotel | 222-226 Vernon Street | |
| Old Town Roseville Historic District | Bordered by Main Street, Pacific Street, Washington Boulevard, and Lincoln Street | The 2009 Downtown Specific Plan erroneously states that the historic district is listed in the California Register of Historical Resources. |

Source: Downtown Specific Plan, Adopted April 1, 2009

City of Roseville Municipal Code, Title 19 Zoning, Chapter 19.61 Significant Buildings (2006)

Chapter 19.61 of the City of Roseville’s Zoning Ordinance is intended to prevent demolition of identified buildings that have historic, cultural, or aesthetic interest, which may have significant value to the community, identified as “Significant Buildings.” The list of buildings was generated by using the list of historic resources provided in the City’s 2010 General Plan, published in 1992. Planning Department staff then met with two

founding members of the Roseville Historical Society, John Piches and Duke Davis, and the Chamber of Commerce Central Roseville Revitalization Committee to identify other significant buildings that were not on the list in the General Plan. Property owners of the newly identified buildings were contacted about the proposed ordinance (City of Roseville Planning Commission Meeting 2006 June 8). City-owned properties on the list in the 2010 General Plan, as well as the federally-owned Post Office (330 Vernon Street) were removed from the list because demolition of these buildings could not happen without a review process. The resulting list from this exercise contains 13 properties, listed in Table 4.9-2 below.

| Table 4.9-2 Privately-Owned Significant Buildings | |
|---|--------------------------|
| Property Name | Address |
| West House | 345 Atlantic Street |
| Barker Hotel | 302 Lincoln Street |
| Bank of Italy Building | 341 Lincoln Street |
| McRae Building | 100 Main Street |
| Haman House | 424 Oak Street |
| Odd Fellows Hall | 110-112 Pacific Street |
| Kaseberg House | 16 Richards Drive |
| Citizens Bank | 201 Vernon Street |
| Vernon Street Hotel | 222-226 Vernon Street |
| Placer County Exhibit Building | 700 Vernon Street |
| First Methodist Church | 109 Washington Boulevard |
| Hemphill House (McAnally) | 315 Washington Boulevard |
| Source: City of Roseville Zoning Ordinance, Amended August 2, 2006, Ordinance #4425, Section 19.61.030(A) | |

City-Owned Buildings Deemed Historically Significant, City Resolution No. 06-610 (2006)

The City of Roseville also identified City-owned buildings located in the Downtown Specific Plan area as historically significant through City Resolution No. 06-610, listed in Table 4.9-3 below.

| Table 4.9-3 City-Owned Significant Buildings | |
|--|-------------------------------------|
| Property Name | Address |
| Carnegie Museum (Library) | 557 Lincoln Street |
| Fire Station (Old Town) | 400 Lincoln Street |
| Union Pacific Hospital | 315 Church Street |
| City Hall Annex | 316 Vernon Street – Demolished 2015 |
| Magic Circle theatre (Roseville Theatre) | 235-245 Vernon Street |
| Tower Theatre | 417 Vernon Street |
| Source: March 2009 Downtown Specific Plan, Final EIR, Corrections and Revisions to Draft EIR | |

Downtown Roseville Specific Plan EIR (2009)

An historic architectural survey conducted by EDAW in 2008 fulfilled the City of Roseville's Downtown Specific Plan, Land Use Strategy 4.5.2a by identifying and recording 213 historic-era properties over 45-years old in the Downtown Roseville Specific Plan area on California Department of Parks and Recreation (DPR) Series 523 forms. Of the 213 historic-era buildings located in the Plan Area, only two appeared eligible for listing in the CRHR: the City Hall Annex (316 Vernon Street), which was demolished in 2015, and the Tower theatre (241 Vernon Street). The Draft EIR stated that the Vernon Street Schoolhouse was previously determined to be eligible

for the CRHR, but was demolished in 2005 and that the Old Town Roseville area had been designated as a historic district at the local level by the City of Roseville. See Table 4.9-4 below.

| Table 4.9-4 Historical Resources in Downtown Specific Plan Area | | |
|--|-------------------------------------|--------------------------------------|
| Property Name | Address | Designation |
| City Hall Annex | 316 Vernon Street – Demolished 2015 | Eligible for CRHR |
| Tower Theatre | 417 Vernon Street | Eligible for CRHR |
| Old Town Roseville Historic District | | Historic District at the local level |
| Source: November 2008 Downtown Specific Plan, Draft EIR | | |

The remaining buildings did not appear eligible for listing in the CRHR because of a lack of significance and integrity. Additionally, a total of 25 buildings within the Downtown Roseville Specific Plan area were less than 45 years old at the time of survey (see Table 4.7-2 in Downtown Roseville Specific Plan Draft EIR). Any future work in the Plan area at or near these 25 buildings would require evaluation if the building is older than 45 years old at the time of projection initiation.

Sites of Historical and Cultural Importance (1992 and 2016)

The 2010 General Plan (prepared in 1992) reported that the Roseville Historical Society compiled a list of significant historic sites. A figure was prepared that showed these sites and “other places of historic interest within the City.” In order to prevent vandalism and looting, the only archaeological site shown on the list is the Maidu Indian Sites which is part of the Maidu Museum. A table of these locations and additional notes compiled by AECOM are provided in Table 4.9-5 below.

| Table 4.9-5 Sites of Historical and Cultural Importance (2010 General Plan, Adopted 1992) | | |
|--|--------------------------|--|
| Property Name | Address | Notes added by AECOM |
| First Continental Railroad Marker | 133 Church Street | Marker; California Historical Landmark No. 780-1 |
| Haman House | 424 Oak Street | Listed in NRHP in 1976 |
| Maidu Indian Sites | 1970 Johnson Ranch Drive | Listed in NRHP in 1973 |
| Kaseberg House | 16 Richards Drive | |
| Odd Fellows Hall | 110-112 Pacific Street | |
| First Methodist Episcopal Church | 109 Washington Boulevard | |
| McRae Building | 100 Main Street | |
| Bank of Italy Building | 341 Lincoln Street | |
| Carnegie Library | 557 Lincoln Street | Listed in NRHP in 2009 |
| Barn Park | Old Auburn Road | Zoned Parks and Recreation |
| Vernon Street School | 725 Vernon Street | |
| Source: 2010 General Plan, Exhibit 4.9-1 | | |

The existing General Plan (prepared in 2016) also reported that the Roseville Historical Society compiled a list of significant historic sites, but three more sites were added to the list since the 2010 General Plan was published. The Vernon Street School was revised to “Vernon Street School Site” because the school was demolished in 2002 and a marker was installed at the site. A table of the revised list is provided in Table 4.9-6.

Historic Property Data File for Placer County

Review of the Historic Property Data File for Placer County identified the California Historical Resources (CHR) Status Codes for a number of previously identified resources, listed in Table 4.9-7.

| Table 4.9-6 Sites of Historical and Cultural Importance (Existing General Plan, Adopted 2016) | | |
|--|---|--|
| Property Name | Address | Notes added by AECOM |
| First Continental Railroad Marker | 133 Church Street | Marker; California Historical Landmark No. 780-1 |
| Haman House | 424 Oak Street | Listed in NRHP in 1976 |
| Maidu Indian Sites | 1970 Johnson Ranch Drive | Listed in NRHP in 1973 |
| Kaseberg House | 16 Richards Drive | |
| Odd Fellow Hall | 110-112 Pacific Street | |
| First Methodist Episcopal Church | 109 Washington Boulevard | |
| McRae Building | 100 Main Street | |
| Bank of Italy Building | 341 Lincoln Street | |
| Carnegie Library | 557 Lincoln Street | Listed in NRHP in 2009 |
| Barn Park | Old Auburn Road | Zoned Parks and Recreation |
| Vernon Street School Site | 725 Vernon Street | Revised entry on list: School demolished in 2002, now the location of a marker |
| School House Park | School House Lane | New entry on list. Park |
| Fiddymment Homestead (Ranch) | 4440 Phillip Road. Note: New road recently cut and new address will be on High School Road when completed | New entry on list. Listed in NRHP in 2010 as Fiddymment Ranch Main Complex |
| Pistachio Orchard | Orchard View Road | New entry on list |
| Source: 2035 General Plan, Figure V-4 | | |

| Table 4.9-7 CHR Status Codes of Previously Identified Historical Resources | | |
|--|-----------------------|-----------------|
| Property Name | Address | CHR Status Code |
| Maidu Indian Sites | 1970 Johnson Ranch Dr | 1S |
| Haman House | 424 Oak St | 1S |
| Carnegie Library (Museum) | 557 Lincoln St | 1S |
| Fiddymment Homestead (Ranch) | 4440 Phillip Rd | 1S; 1D |
| City Hall Annex | 316 Vernon St | 2S2 |
| Tower Theatre | 417-419 Vernon St | 2S2 |
| Citizens Bank (Forlow Building) | 201 Vernon St | 6Y |
| Vernon Street Hotel | 222-226 Vernon St | 6Y |
| Placer County Exhibit Building | 700 Vernon St | 6Y |
| Magic Circle Theatre (Roseville Theatre) | 235-245 Vernon St | 6Y |
| Vernon Street School (Site) | 725 Vernon St | 2S2 |
| First Continental Railroad Marker | 133 Church St | 1CL |
| Old Town Roseville HD | | 7N |
| Source: Historic Property Data File for Placer County, April 5, 2012 | | |
| Notes: 1S = Individual property listed in National Register by the Keeper, Listed in the California Register; 1D = Contributor to a district or multiple resource property listed in the National Register by the Keeper, Listed in the California Register; 2S2 = Individual property determined eligible for National Register by consensus through Section 106 process, Listed in the California Register; 6Y = Determined ineligible for National Register by consensus through Section 106 process – Not evaluated for California Register or Local Listing; 1CL = Automatically listed in the California Register – Includes State Historical Landmarks; 7N = Needs to be reevaluated (Formerly NR Status Code 4). | | |

In summary, the City of Roseville's efforts to identify historical resources through previous General Plans, Specific Plans, Zoning Ordinances, City Resolutions, and coordination with the Roseville Historical Society has resulted in identification of 25 historical resources. A master table of the resource names, addresses, CHR Status Code (if applicable), origin of designation, and any additional notes are listed in Table 4.9-8 and their locations are depicted in Exhibit 4.9-1.

| Table 4.9-8 Master List of City of Roseville's Historical Resources | | | | | | | |
|--|---------------------------------|-----------------------|-----------------|--|--|--|---|
| Map ID | Property Name | Address | CHR Status Code | Significant Building (City or Privately owned) [Zoning Ordinance 19.61 and City Resolution 06-610] | Site of Historical and Cultural Importance [2035 General Plan] | Local Historic District [Zoning Ordinance 19.12] | Notes |
| 1 | Maidu Indian Sites | 1970 Johnson Ranch Dr | 1S | | X | | |
| 2 | Haman House | 424 Oak St | 1S | X | X | | APN 013-123-018-000 |
| 3 | Carnegie Library (Museum) | 557 Lincoln St | 1S | X | X | | APN 011-143-006-000 |
| 4 | Fiddymont Homestead (Ranch) | 4440 Phillip Rd | 1S; 1D | | X | | Phillip Road address on NRHP nomination. New road recently cut and new address will be on High School Road when completed |
| n/a | City Hall Annex | 316 Vernon St | 2S2 | X | | | Demolished 2015 |
| 5 | Tower Theatre | 417-419 Vernon St | 2S2 | X | | | APN 013-123-022-000 |
| 6 | West House | 345 Atlantic St | | X | | | APN 013-092-010-000 |
| 7 | Barker Hotel | 302 Lincoln St | | X | | | APN 012-122-003-000 |
| 8 | Bank of Italy Building | 341 Lincoln St | | X | X | | APN 012-200-008-000 |
| 9 | McRae Building | 100 Main St | | X | X | | APN 11-146-024-000 |
| 10 | Odd Fellows Hall | 110-112 Pacific St | | X | X | | APN 012-200-012-000 |
| 11 | Kaseberg House | 16 Richards Dr | | X | X | | APN 015-350-016-000 |
| 12 | Citizens Bank (Forlow Building) | 201 Vernon St | 6Y | X | | | APN 013-093-007-000; |
| 13 | Vernon Street Hotel | 222-226 Vernon St | 6Y | X | | | APN 013-093-005-520; Primary |
| 14 | Placer County Exhibit Building | 700 Vernon St | 6Y | X | | | APN 013-250-014-000; Primary P-31-001172 |
| 15 | First Methodist Church | 109 Washington Blvd | | X | X | | APN 012-123-009-000 |

| Table 4.9-8 Master List of City of Roseville's Historical Resources | | | | | | | |
|--|--|---------------------|-----------------|--|--|--|---|
| Map ID | Property Name | Address | CHR Status Code | Significant Building (City or Privately owned) [Zoning Ordinance 19.61 and City Resolution 06-610] | Site of Historical and Cultural Importance [2035 General Plan] | Local Historic District [Zoning Ordinance 19.12] | Notes |
| 16 | Hemphill House (McAnally) | 315 Washington Blvd | | X | | | APN 011-144-001-000 |
| 17 | Fire Station (Old Town) | 400 Lincoln St | | X | | | APN 011-147-011-000 |
| 18 | Union Pacific Hospital | 315 Church St | | X | | | APN 013-250-022-000 |
| 19 | Magic Circle theatre (Roseville Theatre) | 235-245 Vernon St | 6Y | X | | | APN 013-093-003-000 |
| 20 | Vernon Street School (Site) | 725 Vernon St | 2S2 | | X | | School demolished in 2002, now the location of a marker |
| 21 | First Continental Railroad Marker | 133 Church St | 1CL | | X | | Marker; California Historical Landmark No. 780-1 |
| 22 | Barn Park | Old Auburn Rd | | | X | | Zoned Parks and Recreation |
| 23 | School House Park | School House Ln | | | X | | Park |
| 24 | Pistachio Orchard | Orchard View Rd | | | X | | |
| 25 | Old Town Roseville HD | | 7N | | | X | |

California Historical Resource (CHR) Status Codes:

1D: Contributor to a district or multiple resources property listed in the National Register by the Keeper. Listed in the California Register.

1S: Individual property listed in National Register by the Keeper. Listed in the California Register.

1CL: Automatically listed in the California Register – Includes State Historical Landmarks 770 and above and Points of Historical Interest nominated after December 1997 and recommended for listing by the State Historical Resources Commission.

2S2: Individual property determined eligible for NR by a consensus through Section 106 process. Listed in the California Register.

6Y: Determined ineligible for National Register by consensus through Section 106 process – Not evaluated for California Register or Local Listing.

7N: Needs to be reevaluated.

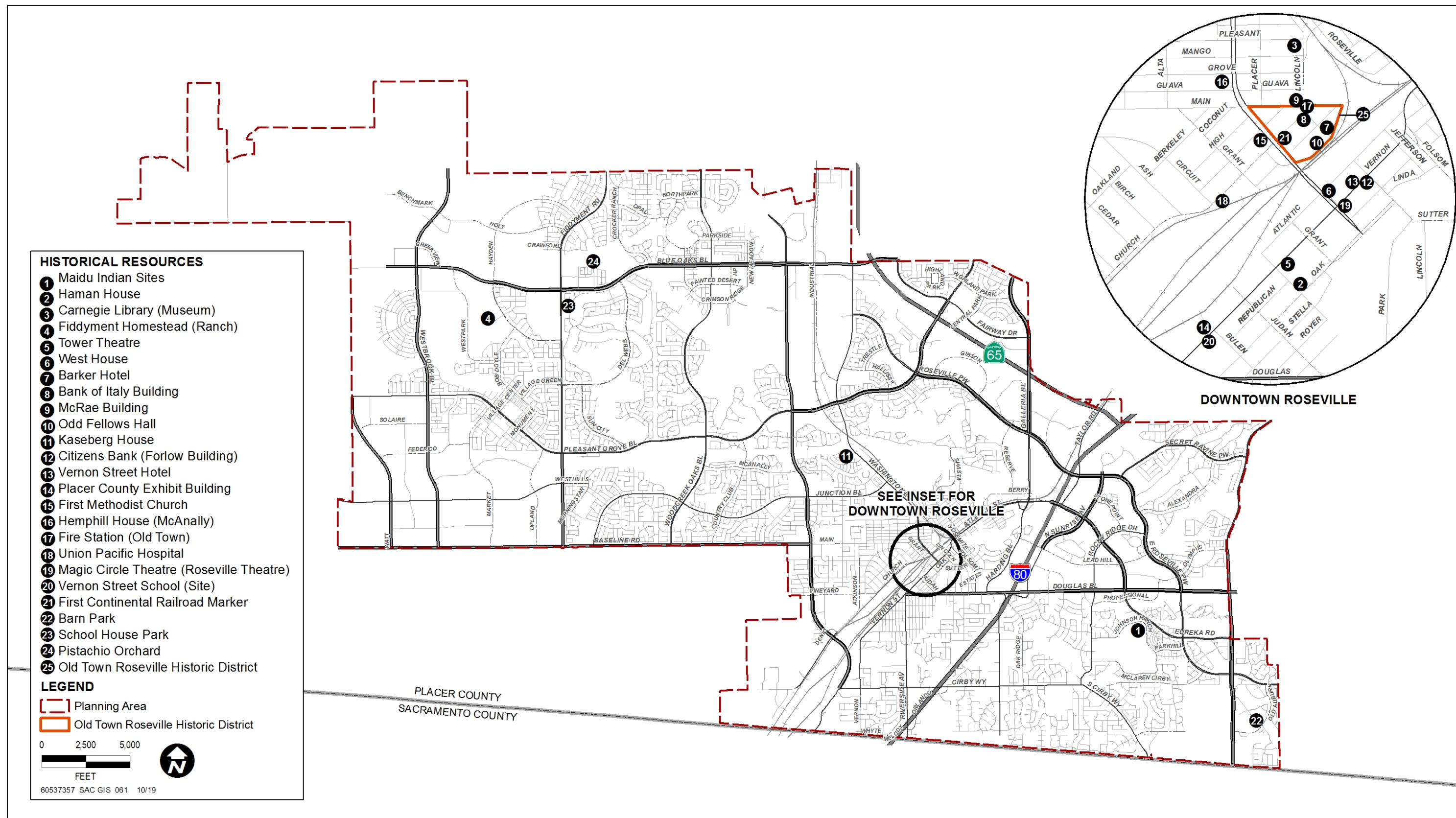


Exhibit 4.9-1

City of Roseville Historical Resources

This page intentionally left blank

4.9.5 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

4.9.4.1 METHODOLOGY

Buildout of the General Plan is compared to existing conditions (i.e., environmental baseline) to determine potential impacts. General Plan policies and implementation measures promote development and infrastructure/public facility projects that avoid or minimize impacts to cultural resources and tribal cultural resources. This proposed General Plan Update does not include any changes to land use designations, expansion to the City's Planning Area, or other major physical changes to areas planned for development compared to the existing General Plan, but does include changes to goals, policies, and implementation measures, which are analyzed as a part of this EIR.

4.9.4.2 THRESHOLDS OF SIGNIFICANCE

Cultural Resources

Based on Appendix G of the State CEQA Guidelines, the proposed project would result in a potentially significant impact on cultural resources if it would:

- ▶ cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5;
- ▶ cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5;²
- ▶ disturb any human remains, including those interred outside formal cemeteries.

Section 15064.5 of the State CEQA Guidelines defines “substantial adverse change” as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of the resource would be materially impaired. The significance of a historical resource is materially impaired when a project results in demolition or material alteration in an adverse manner of those physical characteristics of a resource that:

- ▶ convey its historical significance and that justify its inclusion in, or eligibility for inclusion in, the California Register of Historic Resources;
- ▶ account for its inclusion in a local register of historical resources pursuant to Public Resources Code 5020.1(k) or its identification in a historical resources survey meeting the requirements of Public Resources Code 5024.1(g), unless the public agency reviewing the effects of the proposed project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or
- ▶ convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources, as determined by a lead agency for purposes of CEQA.

² CEQA Guidelines Appendix G, checklist item V.b) only applies to “unique archeological resources.” CEQA Guidelines Section 15064.5(c)(3)-(4) and Public Resources Code Section 21083.2(a).

Tribal Cultural Resources

Based on Appendix G of the State CEQA Guidelines, the proposed project would result in a potentially significant impact on tribal cultural resources if it would:

- ▶ cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resource Codes 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 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), or
 - 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 Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

4.9.4.3 IMPACT ANALYSIS

IMPACT 4.9-1 Cause a Substantial Adverse Change in the Significance of a Historical Resource Pursuant to Section 15064.5. *It is possible that development planned as a part of General Plan buildout could adversely affect historical resources through modification of existing buildings and structures through demolition, deconstruction, relocation, or alteration, or adversely impact the setting through new land uses. However, the existing and proposed General Plan, the 2009 Downtown Specific Plan, and Chapter 19.61 of the City of Roseville's Zoning Ordinance contain goals and policies which would ensure that potential historical resources are assessed for their significance in advance of future development. Implementation of these goals and policies would reduce impacts, but if historical resources are substantially adversely affected by future development, this would be a significant impact.*

A total of 25 designated historical resources have been identified in the General Plan Planning Area, including individual buildings, a historic district, a ranch complex, parks, markers, and an orchard. Many of these historical resources are located in or near the Downtown Roseville Historic District. It is estimated that buildout of the General Plan could accommodate the construction of between 20,000 to 25,000 housing units, 25 to 30 million square feet of non-residential building space, facilities for up to 10,000 additional K-12 students, and park and other public facilities and infrastructure to support such development throughout the Planning Area. This future development could result in significant impacts to known and unknown historical resources through either direct physical impacts or by indirect changes to the setting.

Direct physical impacts would result from activity such as demolition, destruction, relocation, or alteration of historical resources that would materially impair the qualities that contribute to the significance of these historical resources. Changes to the cultural resources setting would occur where new land uses and built environment features are placed on rural undeveloped land, or other changes in land use. Changes to the setting could result in significant impacts where the natural or undeveloped setting forms part of the significance or integrity of a historical resource, such as a rural ranch property, or a previously residential area converted to commercial.

Construction would result from buildout of property in areas where the City anticipates infill development will happen during the planning horizon, as well as in the Specific Plan Areas. Buildout of the General Plan has the potential to affect historical resources both directly and indirectly.

When projects consistent with the General Plan occur in existing developed areas, depending on the context, this could add incompatible architectural elements; diminish the historic integrity of a setting, feeling, or association; or destroy the historic character of a property. The City has numerous buildings and structures that are either individually significant or contributors to a historic district, as well as buildings, structures, and infrastructure that could represent historical resources. These properties are representative of numerous development patterns, property types (residential, civic/cultural, commercial), and architectural styles important to the City's past, and are listed in or eligible for listing in a federal, State, or local register.

The following proposed General Plan Update goals and policies related to historical resources in Roseville are proposed for revision, with additions shown in **bold, underlined** text and deletions shown in ~~striketrough~~ text:

Goal OS4.1: Strengthen Roseville's unique identify through the protection of its archaeological, historic, **paleontological**, and **tribal** cultural resources.

- ▶ **Policy OS4.1: Consult with local Native American Tribes that are traditionally and culturally affiliated with resources that could be affected by City plans or projects, identify areas that may be of cultural or tribal cultural significance, and determine appropriate treatment for the areas.**
- ▶ **Policy OS4.6: Buildings and other resources that have historical or architectural value should be preserved, wherever feasible, and the City will encourage private property owners to preserve and maintain or renovate significant historic resources, consistent with applicable Department of the Interior historic preservation standards.** ~~Establish standards for the designation, improvement and protection of buildings, landmarks, and sites of cultural and historic character.~~
- ▶ **Policy OS4.7: Participate in countywide inventories of historical sites** ~~Participate in the completion of a countywide inventory of historical sites.~~
- ▶ **Policy OS4.10:** Provide opportunities ~~to~~ **for** public awareness and education through coordination with the **Roseville** Historical Society and local schools.

The proposed General Plan Update policy changes listed above would result in improved protection for historical resources, and would not result in any adverse environmental impacts.

Conclusion

Existing General Plan Archaeological, Historic, and Cultural Resources Policies 1, 2, 4, 7, and 8 (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Goal OS4.1 and Policies OS4.1, OS4.6, OS4.7, and OS4.10 listed above would protect historical resources. The City's 14 adopted Specific Plans, including the Downtown Specific Plan, contain mitigation measures that must be implemented to protect historic resources, such as avoidance of resources where feasible, or recordation and consultation with the SHPO. Chapter 19.61 of the City's Zoning Ordinance protects "Significant Buildings" that have historic, cultural, or aesthetic interest, which

may have significant value to the community. Chapter 19.12 of the City's Zoning Ordinance protects the designated Old Town Historic District. In addition, the existing General Plan contains implementation measures, such as referral of development projects to the SHPO and NAHC, preparation of site-specific archaeological surveys, proper treatment of materials encountered during construction activities, incorporation of measures to protect historic resources, protection of historic resources in parks and open space areas, and interagency cooperation to identify and preserve resources. These goals, policies, implementation measures, and Municipal Codes establish review procedures to protect historical resources. However, **significant** impacts to historical resources could still occur.

Mitigation Measure

Mitigation Measure 4.9-1a – The General Plan Update should be amended as follows:

Implementation Measure

As appropriate to each individual project or Specific Plan, the following actions or those determined to be equally as effective by the City shall be implemented where there may be an adverse impact on potential historical resources:

- a. Consult the City's Master List of Historical Resources Inventory and, as necessary, seek updated information from the North Central Information Center or other applicable data repositories to determine whether the project area has been surveyed, and whether historic built environment resources were identified.
- b. If a survey of the property or the area in which the property is located has not been conducted, a qualified architectural historian shall conduct a study of the project area for the presence of historic built environment resources.
- c. If a study is required, it will evaluate the significance of built environment resources greater than 45 years in age that may be directly or indirectly impacted by project activities. The study may include a field survey; background, archival and historic research; and consultation with local historical societies, museums or other interested parties; as necessary.
- d. If necessary, the qualified architectural historian's study will recommend appropriate protection or mitigative treatment, if any, and include recordation of identified built environment resources. Recommended treatment for historical resources identified in the report shall be implemented.
- e. If no significant historic built environment resources are identified in the study or prior survey of the project area that may be directly or indirectly impacted by project activities, there is no adverse change to documented built environment historical resources and no further action is required.
- f. If a significant built environment historical resource could be directly or indirectly impacted by project activities, avoidance shall be considered the primary mitigation option. If avoidance is not feasible, then the maintenance, repair, stabilization, rehabilitation, restoration, preservation, conservation, or reconstruction of the historical resource, conducted in a manner consistent with the Secretary of the Interior's Standards for the Treatment of Historic Properties will reduce impacts to an acceptable level. If adherence to the Secretary of the Interior's Standards cannot avoid materially altering in an adverse manner the physical characteristics or historic character of the surrounding environmental setting that contribute to a resource's historic significance, additional mitigation may be required.

- g. If avoidance is not feasible and minimizing impacts through adherence to the Secretary of the Interior's Standards for the Treatment of Historic Properties is not feasible, documentation is required using, as appropriate, Historic American Buildings Survey (HABS), Historic American Engineering Record (HAER), and/or Historic American Landscapes Survey (HALS) guidelines before the property is potentially altered during project activities.

Significance after Mitigation

Although implementation of the existing General Plan and proposed General Plan Update goals, policies, implementation measures, and Mitigation Measure 4.9-1a will reduce the potential impacts associated with development in the General Plan Planning Area, development within the Planning Area may cause impacts that cannot be reduced to a less-than-significant level through mitigation. No other feasible mitigation measures are available. Therefore, this impact is considered **significant and unavoidable**.

IMPACT 4.9-2 Cause a Substantial Adverse Change in the Significance of an Archaeological Resource pursuant to Section 15064.5. *Individual development and infrastructure projects within the Planning Area would involve grading, excavation or other ground-disturbing activities which could disturb or damage unique archaeological resources. This impact would be significant.*

Numerous historic-era and prehistoric archaeological sites have been identified as part of investigations conducted for Specific Plans in the city, including several prehistoric and historic-era sites identified for the Southeast Roseville Specific Plan and preserved as the Maidu Indian Site within Maidu Regional Park. Other surveys conducted between 1979 and 1982 for the North Central Roseville Specific Plan identified seven prehistoric sites and an unmortared rock wall built by immigrants during the historic period. Investigations for the Northwest Roseville Specific Plan identified four historic-era and four prehistoric isolated artifacts or features. Several prehistoric and historic-era sites were identified for the Southeast Roseville Specific Plan including those preserved within the Maidu Regional Park.

It is estimated that buildout of the General Plan could accommodate the construction of between 20,000 to 25,000 housing units, 25 to 30 million square feet of non-residential building space, facilities for up to 10,000 additional K–12 students, and park and other public facilities and infrastructure to support such development throughout the Planning Area. Individual development projects within the Planning Area would involve grading, excavation or other ground-disturbing activities which could disturb or damage any as-yet-undiscovered archaeological resources. It is possible that prehistoric or historic-age archaeological resources have been covered by later deposits that could be removed, exposing the cultural deposits during project-related construction activities. Prehistoric archaeological indicators can include: obsidian and chert flakes and flaked stone tools; ground stone implements (grinding slabs, mortars and pestles) and locally darkened midden soils containing some of the previously listed items plus fragments of burned and unburned faunal bone and fire affected stones. Historic-era site indicators generally include: fragments of glass, ceramic, and metal objects; milled and split lumber; and structure and feature remains such as building foundations, privy pits, wells, and dumps.

The following proposed General Plan Update goal and policies related to archaeological resources in Roseville are proposed for revision:

Goal OS4.1: Strengthen Roseville’s unique identify through the protection of its archaeological, historic, paleontological, and tribal cultural resources.

- ▶ **Policy OS4.1: Consult with local Native American Tribes that are traditionally and culturally affiliated with resources that could be affected by City plans or projects, identify areas that may be of cultural or tribal cultural significance, and determine appropriate treatment for the areas.**
- ▶ **Policy OS4.4:** Subject to approval by The City shall coordinate with the appropriate federal, state, local agencies, and Native American ~~Most Likely Descendant (MLD)~~ **Tribes upon discovery of artifacts. The City shall offer the Maidu Museum & Historic Site as a temporary housing location for artifacts** that are discovered and subsequently determined to be “removable,” ~~should be offered for dedication to the Maidu Interpretive Center Museum & Historic Site.~~
- ▶ **Policy OS4.6: Buildings and other resources that have historical or architectural value should be preserved, wherever feasible, and the City will encourage private property owners to preserve and maintain or renovate significant historic resources, consistent with applicable Department of the Interior historic preservation standards.** ~~Establish standards for the designation, improvement and protection of buildings, landmarks, and sites of cultural and historic character.~~
- ▶ **Policy OS4.7: Participate in countywide inventories of historical sites** ~~Participate in the completion of a countywide inventory of historical sites.~~
- ▶ **Policy OS4.9:** ~~Explore~~ **Pursue** funding for cultural, archaeological, and historic programs and activities.
- ▶ **Policy OS4.10:** Provide opportunities ~~to~~ **for** public awareness and education through coordination with the Roseville Historical Society and local schools.

The proposed General Plan Update policy changes listed above would result in improved protection for historical resources and would not result in any adverse environmental impacts.

Conclusion

Existing General Plan Archaeological, Historic, and Cultural Resources Policies 1, 2, 4, 7, and 8 (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Goal OS4.1 and Policies OS4.1, OS4.4, OS4.6, OS4.7, OS4.9, and OS4.10 listed above, would protect archaeological resources. In addition, the existing General Plan contains implementation measures such as referral of development projects to the SHPO and NAHC, preparation of site-specific archaeological surveys, proper treatment of materials encountered during construction activities, incorporation of measures to protect archaeological resources, protection of archaeological resources in parks and open space areas, and interagency cooperation to identify and preserve resources. These goals, policies, and implementation measures establish review procedures that would help to protect archaeological resources. However, **significant** impacts to archaeological resources may still occur.

Mitigation Measure

Mitigation Measure 4.9-2a – The proposed General Plan Update should be amended as follows:

Implementation Measure

Projects that could have significant adverse impacts to potentially significant archaeological resources shall be required to assess impacts and provide feasible mitigation. The following steps, or those determined to be equally as effective by the City, will be followed:

- a. Request information from the California Native American Heritage Commission to obtain a review of the Sacred Lands File and a list of local Native American groups and individuals that may have specific knowledge of cultural resources in the area that could be affected by project implementation. Each Native American group and individual identified by the Native American Heritage Commission will be contacted to obtain any available information on cultural resources in the project area. Additional consultation with relevant tribal representatives may be appropriate, depending on the relative level of cultural sensitivity.
- b. Request updated information from the North Central Information Center of the California Historical Resources Information System (California State University, Sacramento) to determine whether the project area has been previously surveyed and whether archaeological resources were identified. In the event the records indicate that no previous survey has been conducted or existing survey data is greater than five years old, the applicant will retain the services of a qualified archaeologist to assess the adequacy of the existing data (if any) and assess the archaeological sensitivity of the project area. If the survey did not meet current professional standards or regulatory guidelines, or relies on outdated information, a qualified archaeologist will make a recommendation on whether a survey is warranted based on the sensitivity of the project area for archaeological resources.
- c. If a survey is warranted, it will include all necessary background research in addition to an archaeological pedestrian survey. Based on findings of the survey, additional technical studies may be required, such as geoarchaeological sensitivity analysis, or other analysis scaled according to the nature of the individual project. A report will document the results of the survey and provide appropriate management recommendations, and include recordation of identified archaeological resources on appropriate California Department of Parks and Recreation site record forms and cultural resources reports.
- d. Management recommendations may include, but are not limited to additional studies to evaluate identified sites or archaeological monitoring at locations determined by a qualified archaeologist to be sensitive for subsurface cultural resource deposits.
- e. Once approved by the City, provide the North Central Information Center with appropriate California Department of Parks and Recreation site record forms and cultural resources reports for any resources identified. Any subsequent reports completed as a result of additional technical work will likewise be submitted to the Northcentral Information Center.
- f. If no archeological resources are identified that may be directly or indirectly impacted by project activities, mitigation is complete as there would be no adverse change to documented archeological resources. The exception would be in the event of the discovery of a previously unknown archaeological site inadvertently exposed during project implementation. In such an event, a qualified archaeologist will be retained to assess the discovery and provide management recommendations as necessary.

- g. When a project will impact a known archaeological site, and avoidance is not a feasible option, a qualified archaeologist shall evaluate the eligibility of the site for listing in the California Register of Historical Resources. If the archaeological site is found to be a historical resource as per CEQA Guidelines Section 15064.5 (a)(3), the qualified archaeologist shall recommend further mitigative treatment which could include preservation in place or data recovery.
- h. If a site to be tested is prehistoric, local tribal representatives should be afforded the opportunity to monitor the ground-disturbing activities. Appropriate mitigation may include curation of artifacts removed during subsurface testing.
- i. If significant archaeological resources that meet the definition of historical or unique archaeological resources are identified in the project area, the preferred mitigation of impacts is preservation in place. If impacts cannot be avoided through project design, appropriate and feasible treatment measures are required, which may consist of, but are not limited to actions, such as data recovery excavations. If only part of a site will be impacted by a project, data recovery will only be necessary for that portion of the site. Data recovery will not be required if the implementing agency determines prior testing and studies have adequately recovered the scientifically consequential information from the resources. Studies and reports resulting from the data recovery shall be deposited with the North Central Information Center. Archaeological sites known to contain human remains shall be treated in accordance with the provisions of Section 7050.5 of the Health and Safety Code.

Mitigation Measure 4.9-2b – The General Plan Update should be amended as follows:

Implementation Measure

Projects that could have significant adverse impacts to undiscovered, potentially significant archaeological resources shall be required to implement the following steps, or those determined to be equally as effective by the City:

- a. During ground-disturbing activities necessary to implement proposed development and infrastructure projects, if any prehistoric or historic subsurface archaeological resources are discovered, all work within 100 feet of the resources shall be halted and a qualified archaeologist³ shall be consulted within 24 hours to assess the significance of the find, according to CEQA Guidelines Section 15064.5, and implement, as applicable, CEQA Guidelines Sections 15064.5(d), (e), and (f).
- b. If any find is determined to be a historical resource according to CEQA Guidelines Section 15064.5, representatives from the City and the archaeologist will meet to determine the appropriate avoidance measures or other appropriate mitigation. Cultural resources shall be recorded on appropriate Department of

³ The California Office of Historic preservation utilizes the Secretary of the Interior's Standards and Guidelines for Archeology and Historic Preservation as found in Code of Federal Regulations, 36 CFR Part 61. The minimum professional qualifications in archeology are a graduate degree in archeology, anthropology, or closely related field plus: 1. At least one year of full-time professional experience or equivalent specialized training in archeological research, administration or management; 2. At least four months of supervised field and analytic experience in general North American archeology; and 3. Demonstrated ability to carry research to completion. In addition to these minimum qualifications, a professional in prehistoric archeology shall have at least one year of full-time professional experience at a supervisory level in the study of archeological resources of the prehistoric period. A professional in historic archeology shall have at least one year of full-time professional experience at a supervisory level in the study of archeological resources of the historic period.

Parks and Recreation forms, and all significant cultural materials recovered shall be, as necessary and at the discretion of the qualified archaeologist and in consultation with the local Native American community if the discovery is prehistoric in age, subject to scientific analysis, professional curation, and documentation according to professional standards. If it is determined that the proposed development or infrastructure project could damage a historical resource or a unique archaeological resource (as defined pursuant to the CEQA Guidelines), mitigation shall be implemented in accordance with Section 21083.2 of the California Public Resources Code and CEQA Guidelines Section 15126.4, with a preference for preservation in place. Work may proceed on other parts of the project site while mitigation for historical resources or unique archaeological resources is being carried out. Preservation in place may be accomplished by planning construction to avoid the resource; incorporating the resource within open space; capping and covering the resource; or deeding the site into a permanent conservation easement.

- c. If avoidance is not feasible, the qualified archaeologist shall develop and oversee the execution of a treatment plan. The treatment plan shall include, but shall not be limited to, data recovery procedures based on location and type of archaeological resources discovered and a preparation and submittal of report of findings to the Northwest Information Center of the California Historical Resources Information System. Data recovery shall be designed to recover the significant information the archaeological resource is expected to contain, based on the scientific/historical research questions that are applicable to the resource, what data classes the resource is expected to possess, and how the expected data classes would address the applicable resource questions. Data recovery, in general, should be limited to the portions of the historical property that could be adversely affected by project proponents' actions. Destructive data recovery methods shall not be applied to portions of the archaeological resources if nondestructive methods are practical.

Significance after Mitigation

The existing General Plan and proposed General Plan Update policies and implementation measures summarized above, along with implementation of Mitigation Measures 4.9-2a and 4.9-2b, establish appropriate review procedures and consultation requirements, while also addressing the need for qualified personnel to undertake technical analysis, where necessary. These policies and implementation programs provide for the identification and evaluation of cultural resources, as well as for the assessment of potential impacts to such resources and the development of mitigation strategies. Additionally, CEQA review and local regulatory review, including mitigation measures that have been adopted as part of existing Specific Plans, provide additional levels of protection for known resources and address the identification of unidentified cultural resources. Because prehistoric and historic-era archaeological sites can occur below ground with little or no surface manifestation it may not be feasible to entirely avoid impacts during buildout of the General Plan, despite implementation of state and federal laws and the City's proposed policies and mitigation measures. If unknown archaeological resources are encountered during construction without prior discovery, they may be inadvertently damaged or destroyed. No other feasible mitigation measures are available. Therefore, this impact remains **significant and unavoidable**.

IMPACT 4.9-3 **Disturb Any Human Remains, Including Those Interred Outside of Formal Cemeteries.** *The general project vicinity is known to have been heavily used by Native American groups prehistorically; in addition, Roseville was settled by European immigrants by the mid-19th century. While some burial ground locations (generally from the historic-era) are known, there is the possibility that ground disturbing activities in the general plan update area could encounter prehistoric, historic-era, or other human remains. This impact is considered to be **significant**.*

It is possible that buildout of the General Plan, including development and infrastructure improvement projects throughout the Planning Area involving grading, trenching, excavation, soil stockpiling, and other earthmoving activities, could impact human remains. While there are no known interment sites within the developable areas of the Planning Area, there is the potential for discovery during construction of development and infrastructure projects which are consistent with the General Plan.

The following proposed General Plan Update goals and policies related to cultural resources, including human remains, in Roseville are proposed for revision, with additions shown in **bold, underlined** text and deletions shown in ~~strike through~~ text:

Goal OS4.1: Strengthen Roseville’s unique identify through the protection of its archaeological, historic, **paleontological**, and **tribal** cultural resources.

- ▶ **Policy OS4.1: Consult with local Native American Tribes that are traditionally and culturally affiliated with resources that could be affected by City plans or projects, identify areas that may be of cultural or tribal cultural significance, and determine appropriate treatment for the areas.**
- ▶ **Policy OS4.4: Subject to approval by The City shall coordinate with** the appropriate federal, state, local agencies, and Native American ~~Most Likely Descendant (MLD)~~ **Tribes upon discovery of** artifacts. **The City shall offer the Maidu Museum & Historic Site as a temporary housing location for artifacts** that are discovered and subsequently determined to be “removable.” ~~should be offered for dedication to the Maidu Interpretive Center Museum & Historic Site.~~

The proposed General Plan Update policy changes listed above would result in improved protection for cultural resources, including human remains, and would not result in any adverse environmental impacts.

Conclusion

Existing General Plan Archaeological, Historic, and Cultural Resources Policies 1, 2, 4, 7, and 8 (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Goal OS4.1 and Policies OS4.1 and OS4.4 listed above, would protect cultural resources, including human remains. In addition, the existing General Plan contains implementation measures, such as referral of development projects to the SHPO and NAHC, preparation of site-specific archaeological surveys, proper treatment of materials encountered during construction activities, incorporation of measures to protect archaeological resources, protection of archaeological resources in parks and open space areas, and interagency cooperation to identify and preserve resources. These goals, policies, and implementation measures establish general review procedures that would help to protect archaeological resources. However, **significant** impacts to cultural resources, including human remains, may still occur.

Mitigation Measure

Mitigation Measure 4.9-3 – The General Plan Update should be amended as follows:

Implementation Measure

Management of Tribal Cultural Resources and Consultation

The City will develop and implement guidance for consultation and management of cultural and tribal cultural resources. This guidance should have two parts. First is the City’s position on tribal participation during the project planning and approval process for discretionary projects. This includes both private sector and public (City) projects, which are subject to State and local laws and regulations that are under the jurisdiction of the City. It should also include guidance for City planners on determining when mitigation measures related to Native American participation are warranted under CEQA, standard treatment and mitigation measures that can be used consistently in project planning, and guidance on the City’s use of public funding when conducting consultation. Second, this guidance document should also provide information and guidance for City staff and contractors during the project construction and implementation phases. This includes thresholds for payment for tribal participation, instructions for contractors in the event of an unanticipated discovery, and guidance for City staff in assessing and acting upon unanticipated discoveries. The City may update this guidance periodically, as appropriate.

Significance after Mitigation

Because prehistoric and historic archaeological sites that contain human remains can occur below ground with little or no surface manifestation it may not be feasible to entirely avoid impacts to interred human remains during buildout of the General Plan Planning Area, despite implementation of the state and federal laws, the City’s proposed goals, policies, implementation program, and Mitigation Measure 4.9-3. If unanticipated buried human remains are encountered during construction, they may be inadvertently damaged or destroyed. No other feasible mitigation measures are available. Therefore, this impact remains **significant and unavoidable**.

IMPACT 4.9-4 Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource. *Buildout of the General Plan Planning Area would result in development projects throughout the Planning Area that would involve earthmoving activities. The Planning Area and vicinity are known to have been heavily used by Native American groups prehistorically and UAIC has indicated that TCRs are located within the Planning Area. This impact is considered to be significant.*

Numerous prehistoric archaeological sites have been identified as part of investigations conducted for Specific Plans in the city, including the Maidu Indian Sites. Prehistoric resources also may be considered TCRs and can include sites, features, and objects that are CRHR-listed, eligible to be listed, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k). The United Auburn Indian Community (UAIC) stated that there are TCRs within the Planning Area. State and federal law requires maintaining confidentiality of the location and nature of archaeological sites and TCRs, and therefore this EIR does not include an exhibit or physical description their locations. However, based on information provided by UAIC during consultation on this project, development projects within the Planning Area which would involve grading, excavation or other ground-disturbing activities could disturb or damage TCRs.

The following proposed General Plan Update goals and policies related to tribal cultural resources in Roseville are proposed for revision, with additions shown in **bold, underlined** text and deletions shown in ~~striketrough~~ text:

Goal OS4.1: Strengthen Roseville’s unique identify through the protection of its archaeological, historic, **paleontological**, and **tribal** cultural resources.

- ▶ **Policy OS4.1: Consult with local Native American Tribes that are traditionally and culturally affiliated with resources that could be affected by City plans or projects, identify areas that may be of cultural or tribal cultural significance, and determine appropriate treatment for the areas.**
- ▶ **Policy OS4.4:** ~~Subject to approval by~~ **The City shall coordinate with** the appropriate federal, state, local agencies, and Native American ~~Most Likely Descendant (MLD)~~ **Tribes upon discovery of** artifacts. **The City shall offer the Maidu Museum & Historic Site as a temporary housing location for artifacts** that are discovered and subsequently determined to be “removable.” ~~should be offered for dedication to the Maidu Interpretive Center Museum & Historic Site.~~
- ▶ **Policy OS4.9:** ~~Explore~~ **Pursue** funding for cultural, archaeological, and historic programs and activities.
- ▶ **Policy OS4.10:** Provide opportunities ~~to~~ **for** public awareness and education through coordination with the **Roseville** Historical Society and local schools.

The proposed General Plan Update policy changes listed above would result in improved protection for tribal cultural resources, and would not result in any adverse environmental impacts.

Conclusion

Existing General Plan Archaeological, Historic, and Cultural Resources Policies 1, 2, 4, 7, and 8 (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Goal OS4.1 and Policies OS4.1, OS4.4, OS4.9, and OS4.10 listed above, would help to protect tribal cultural resources. In addition, the existing General Plan contains implementation measures, such as referral of development projects to the SHPO and NAHC, preparation of site-specific archaeological surveys, proper treatment of materials encountered during construction activities, incorporation of measures to protect archaeological resources, protection of archaeological resources in parks and open space areas, and interagency cooperation to identify and preserve resources. These goals, policies, and implementation measures establish general review procedures that would help to protect tribal cultural resources. However, **significant** impacts to tribal cultural resources may still occur.

Mitigation Measure

Mitigation Measure 4.9-4 – Implement Mitigation Measure 4.9-3.

Significance after Mitigation

While the existing laws, General Plan policies, and implementation programs, along with proposed General Plan Update policies and implementation of Mitigation Measure 4.9-4 will reduce potential effects, the potential remains for residual effects. No other feasible mitigation measures are available. Therefore, the impact of development in the General Plan Planning Area to TCRs is considered **significant and unavoidable**.

4.10 HAZARDS, HAZARDOUS MATERIALS, AND WILDFIRE

4.10.1 INTRODUCTION

This section describes potential impacts related to human-caused hazards in the Planning Area associated with the proposed General Plan Update, including the transport and use of hazardous materials, toxic releases, leaking underground storage tanks, residual pesticides on agricultural land, and underground pipelines. This section also addresses potential hazards associated with emergency access and fires. To provide context for the impact analysis, this section begins with an environmental setting describing the existing conditions in the Planning Area related to hazards and hazardous materials. Next, the regulatory framework is described, which informs the selection of the significance thresholds used in the impact analysis. The regulatory framework also includes existing General Plan policies related to the impact analysis of this section. The section concludes with the applicable significance thresholds, the impacts of the proposed changes to adopted General Plan policies, recommended mitigation measures, and the significance conclusions.

As part of the impact analysis, Notice of Preparation (NOP) comments were reviewed to help guide the analysis, and any comments were integrated into the analysis. No NOP comments related to hazards or hazardous materials were received.

Service levels by fire personnel and other emergency responders are addressed in Section 4.11, “Public Services and Recreation” of this EIR. Potential hazards and associated impacts related to toxic air contaminant emissions are discussed in Section 4.4, “Air Quality”; potential impacts from geologic and seismic hazards are discussed in Section 4.7, “Geology, Soils, and Paleontological Resources”; and potential hazards related to flooding are discussed in Section 4.13, “Hydrology and Water Quality.”

4.10.2 ENVIRONMENTAL SETTING

For purposes of this section, the term “hazardous materials” refers to both hazardous substances and hazardous wastes. A “hazardous material” is defined by federal regulations as “a substance or material that ... is capable of posing an unreasonable risk to health, safety, and property when transported in commerce” (49 Code of Federal Regulations [CFR] 171.8). California Health and Safety Code Section 25501 defines a hazardous material 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 wastes are hazardous substances that no longer have practical use, such as materials that have been discarded, discharged, spilled, or contaminated or are being stored until they can be disposed of properly. Hazardous wastes are defined in California Health and Safety Code Section 25141(b) as wastes that “...because of their quantity, concentration, or physical, chemical, or infectious characteristics, [may either] cause, or significantly contribute to an increase in mortality or an increase in serious illness [, or] pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, disposed of, or otherwise managed.”

Hazardous materials can be liquids, solids, or gases. Some examples include gasoline, propane, coolants, refrigerants, explosives, acetylene (used for welding and cutting), and hydrochloric acid (used in a wide variety of industrial and manufacturing processes).

4.10.2.1 TRANSPORT OF HAZARDOUS MATERIALS

Hazardous materials are routinely transported by truck and rail cars. Transport by truck occurs over state and federal highways as well as local roads. California Vehicle Code Section 31303 requires that hazardous materials be transported via routes with the least overall travel time. Although the choice of routes is left primarily to the discretion of the transporter, the California Vehicle Code prohibits the transport of hazardous materials through residential neighborhoods. There are no designated routes for the transport of hazardous materials by truck within the City of Roseville. However, the City has designated truck routes that are intended to divert traffic away from residential areas (see Circulation Element).

Hazardous materials are also transported through the City by rail cars on the Union Pacific Railroad (UPRR), which bisects the City in a southwest to northeast direction. UPRR operates a major rail car switching yard and operations and maintenance facility in Roseville. As discussed in detail in Section 4.10.2 “Regulatory Framework,” the Federal Railroad Administration enforces a variety of federal safety regulations related to the transport of hazardous materials on rail lines.

4.10.2.2 STORAGE OF HAZARDOUS MATERIALS

Underground storage tanks (USTs) and above-ground storage tanks (ASTs) are commonly used for the storage of hazardous materials, especially petroleum products. These storage devices are commonly found at gas stations, businesses operating vehicle fleets, agricultural operations, and industrial and manufacturing sites.

All hazardous materials handlers that store in excess of 55 gallons, 500 pounds, or 200 cubic feet of gas are required to submit Hazardous Materials Management (Business) Plans. From these plans, emergency responders are provided emergency contact information, site specific chemical inventories, and vicinity as well as facility maps. Facilities storing materials which are “acutely” hazardous, and in excess of the quantity listed in California Code of Regulations (CCR) Title 19, must submit a more comprehensive Risk Management Plan that includes maintenance and training programs, and an analysis of potential off-site consequences. Owners/operators of aboveground tanks containing in excess of 660 gallons of petroleum hydrocarbons (or an aggregate quantity of 1,320 gallons), must comply with the state’s Aboveground Petroleum Storage Act, which requires the preparation of a Spill Prevention and Countermeasure Plan.

Hazardous materials are also used in many household products (e.g., drain cleaners, waste oil, cleaning fluids, paints, insecticides, and car batteries). Improper disposal of these materials can interact with other chemicals to cause fires and result in chemical leachate from landfills that are not equipped to handle them.

In order to avert spills or contamination, the Roseville Fire Department regularly monitors hazardous material generators and storage facilities in the City for compliance with state regulations. The largest hazardous waste generators and hazardous material storage facilities in the Roseville area include NEC Electronics and Hewlett-Packard (located on Foothills Boulevard); the H. B. Fuller Company, which manufactures industrial adhesives, coatings, and sealants (located on Industrial Avenue); and Union Pacific Railroad.

4.10.2.3 HAZARDOUS MATERIALS IN THE PLANNING AREA

USTs often contain hazardous materials, such as gasoline, diesel fuel, oils, solvents, and agricultural and industrial chemicals. Today, USTs are composed primarily of fiberglass (which is more durable), are double

walled, and are equipped with electronic systems to detect leaks. However, older tanks (which are the most frequently subject to leakage) are single walled and frequently composed of steel. Over time, the steel rusts, which results in corrosion, creating holes through which the stored product can leach out into soil and/or groundwater.

A leaking tank could result in the release of hazardous chemicals into soil and potentially into groundwater, risking exposure to the public and the environment if contaminated soil is encountered or water quality is degraded. The State Water Resources Control Board's (SWRCB) Division of Water Quality manages a UST Program to protect public health and the environment from releases of petroleum and other hazardous substances from tanks. The two main components of the program are (1) permitting of operating tanks (aka leak prevention), which is run by the local Certified Unified Program Agencies (CUPAs), and (2) cleanup, which is shared by the CUPAs and the appropriate Regional Water Quality Control Board (RWQCB). In the Planning Area, USTs are permitted, inspected, and monitored by the Placer County Division of Environmental Health (the local CUPA).

Agricultural uses, which are located in the western portion of the Planning Area, employ a range of hazardous materials, including fertilizers, herbicides, fungicides, and insecticides. These materials, considered together, are regulated as "pesticides" by the U.S. Environmental Protection Agency (EPA) and the California Environmental Protection Agency (CalEPA). Areas which were formerly used for agriculture may also contain hazardous materials residue in the top layers of soil, due to the historic use of pesticides and insecticides. These materials can cause health hazards to humans directly during the time of application; and can result in hazards to humans, terrestrial wildlife, and aquatic life through "drift" of the pesticide through the air from the target area to other areas, and through the residue of these materials which may persist in the soil and be transported through water. Prior to 1950, inorganic pesticides that contained elevated concentrations of metals, such as arsenic, were commonly used in California agriculture. After 1950, organochlorine pesticides (OCPs) were commonly used in California agriculture until about the mid-1970s. Arsenic from inorganic pesticides and residues from OCPs used in the past have the potential to persist for many decades in shallow soils and can affect human health and the environment when encountered during earth-moving activities. Persistent residual chemicals are not typically associated with dry-farmed crops and livestock grazing, because these types of agricultural activities typically require little to no application of pesticides. However, other types of agricultural crops, such as orchards, typically require higher levels of pesticide application where residues may persist in the soil.

Environmental contamination can also result from accidental spills of hazardous materials. These types of spills are most likely to occur along rail lines, highways, and underground pipelines, where hazardous materials are frequently transported, as well as industrial sites where larger quantities of hazardous materials are frequently used and stored. Several major underground pipelines, which contain natural gas and other hazardous materials, traverse the City in both north-south and east-west directions (Pipeline and Hazardous Materials Safety Administration [PHMSA] 2019).

The sites with a known release of hazardous materials to soil and/or groundwater are shown in Exhibit 4.10-1. These sites were identified based on information obtained from the SWRCB's GeoTracker database and the California Department of Toxic Substances Control's (DTSC) EnviroStor database, which are part of the Cortese List. The GeoTracker database provides a listing of leaking underground storage (LUST) sites and other known cleanup sites in California (SWRCB 2019). The EnviroStor database provide a listing of hazardous waste facility cleanup sites in California (DTSC 2019).

There are 10 active sites with hazardous or potentially hazardous materials identified within the Planning Area. These sites include ongoing cleanup (remediation) of contaminated soil and/or groundwater. Remediation of contaminated soil is accomplished by excavating the contaminated soil and then transporting it for disposal at a landfill that is permitted to accept hazardous wastes. The subsequent “hole” that is left in the ground from removal of the contaminated soil is then backfilled with clean fill dirt. For sites that involve contamination of very large areas of soil, the soil may be left in place and a “cap” of clean fill dirt placed on top. Remediation of contaminated groundwater or surface water is much more costly and time consuming, generally occurring over a period of many years. The most basic type of groundwater remediation, called air sparging, uses air to strip the water clean. Another common method, called a groundwater extraction and treatment (GET) system, consists of installing a network of underground pipes and pumps that extract the groundwater, pump it through a series of chemical and/or biological treatment tanks and filters, and then discharge the treated water to another location.

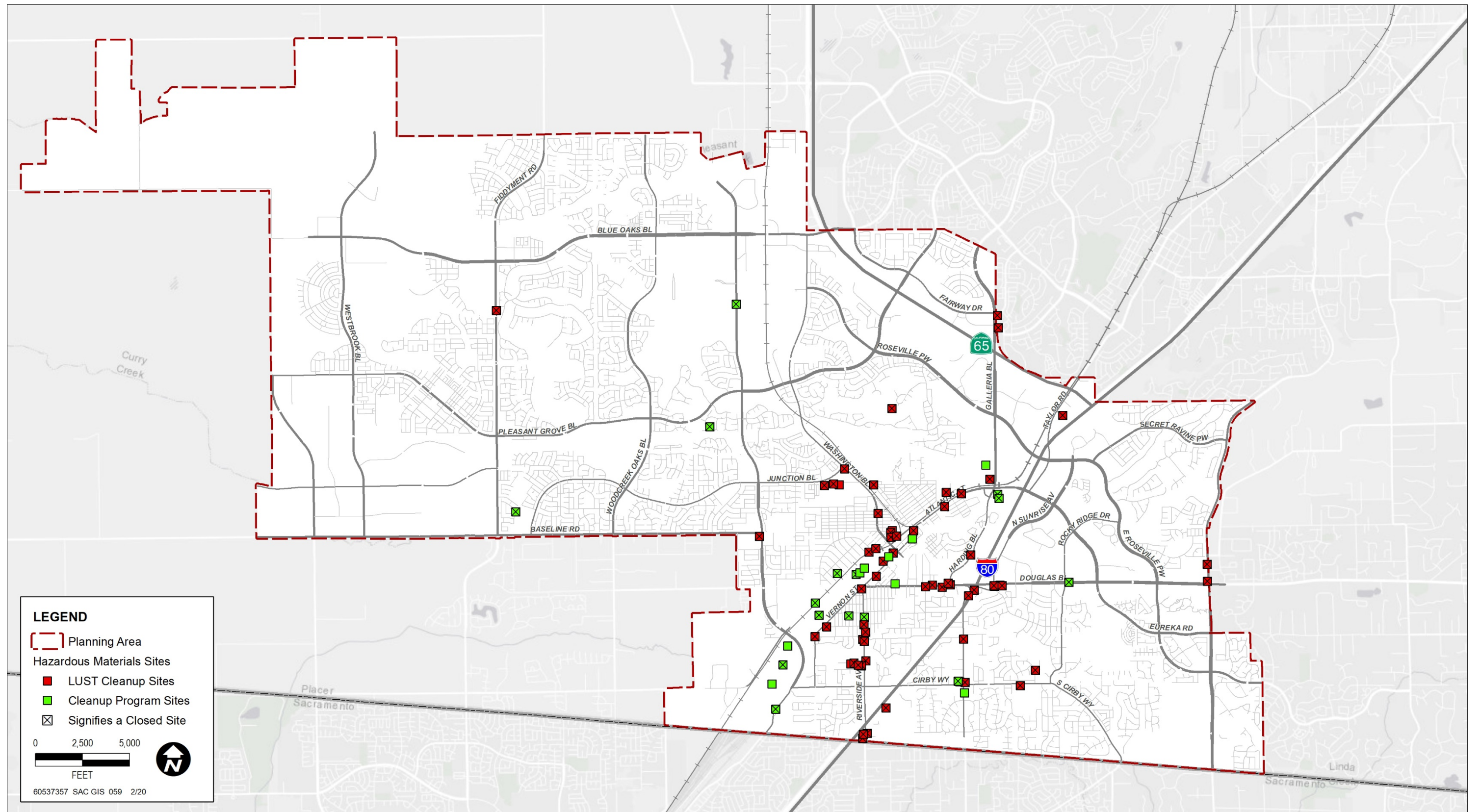
There are more than 60 inactive sites within the Planning Area. Inactive sites have met the remediation goals set by SWRCB and/or DTSC, and therefore these cases have been closed. However, inactive sites where soil or groundwater contamination has occurred could still result in public health or environmental exposure to hazardous materials in certain situations; for example, where contaminated soil is covered with a protective clean soil cap or where groundwater contamination is still present at low levels. These types of sites generally have land use prohibitions in place, which require notification of and consultation with SWRCB and/or DTSC and the local CUPA if subsurface excavation is proposed or if a change in land use is proposed.

There is one former “Superfund” site in the City, which is still undergoing remedial activities—the former Southern Pacific Railyard, now located on Union Pacific Railroad property, approximately 1 mile northwest of I-80. Eight of the ten active remedial action sites in the Planning Area are associated with contamination at the railyards. Soil and groundwater contamination occurred in the railyards from LUSTs, and on-site activities that resulted in spills. The primary environmental contaminants that are present at the railyards consist of solvents, lubricants, metals, and fuels (SWRCB 2019). In 1984, this site was placed on the National Priorities List (i.e., Superfund). However, in 1989, after a substantial amount of remediation had occurred, the site was removed from the National Priorities List (NPL); accordingly, it is no longer designated as a “Superfund” site. Remedial activities are ongoing under the direction of DTSC and SWRCB. There are no active Superfund sites in the Planning Area (U.S. Environmental Protection Agency 2019).

4.10.2.4 LEAD AND ASBESTOS

Lead is a highly toxic metal that was used until the late 1970s in a number of products, most notably paint. The use of lead as an additive to paint was discontinued in 1978 because human exposure to lead was determined by EPA and the Occupational Health and Safety Administration (OSHA) to be an adverse human health risk, particularly to young children. Primary sources of lead exposure are deteriorating lead-based paint, lead-contaminated dust, and lead-contaminated soil. Demolition of structures containing lead-based paint requires specific remediation activities regulated by federal, state, and regional and local laws.

Asbestos is designated as a hazardous substance when the fibers have potential to come in contact with air because the fibers are small enough to lodge in lung tissue and cause health problems. The presence of asbestos-containing materials (ACMs) in existing buildings poses an inhalation threat only if the ACMs are in a friable state. If the ACMs are not friable, then there is no inhalation hazard because asbestos fibers remain bound in the material matrix. People exposed to asbestos may develop lung cancer and mesothelioma. The risk is proportional



Sources: SWRCB 2019, DTSC 2019

Exhibit 4.10-1

Known Hazardous Materials Sites

This page intentionally left blank

to the cumulative inhaled dose (quantity of fibers), and also increases with the time since first exposure. Although there are a number of factors that influence the disease-causing potency of any given asbestos (such as fiber length and width, fiber type, and fiber chemistry), all forms are carcinogens. Emissions of asbestos fiber to the ambient air, which can occur during activities such as renovation or demolition of structures made with ACMs (e.g., insulation), are regulated in accordance with EPA's Asbestos National Emission Standards for Hazardous Air Pollutants.

4.10.2.5 FIRE HAZARDS

Wildland Fires

Wildland fires represent a substantial threat in California, particularly during the hot, dry summer months in more isolated areas where steep topography, limited access, and heavy fuel loading contribute to hazardous conditions. Wildland fires may be started by natural processes, primarily lightning, or by human activities. The California Department of Forestry and Fire Protection (CAL FIRE) has established a fire hazard severity classification system to assess the potential for wildland fires. The zones depicted on CAL FIRE maps take into account potential fire intensity and speed, production and spread of embers, fuel loading, topography, and climate (e.g., temperature and the potential for strong winds). The classification system provides three classes of fire hazards: Moderate, High, and Very High.

Public Resources Code Sections 4125–4137 require the designation of State Responsibility Areas (SRAs) (based on the amount and type of vegetative cover, beneficial water uses, probable erosion damage, fire risks, and hazards) where the financial responsibility of preventing and suppressing fires falls primarily on the State of California. Fire protection outside the SRAs is the responsibility of local or federal agencies.

The Planning Area is designated by CAL FIRE as a Local Responsibility Area, and there are no Very High Fire Hazard Severity Zones in the Planning Area (CAL FIRE 2008). The central and eastern portions of the Planning Area are heavily urbanized. The western portion of the Planning Area consists of agricultural land (DOC 2019), including row crops, orchards, and grazing land that is covered with grasses.

Urban Fires

Urban fires are fires that begin in buildings in urban centers. They are typically localized, but have the potential to spread to an adjoining building, especially in areas where homes and/or business facilities are clustered close together. Structural fire risk is greatest in older structures and neighborhoods built before modern building codes for fire safety and building systems were in place.

Fire suppression services in the Planning Area are provided by local fire stations operated by the City of Roseville Fire Department, which are discussed in more detail in Section 4.11, "Public Services and Recreation."

4.10.2.6 AIRPORTS

There are no airports in the Planning Area. The closest airport is the Rio Linda Airport in Sacramento County, approximately 6.3 miles southwest of the Planning Area. Rio Linda Airport is privately owned but is open to the public; it has two paved and lighted runways. The Planning Area is not located within the overflight, noise, or other airport hazard zones of any airport. Because there are no airports within 6 miles of the planning area, this topic is not discussed further in this EIR.

4.10.3 REGULATORY FRAMEWORK

4.10.3.1 FEDERAL

Environmental Protection Agency

The Federal Toxic Substances Control Act (1976) and the Resource Conservation and Recovery Act of 1976 (RCRA) established a program administered by EPA for the regulation of the generation, transportation, treatment, storage, and disposal of hazardous waste. The RCRA was amended in 1984 by the Hazardous and Solid Waste Act (HSWA), which affirmed and extended the “cradle to grave” system of regulating hazardous wastes. The use of certain techniques for the disposal of some hazardous wastes was specifically prohibited by the HSWA.

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, was enacted by Congress on December 11, 1980. This law provided broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA established requirements concerning closed and abandoned hazardous waste sites; provided for liability of persons responsible for releases of hazardous waste at these sites; and established a trust fund to provide for clean up when no responsible party could be identified. CERCLA also enabled the revision of the National Contingency Plan (NCP). The NCP provided the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, or contaminants. The NCP also established the National Priorities List, which is a list of contaminated sites warranting further investigation by EPA. CERCLA was amended by the Superfund Amendments and Reauthorization Act (SARA) on October 17, 1986.

Federal Emergency Management Agency

The primary mission of the Federal Emergency Management Agency is to reduce the loss of life and property and to protect the nation from all hazards, including natural disasters, acts of terrorism, and other man-made disasters, by leading and supporting a risk-based, comprehensive emergency management system of preparedness, protection, response, recovery, and mitigation.

Disaster Mitigation Act

The Disaster Mitigation Act of 2000 requires a state mitigation plan as a condition of disaster assistance, adding incentives for increased coordination and integration of mitigation activities at the state level through the establishment of requirements for two different levels of state plans: “Standard” and “Enhanced.” States that develop an approved Enhanced State Plan can increase the amount of funding available through the Hazard Mitigation Grant Program. The Disaster Mitigation Act also established a new requirement for local mitigation plans.

Emergency Planning and Community Right-To-Know Act

The Emergency Planning Community Right-to-Know Act (EPCRA) of 1986 was included under the Superfund Amendments and Reauthorization Act (SARA) law and is commonly referred to as SARA Title III. EPCRA was passed in response to concerns regarding the environmental and safety hazards proposed by the storage and handling of toxic chemicals. EPCRA establishes requirements for federal, state, and local governments, Indian Tribes, and industry regarding emergency planning and Community Right-to-Know reporting on hazardous and

toxic chemicals. SARA Title III requires states and local emergency planning groups to develop community emergency response plans for protection from a list of Extremely Hazardous Substances (40 CFR Appendix B). The Community Right-to-Know provisions help increase the public's knowledge of and access to information on chemicals at individual facilities, their uses, and their release into the environment.

Hazardous Materials Transportation Act

The Hazardous Materials Transportation Act (HMTA) of 1975 was created to provide adequate protection from the risks to life and property related to the transportation of hazardous materials in commerce by improving regulatory enforcement authority of the Secretary of Transportation.

United States Department of Transportation

Transportation of chemicals and hazardous materials are governed by the U.S. Department of Transportation (USDOT), which stipulates the types of containers, labeling, and other restrictions to be used in the movement of such material on interstate highways.

Federal Railroad Administration

The Federal Railroad Administration (FRA) an agency under USDOT, is responsible for requiring each railroad carrier that provides intercity or commuter rail passenger transportation to develop a Railroad Safety Risk Reduction Program, as part of Public Law 110-432, "Federal Rail Safety Improvements," enacted in 2008. The program addresses issues such as railroad safety, highway/rail grade crossings, pedestrian safety, trespasser prevention, and safety enhancements. FRA is also responsible for enforcing safety rules and standards under CFR Title 49, Sections 200–272, which cover a comprehensive range of railroad safety topics, including track safety, roadway workplace safety, railroad operation rules, communication, locomotive safety standards, inspections and maintenance, signal systems, grade crossing safety, bridge safety standards, emergency preparedness, passenger safety, safety training, dispatching, and qualification/certification for conductors.

Pipeline and Hazardous Materials Safety Administration

Pipeline facilities are subject to regular inspection and maintenance activities required by USDOT's Pipeline and Hazardous Materials Safety Administration (PHMSA) regulations and include, but are not limited to, regular inspections of terminals and pipeline routes for visible leaks and evaluations of aboveground equipment including valve stations, pump and power stations; monthly inspections to ensure the integrity of pipeline corrosion protection; excavation and repair of pipeline segments experiencing degradation; and repair of pipeline anomalies identified during internal inspection or at locations damaged by third parties.

In addition, the California Public Utilities Commission (CPUC) is the agency authorized to oversee gas pipeline facilities within the State and has rules governing design, construction, testing, operation and maintenance of gas gathering, transmission and distribution piping systems.

4.10.3.2 STATE

California Environmental Protection Agency, Executive Order W-5-91

The California Environmental Protection Agency (CalEPA) was established in 1972 by the State of California to establish a cabinet-level voice for the protection of human health and the environment and to assure the coordinated deployment of state resources.

Department of Pesticide Regulation

The purpose of the California Department of Pesticide Regulation (DPR) is to protect the health of humans and the environment. DPR sets standards for the sale and use of pesticides and encourage “reduced-risk pest management” to decrease the use of hazardous pesticides. The DPR is funded by regulatory fees. A portion of its budget supports local pesticide enforcement by County Agricultural Commissioners. DPR released the publication “A Community Guide to Recognizing and Reporting Pesticide Problems” to inform Californians about the use, potential hazards, and response to hazards from pesticide use (DPR 2014).

Department of Resources, Recycling, and Recovery

The California Department of Resources Recycling and Recovery (CalRecycle) and the SWRCB jointly issue regulations pertaining to waste disposal on land, including criteria for all waste management units, documentation and reporting, and enforcement.

Department of Toxic Substances Control

The California Department of Toxic Substances Control (DTSC) has primary regulatory responsibility, with delegation of enforcement to local jurisdictions that enter into agreements with the State agency, for the management of hazardous materials and the generation, transport and disposal of hazardous waste under the authority of the Hazardous Waste Control Law. Since August 1, 1992, DTSC has been authorized to implement the state’s hazardous waste management program for CalEPA.

California Occupational Safety and Health Administration

California Occupational Safety and Health Administration (Cal-OSHA) assumes primary responsibility for developing and enforcing workplace safety regulations within California. Cal-OSHA regulations pertaining to the use of hazardous materials in the workplace (Title 8 of the CCR) include requirements for safety training, availability of safety equipment, accident and illness prevention programs, hazardous substance exposure warnings, and preparation of emergency action and fire prevention plans. Cal-OSHA enforces hazard communication program regulations that contain training and information requirements, including procedures for identifying and labeling hazardous substances, communicating hazard information related to hazardous substances and their handling, and preparation of health and safety plans to protect workers and employees at hazardous-waste sites. The hazard communication program requires that employers make Safety Data Sheets available to employees, and requires documentation of informational and training programs for employees.

Office of Environmental Health Hazard Assessment, Executive Order W-5-91

The State of California Office of Environmental Health Hazard Assessment was established in its current form in 1991, but the work of the Office of Environmental Health Hazard Assessment originated in the 1950s. It oversees

implementation of many public health-related environmental regulatory programs within CalEPA, including implementing the provisions of the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65). Proposition 65 requires the governor to publish, at least annually, a list of chemicals known to the state to cause cancer or reproductive toxicity. The proposition was intended by its authors to protect California citizens and the state's drinking water sources from chemicals known to cause cancer, birth defects, or other reproductive harm and to inform citizens about exposures to such chemicals.

State Water Resources Control Board

The SWRCB was established in 1967 by combining the State Water Quality Control Board and the State Water Rights Board, but its work originated in the 1950's. The Central Valley RWQCB is authorized by the SWRCB to enforce provisions of the Porter-Cologne Water Quality Control Act of 1969. This act gives the Central Valley RWQCB authority to require groundwater investigations when the quality of groundwater or surface waters of the state is threatened and to require remediation of the site, if necessary.

California Department of Transportation

The California Department of Transportation (Caltrans) was established in 1972 and manages more than 50,000 miles of California's highway and freeway lanes, provides inter-city rail services, and permits more than 400 public-use airports and special-use hospital heliports. Caltrans is also the first responder for hazardous material spills and releases that occur on highway and freeway lanes and inter-city rail services.

SB 1889, Accidental Release Prevention Law/Chemical Accident Release Prevention Program, 1996

SB 1889 required California to implement a federally mandated program governing the accidental airborne release of chemicals listed under Section 112 of the Clean Air Act. Effective January 1, 1997, the California Accidental Release Prevention program (CalARP) replaced the previous California Risk Management and Prevention Program (RMPP) and incorporated the mandatory federal requirements. CalARP addresses facilities containing specified hazardous materials that, if involved in an accidental release, could result in adverse off-site consequences. CalARP 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.

SB 1082, California Environmental Protection Agency's Unified Program, 1993

In 1993, Senate Bill 1082 gave CalEPA the authority and responsibility to establish a unified hazardous waste and hazardous materials management and regulatory program, commonly referred to as the Unified Program. The purpose of this program is to consolidate and coordinate six different hazardous materials and hazardous waste programs, and to ensure that they are consistently implemented throughout the state. The Unified Program is overseen by CalEPA with support from DTSC, RWQCBs, the California Office of Emergency Services (OES), and the State Fire Marshal.

The Unified Program Administration and Advisory Group (UPAAG) was created to foster effective working partnerships between local, State and federal agencies. The UPAAG's goals and objectives are listed in the UPAAG Strategic Plan. The six programs are:

- ▶ Hazardous Materials Release Response Plans and Inventories (Business Plans)

- ▶ California Accidental Release Prevention Program
- ▶ Underground Storage Tank Program
- ▶ Aboveground Petroleum Storage Act Program
- ▶ Hazardous Waste Generator and Onsite Hazardous Waste Treatment (tiered permitting) Programs
- ▶ California Uniform Fire Code: Hazardous Material Management Plans and Hazardous Material Inventory Statements

State law requires county and local agencies to implement the Unified Program. The agency in charge of implementing the program is called the CUPA. The Placer County Environmental Health Services Division is the designated CUPA for the county, and the Roseville Fire Department is the designated CUPA for the City. Both agencies work together to regulate hazardous materials in the City.

Aboveground Petroleum Storage Act, Health and Safety Code 25270

The Aboveground Petroleum Storage Act, requires registration and spill prevention programs for above ground storage tanks that store petroleum. In some cases, ASTs for petroleum may be subject to groundwater monitoring programs that are implemented by the RWQCBs and the SWRCB.

AB 2185 and AB 2189, Hazardous Materials Business Emergency Response Plan Program, CA Health and Safety Code Chapter 6.95

The State of California requires an owner or operator of a facility to complete and submit a Hazardous Material Business Plan (HMBP) to the Governor's OES if the facility handles a hazardous material or mixture containing a hazardous material in amounts greater than specified threshold quantities. Placer County Environmental Health is responsible for the implementation of the HMBP program in Placer County. Congress requires EPA Region 9 to make HMBP program information available to the public through the EPA's Envirofacts Data Warehouse.

Underground Storage Tank (UST) Act, CCR Title 23

The UST monitoring and response program is required under Chapter 6.7 of the California Health and Safety Code and Title 23 of the CCR. The program was developed to ensure that the facilities meet regulatory requirements for design, monitoring, maintenance, and emergency response in operating or owning USTs. The Placer County Department of Environmental Health is the local administering agency for this program.

State Hazard Mitigation Plan

The State Hazard Mitigation Plan (SHMP) is a federally required official statement of the state's hazard identification, vulnerability analysis, and hazard mitigation strategy (44 CFR, Subpart M, Section 206.401) under the Disaster Mitigation Act of 2000 for the State of California to receive federal funds for disaster assistance grant programs (California Emergency Management Agency 2018). The goal of the SHMP, prepared by the OES, is to guide implementation activities to achieve the greatest reduction of vulnerability, which results in saved lives, reduced injuries, reduced property damage, and protection for the environment.

School Site Selection and Approval Guide

The California Department of Education (CDE) has developed a *School Site Selection and Approval Guide* to help school districts select appropriate locations for educational institutions (CDE 2019). The guide contains 12 screening and ranking criteria, including: safety, location, topography, cost, utilities, and public acceptance.

School Sites in Relation to Hazardous Emissions

Public Resources Code Sections 21151.4(a) and 21151.8(a) require that no EIR be certified for a project involving construction or alteration of a facility that might reasonably be anticipated to result in hazardous air emissions, or that would handle an extremely hazardous substance or a mixture containing extremely hazardous substances in a quantity equal to or greater than the state threshold quantity specified in the California Health and Safety Code Section 25532(j), within one-quarter mile of a school unless the lead agency has consulted with the school district having jurisdiction regarding the potential impact of the project on the school and the school has been given written notification of the project not less than 30 days prior to approval of the EIR.

California Air Resources Board

The California Air Resources Board (ARB) oversees implementation of and compliance with the National Emission Standard for Hazardous Air Pollutants (NESHAP) for asbestos, and investigates all related complaints, as specified by California Health and Safety Code Section 39658 (b)(1). The Placer County Air Pollution Control District (PCAPCD) requires notification of CARB and EPA for demolition and renovation where ACMs may be present (PCAPCD 2019). ARB reviews and investigates each notification; and if it is determined that a structure contains ACMs, demolition or renovation of the structure must be compliant with NESHAP standards for demolition and renovation (40 CFR 61.145). Demonstration of compliance with NESHAP remediation and disposal standards is required before a City of Roseville building permit can be issued for projects where ACMs are present.

Lead-Based Paint, CCR Title 17

Title 17, Division 1, Chapter 8, of the CCR requires that work on any structure built prior to January 1, 1978 use lead-safe practices. Such practices include containment of the work area and cleaning of the work area after project completion. CCR Chapter 8 also covers accreditation of training providers and certification of individuals to perform lead abatement. Cal-OSHA provides construction and general industry lead standards within Title 8 of the CCR, which contains occupational health requirements for lead abatement. DTSC regulations for hazardous waste are provided within CCR Title 22, Division 4.5. Demolition or renovation of structures with lead-based paint would be required to comply with procedures in CCR Title 22.

Cortese List, California Government Code Section 65962.5

The provisions of Section 65962.5 of the California Government Code are commonly referred to as the “Cortese List” (after the legislator who authored the legislation that enacted it). The Cortese List is a planning document used by state and local agencies to comply with CEQA’s requirement to provide information about the location of hazardous-materials release sites. Government Code Section 65962.5 requires Cal/EPA to develop an updated Cortese List at least annually. DTSC is responsible for a portion of the information contained on the Cortese List. Other state and local government agencies, including the SWRCB and RWQCBs, are required to provide additional information for the Cortese List about releases of hazardous materials.

In addition, Government Code Section 65962.5 (and Public Resources Code Section 21092.6) requires all project applicants to consult the Cortese List and determine whether any site-specific project is within a hazardous materials site on the List. If so, the project applicant is required to notify the lead agency in writing prior to the issuance of a building permit, so the lead agency can determine the appropriate course of action (which generally would include preparation of Phase I and (if necessary) Phase II environmental site assessment, along with site-specific remediation).

4.10.3.3 REGIONAL AND LOCAL

Placer County Agricultural Commissioner

According to the California Food and Agriculture Code, the regulation of pesticide use in California occurs at the County level, thus the Placer County Agricultural Commissioner regulates and enforces use of pesticides. Pesticide use is enforced through permitting the use of restricted and non-restricted pesticides; enforcing worker safety laws; inspecting pesticide equipment and applications; auditing records of growers, pest control operators, dealers and pest control advisors; and additional strategies.

Placer County Environmental Health Services

The Placer County Environmental Health Services Division (the local CUPA for the county) regulates hazardous waste, aboveground petroleum storage and risk management plans, hazardous materials business plans and chemical inventories, risk management plans, and USTs. The Roseville Fire Department (the local CUPA for the city) works cooperatively with the Placer County Environmental Health Services Division to regulate hazardous materials in the City.

Existing City of Roseville General Plan

The existing Roseville General Plan (City of Roseville 2016) includes the following goals and policies related to hazardous materials, emergency preparedness, and fire risks.

Hazardous Materials Goal 1: Protect the community's health, safety, natural resources, and property through regulation of use, storage, transport, and disposal of hazardous materials.

- ▶ **Hazardous Materials Policy 1:** Require the disclosure of the use and storage of hazardous materials in existing and proposed industrial and commercial activities and siting of hazardous waste disposal facilities in accordance with Placer County guidelines and state law.
- ▶ **Hazardous Materials Policy 2:** Work with Placer County and other public agencies to inform consumers about household use and disposal of hazardous materials.
- ▶ **Hazardous Materials Policy 3:** Cooperate fully with both public and private agencies, as defined in the City of Roseville Hazardous Materials Emergency Response Plan in the event of a hazardous material emergency.
- ▶ **Hazardous Materials Policy 4:** Develop a hazardous materials truck route through the City of Roseville and limit pickup and delivery of hazardous materials during peak traffic hours.

Schools Goal 1: The provision of adequate school facilities is a community priority. The school districts and the City will work closely together to obtain adequate funding and site locations for new school facilities.

- ▶ **Schools Policy 5:** The City and the school districts will work together to develop criteria for the designation of school sites, and consider the opportunities for reducing the cost of land for school facilities. The City shall encourage the school districts to comply with City standards in the design and landscaping of school facilities.
- ▶ **Schools Policy 8:** Schools, where feasible, shall be located away from hazards or sensitive resource conservation areas, except where the proximity of resources may be of educational value and the protection of the resource is reasonably assured.

Fire Protection Goal 1: Protect against the loss of life, property, and the environment by the application of appropriate prevention, education, and operational measures.

Fire Protection Goal 2: Provide emergency services in a well-planned, cost-effective, and professional manner through the best utilization of properly trained, equipped, and supervised personnel.

- ▶ **Fire Protection Policy 1:** Continue to pursue and promote fire prevention programs and standards.
- ▶ **Fire Protection Policy 4:** Provide highly trained personnel to ensure effective suppression of fires and safety for firefighters.
- ▶ **Fire Protection Policy 5:** Seek to reduce fires by fully investigating the cause, origin and circumstances of each fire; collect and preserve evidence; coordinate with authorities in detection, apprehension, and prosecution of arsonists; pursue each investigation to its conclusion; and use resultant findings to develop more effective fire prevention programs.
- ▶ **Fire Protection Policy 6:** Phase the timing of the construction of fire stations to be available to serve the surrounding service area.
- ▶ **Fire Protection Policy 9:** Continually update the Roseville Emergency Operations Plan and ensure that participants are prepared to efficiently carry out assigned functions.
- ▶ **Privately-Owned Utilities Policy 2: Require** the installation of communication and electric lines underground except when infeasible or impractical.

Air Quality Goal 1: Improve Roseville's air quality by:

- a) Achieving and maintaining ambient air quality standards established by the U.S. Environmental Protection Agency and the California Air Resources Board; and,
- b) Minimizing public exposure to toxic or hazardous air pollutants and air pollutants that create a public nuisance through irritation to the senses (such as unpleasant odors).

Air Quality Goal 2: Integrate air quality planning with the land use and transportation planning process.

- ▶ **Air Quality – Land-Use Related Policy 8:** Separate air pollution-sensitive land uses from sources of harmful air pollution.

- ▶ **Air Quality – Hazardous-Materials Related Policy 11:** Protect City residents from the risks involved in the transport, distribution, storage, use, and disposal of hazardous materials.

Circulation-Function Classification Goal 1: Provide guidance to the long-range planning of the City’s roadway system including design standards, right-of-way requirements and coordination with surrounding jurisdictions.

- ▶ **Circulation-Functional Classification Policy 5:** Design intersections and public rights-of-ways in accordance with state and federal accessibility requirements.

City of Roseville 2019 Design and Construction Standards

Section 8 of the Roseville design standards require a minimum flow of water for fire protection in accordance with the Roseville Fire Department and California Fire Code. For single-family detached houses, water mains must provide a flow of 1,500 gallons per minute in addition to the peak normal maximum daily consumption needs for a neighborhood. The required fire flow for multi-family, commercial, business, industrial, and school areas is determined on a case-by-case basis by the Roseville Fire Department, but may not exceed 4,000 gallons per minute, in addition to the peak normal daily consumption needs.

Fire hydrants shall be placed at street intersections wherever possible. Fire hydrants and blow-offs not located at intersections shall be installed on property lines between lots. Fire hydrants and blow-offs shall have a maximum spacing of 500 feet measured along the street frontage in residential areas and a maximum spacing of 350 feet in all other areas. Hydrants shall be required within a cul-de-sac or dead-end street measuring more than 250 feet as measured from the curb return of the intersecting street and the end of the bulb or street.

Sections 5, 6, and 7 of the Roseville design standards contain a variety of requirements that are intended to provide safe access to property and on streets throughout the City for motorists and emergency vehicles including driveways, turn lanes, streets, and traffic lights.

Roseville Emergency Operations Plan and Multi-Hazard Mitigation Plan

The City of Roseville has developed an Emergency Operations Plan (EOP) (City of Roseville 2011). The plan describes organizational and operational responsibilities in the event of an emergency, including hazardous materials emergencies and clean up and de-contamination procedures. The EOP is an extension of the City’s Multi-Hazard Mitigation Plan and follows nationally-adopted Incident Command System guidelines. The City’s 2016 Multi-Hazard Mitigation Plan was developed to evaluate hazards within the City and identifies planning tools, policy changes, programs, projects, and other activities that can mitigate the impacts of hazards (City of Roseville 2016). Through mutual aid agreements, the Roseville Fire Department can also request services from the Placer County, City of Sacramento, and Sacramento Metropolitan Fire District Hazardous Materials Response Teams in the event of a large-scale incident. The Roseville Fire Department would also provide assistance to California Highway Patrol (CHP), OES, and other responding agencies as requested, in the event of a hazardous materials spill on SR 65 or I-80.

Household Hazardous Waste

The City of Roseville Environmental Utilities Department provides a free hazardous and electronic waste pick-up service for Roseville residents. Residents may call the department to schedule a pick-up time at their homes. In

addition, Roseville residents can drop off hazardous and electronic materials at the Western Placer Waste Management Authority's Household Waste Facility in Lincoln.

City of Roseville Municipal Code

Chapter 9.60 of the Roseville Municipal Code establishes regulations for the identification and disclosure of hazardous materials use and management in the City.

9.60.050: Filing of a hazardous material disclosure form.

- A. Any person who uses or handles a hazardous material must annually submit a completed disclosure form to the fire chief.
- B. Within 15 days of any:
 - 1. New use or significant change in the use or handling of a hazardous material;
 - 2. New use or handling of a previously undisclosed hazardous material;
 - 3. Change of business address;
 - 4. Change of business ownership; or
 - 5. Change of business name.

Adopted Specific Plans and Mitigation Measures

Currently, the City has adopted 14 Specific Plans. A Specific Plan is a comprehensive planning and zoning document that implements the General Plan by providing development and conservation standards for a defined geographic location within the Planning Area. Each Specific Plan contains guidelines for site, architectural, landscaping, lighting, roadway networks, pedestrian/bicycle paths, open space corridors, parks, and other aspects of design. Each adopted Specific Plan involved preparation of an EIR, which evaluated potential human health and environmental risks related to hazards and hazardous materials. Where appropriate, mitigation measures were adopted and incorporated into the specific plan to reduce the level of risk from hazards and hazardous materials, and are required to be implemented in the respective Specific Plan Areas. Adopted mitigation measures for hazards and hazardous materials include identifying and remediating contaminated soil and other hazardous materials. Copies of the adopted Specific Plans and their associated EIRs are available upon request from the City of Roseville Development Services Department, Planning Division.

4.10.4 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

4.10.4.1 METHODOLOGY

This proposed General Plan Update does not include any changes to land use designations, expansion of the City's Planning Area, or other major physical changes to areas planned for development compared to the existing General Plan, but does include changes to goals, policies, and implementation measures, which are analyzed as a part of this EIR. This EIR analyzes buildout of the Planning Area consistent with the existing General Plan land use designations and compares this to the existing physical conditions, which constitute the baseline for determining whether potential impacts are significant.

The analysis in this section considers the range and nature of foreseeable hazardous materials use, storage, and disposal resulting from implementation of the proposed General Plan Update, and identifies the primary ways that these hazardous materials could expose individuals or the environment to health and safety risks.

The range and types of uses accommodated under the proposed General Plan Update can be identified in general terms. The nature of general plans, consistent with state law and common practice, is that specific uses or developments normally are not identified. Rather, categories of land use are defined that would allow a wide range of specific uses. The specific types of businesses allowed, and whether or not they would generate or use hazardous materials, cannot be known at this time. Businesses such as gasoline service stations and dry cleaners are some of the most common commercial operations that routinely use hazardous materials (motor fuels and other petroleum products, and solvents, respectively), but other possible commercial and industrial uses could potentially use a range of oils and lubricants, solvents, fertilizers, pesticides and herbicides, and other chemicals and materials in liquid, solid, or gas form.

Future development in the City could involve a variety of land uses, including residences, commercial uses, industrial uses, utilities and transportation facilities, office space, and public services facilities (i.e., educational and institutional uses). As a result, this analysis assumes and evaluates a range of potential uses that could handle hazardous materials, and a broad range of potential hazardous materials that could be used.

As discussed in Section 4.10.3, “Regulatory Framework,” compliance with applicable federal, state, and regional and local health and safety laws and regulations by residents and businesses in the City would protect the health and safety of the public. State and local agencies are required to enforce applicable requirements. In determining the level of significance, the analysis in this section considers development in the City in the context of required federal, state, and local ordinances and regulations.

A preliminary review of environmental risk databases was conducted, but this analysis did not include any sampling, site specific review, laboratory analysis, or inspection of buildings or site surfaces. Sites within the Planning Area with potential environmental hazards were identified based on information obtained from the Cortese List (including SWRCB’s GeoTracker database and DTSC’s EnviroStor database), the Pipeline and Hazardous Materials Safety Administration (PHMSA) Public Map Viewer, and a review of California Important Farmlands mapped by the Department of Conservation. In addition, the Placer County Department of Environmental Health maintains lists of hazardous material sites, releases, and accident occurrences.

Site-specific investigations for projects developed under the proposed General Plan Update will be required to address hazardous materials conditions. These activities would be conducted during subsequent environmental reviews, required for future development activities. For example, site-specific Phase I environmental site assessments would be required for projects where the presence of hazardous materials is known or suspected, and if necessary, subsequent Phase II soil/groundwater testing and remediation could be required before site development.

The methodology for determining wildfire hazards included a review of aerial photographs, and a review of CAL FIRE’s fire hazard severity zone maps.

4.10.4.2 THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines, a hazards and hazardous materials or wildfire impact is considered significant if the proposed project would:

- ▶ create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- ▶ create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;
- ▶ emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school;
- ▶ be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would create a significant hazard to the public or the environment;
- ▶ result in a safety hazard or excessive noise for people residing or working in the project location within an airport land use plan or within two miles of a public airport or public use airport;
- ▶ impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan;
- ▶ expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires;
- ▶ if located in or near state responsibility areas or land classified as very high fire hazard severity zones, 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; 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.

4.10.4.3 ISSUES NOT CONSIDERED FURTHER IN THIS EIR

Airport Safety and Noise Hazards—The closest airport is the Rio Linda Airport in Sacramento County, approximately 6.3 miles southwest of the Planning Area. The Planning Area is not located within the overflight, noise, or other airport hazard zones of any airport. Therefore, implementation of the land use changes and policies consistent with the proposed General Plan Update would have no impact related to safety hazards for aircraft or for people residing or working in the vicinity of an airport, and this issue is not addressed further in this EIR.

4.10.4.4 IMPACT ANALYSIS

IMPACT 4.10-1 Create a Significant Hazard Through Routine Transport, Use, or Disposal or Possible Release of Hazardous Materials from Upset or Accident Conditions. *Future population growth with buildout of the General Plan would result in an increase in the routine transport, use, and/or disposal of hazardous materials, which could result in greater exposure of the public to such materials and exposure of increasing numbers of people through either routine use or accidental release. Implementation of proposed General Plan Update policies, in combination with existing federal and state regulations, would reduce the potential impacts related to the routine transportation of hazardous materials. This impact would be **less than significant**.*

Buildout of the General Plan will involve development of new residential, commercial, and industrial uses. New residential development would result in increased use, storage, and disposal of household hazardous materials. New commercial and industrial development would also result in increased use, storage, and/or disposal of hazardous materials during routine operations. Of particular concern are facilities with USTs or other methods of storage that could accidentally leak into the soil, surface water, groundwater, or air. Specific examples of such facilities include gas stations, automotive repair shops, and dry cleaners.

The amount of hazardous materials transported through the City on designated truck routes, the UPRR, and highways (i.e., SR 65 and I-80) is likely to increase as a result of new development accommodated under the proposed General Plan Update and regional growth. With additional development anticipated under the proposed General Plan Update, more people could be potentially exposed to toxic spills or releases under buildout conditions compared to existing conditions.

Transportation of hazardous materials on area roadways is regulated by the California Highway Patrol and Caltrans, and use of these materials is regulated by DTSC, as outlined in CCR Title 22. FRA regulates the use, storage, and transport of hazardous materials at rail facilities. USDOT (through the Hazardous Materials Transportation Act), and other regulatory agencies (including the California Public Utilities Commission for natural gas transmission lines) provide standards designed to avoid releases including provisions regarding securing materials and container design. Facilities developed under the proposed General Plan Update that would use hazardous materials on-site would be required to obtain permits and comply with appropriate regulatory agency standards designed to avoid hazardous waste releases and protect the public health.

The following policies related to the routine use, storage, and disposal of hazardous materials would be revised as a part of the proposed General Plan Update, with additions shown in **bold, underlined** text and deletions shown in ~~strikethrough~~ text:

- ▶ **Policy SAFE5.1:** Require the disclosure, ~~of the use, and storage,~~ **and disposal** of hazardous materials ~~in existing and proposed industrial and commercial activities and siting of hazardous waste disposal facilities in accordance with~~ to comply with ~~Placer County guidelines and state law~~ local, state, and federal safety standards.
- ▶ **Policy SAFE5.3:** Cooperate fully with both public and private agencies, ~~as defined in the City of Roseville Hazardous Materials Emergency Response Plan~~ in the event of a hazardous material emergency.
- ▶ ~~**Hazardous Materials Policy 4:** Develop a hazardous materials truck route through the City of Roseville and limit pickup and delivery of hazardous materials of hazardous materials during peak traffic hours.~~

- **Policy AQ1.21:** Protect City residents from the risks involved in the transport, distribution, storage, use, and disposal of hazardous materials, **and coordinate with other agencies and organizations to reduce existing sources of health risk.**

Hazardous Materials Policy 4 has been removed because the City has already designated appropriate truck routes, and these routes are appropriate for transportation of all types of materials. Policy SAFE5.3 has been revised to clarify that the City will cooperate with other public and private agencies in the event of a hazardous material emergency, regardless of how this is addressed in existing plans. The proposed General Plan Update policy changes listed above would improve clarity and would not result in any adverse environmental impacts.

Conclusion

Projects potentially developed as a part of buildout of the General Plan that would involve the use, transport, and disposal of hazardous materials are subject to regulations that are designed to protect public health. Existing General Plan Hazardous Materials Goal 1 and Hazardous Materials Policies 2 (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Policies SAFE5.1, SAFE5.3, and AQ1.21 listed above, require consideration of hazardous materials issues in the land use planning process and require the use, disposal, storage, and transport of hazardous materials in compliance with local, state, and federal safety requirements. Implementation of current state and federal regulations, as well as the policies of the proposed General Plan Update may not prevent all potential releases of hazardous materials, but would serve to minimize both the frequency and the magnitude, if such a release occurs. In combination with existing federal and state regulations, these policies would also reduce the potential impacts of the routine transportation of hazardous materials in the City. This impact would be **less than significant**.

Mitigation Measure

No mitigation is required.

IMPACT 4.10-2 Emission or Handling of Hazardous or Acutely Hazardous Materials, Substances, or Waste within One-Quarter Mile of an Existing or Proposed School. *Buildout of the General Plan could result in development of uses that would emit or handle hazardous waste in proximity to new or existing schools. However, implementation of proposed General Plan Update policies and compliance with existing regulations would ensure that the impact is less than significant.*

Because the proposed land uses identified in the General Plan are conceptual, it cannot be specifically demonstrated that the necessary one-quarter mile distance would be implemented between incompatible land uses and the potential school sites. The proposed General Plan Update encourages the development of mixed land uses to promote walking and biking between residential uses and public uses such as schools, so it is reasonable to assume that new development would occur in close proximity to existing and newly developed schools.

However, the California Department of Education enforces school siting requirements (CDE 2019), and new facilities would not be constructed within ¼ mile of facilities emitting or handling materials based on these requirements. Furthermore, permitting requirements for individual hazardous material handlers or emitters, including enforcement of Public Resources Code Section 21151.4(a) and 21151.8(a), which would require consultation with the school district and public notification as part of the CEQA environmental review for the

proposed use where proposed construction or alteration of a facility that has the potential to emit hazardous materials would be located within one-quarter mile of a school.

The following goal and policies related to hazards near schools would be revised as a part of the proposed General Plan Update, with additions shown in **bold, underlined** text and deletions shown in ~~strikethrough~~ text:

- ▶ ~~**Hazardous Materials Policy 4:** Develop a hazardous materials truck route through the City of Roseville and limit pickup and delivery of hazardous materials of hazardous materials during peak traffic hours.~~
- ▶ **Policy SAFE5.1:** Require the disclosure, ~~of the use, and~~ storage, **and disposal** of hazardous materials in existing and proposed industrial and commercial activities and siting of hazardous waste disposal facilities in accordance with to comply with Placer County guidelines and state law local, state, and federal safety standards.
- ▶ **Policy SAFE5.3:** Cooperate fully with both public and private agencies, ~~as defined in the City of Roseville Hazardous Materials Emergency Response Plan~~ in the event of a hazardous material emergency.

Goal AQ1.1: Improve Roseville's air quality by: a) Achieving and **Reduce local air pollutant emissions to assist with meeting and** maintaining ambient air quality standards established by the U.S. Environmental Protection Agency and the California Air Resources Board; and, b) **and** minimizing public exposure to toxic or hazardous air pollutants and air pollutants that create a public nuisance through irritation to the senses (such as unpleasant odors).

- ▶ **Policy AQ1.3:** **Projects that could generate substantial air pollutant emissions or expose sensitive uses to substantial air pollutant concentrations should incorporate strategies to reduce** operational emissions, applicable emissions control **exposure to such emissions using measures recommended by the Placer County Air Pollution Control District, and other relevant applicable, feasible strategies, as needed, to avoid significant air quality impacts** ~~Develop consistent and accurate procedures for evaluating the air quality impacts of new projects.~~
- ▶ **Policy AQ1.21:** Protect City residents from the risks involved in the transport, distribution, storage, use, and disposal of hazardous materials, **and coordinate with other agencies and organizations to reduce existing sources of health risk.**
- ▶ **Policy PF3.4:** The City and the school districts will work together to develop criteria for the designation of school sites, ~~and~~ consider the opportunities for reducing the cost of land for school facilities, **and work to minimize the impact of school traffic on the adjacent neighborhoods vehicular traffic by ensuring** ~~Encourage~~ **opportunities for bicycle and pedestrian connections.** The City shall encourage the school districts to comply with City standards in the design and landscaping of school facilities.
- ▶ **Policy PF3.7:** Schools, where feasible, ~~shall~~ **should** be located away from hazards or sensitive resource conservation areas, except where the proximity of resources may be of educational value and the protection of the resource is reasonably assured.

Hazardous Materials Policy 4 has been removed because the City has already designated appropriate truck routes, and these routes are appropriate for transportation of all types of materials. Policy PF3.7 has been revised in

recognition that the City does not control the location of schools. The proposed General Plan Update policy changes listed above would result in improved protection for school children and employees, along with general public citizens in Roseville related to hazardous materials, and would not result in any adverse environmental impacts.

Conclusion

Existing General Plan Hazardous Materials Goal 1 and Hazardous Materials Policy 2, Air Quality Goal 2, Air Quality Policies 8 and 11, Schools Goal 1, and Schools Policy 7, (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Policies SAFE5.1 and SAFE 5.3, Goal AQ1.1 and Policies AQ1.3 and 1.21, and Schools Policy PF.4 listed above, augment existing state hazardous materials regulations related to schools and ensure that consideration is made of land uses potentially handling hazardous materials, which would further ensure that such land uses are not developed in proximity to schools. Furthermore, these policies require the use, disposal, storage, and transport of hazardous materials in compliance with local, state, and federal safety requirements, which would help to protect schools. Enforcement of California Department of Education school siting regulations, permitting requirements for individual hazardous material handlers and emitters, and enforcement of Public Resources Code Section 21151.4(a) and 21151.8(a) during project-level review for projects developed under the General Plan, would prevent future conflicts between hazardous materials handling and emissions and schools. This impact would be **less than significant**.

Mitigation Measure

No mitigation is required.

IMPACT 4.10-3 **Public Health Hazards from Locating Project Development on a Known Hazardous Materials Site Compiled Pursuant to Government Code Section 65962.5.** *Several sites within the City are listed on the Cortese List as known hazardous materials sites. New and infill development proposed in the proposed General Plan Update could expose construction workers to hazards and hazardous materials from these sites during construction activities, and hazardous materials on-site could create an environmental or health hazard if left in place. This impact would be **less than significant**.*

There are approximately 70 known listed hazardous materials sites in the City, most of which have been remediated and are closed. There are 10 open, active sites which are undergoing remedial action under the jurisdiction of DTSC and/or the Central Valley RWQCB. Ground disturbance associated with development proposed in the 2035 General Plan, if excavation and/or grading were to occur at sites listed on a known hazardous materials site list compiled pursuant to Government Code Section 65962.5 (Cortese List), could potentially result in the exposure of construction workers, the public, and the environment to hazards associated with contaminated soil and/or groundwater if not properly remediated and/or monitored.

The largest hazardous materials site in Roseville is associated with the former Southern Pacific Railyard (now the Union Pacific Railyard). The railyard was placed on the EPA National Priorities List in 1984 as a Superfund site, but was subsequently removed from the NPL in 1989 following substantial remediation efforts. The primary environmental contaminants that are present at the railyards consist of solvents, lubricants, metals, and fuels; both soil and groundwater are contaminated. Cleanup and mitigation for contamination is ongoing, and public access to

the railyards is limited by fencing, in order to minimize risk of exposure to the public and to minimize public risks associated with active railway operations and maintenance.

Most of the new development in the City is proposed in the western and northwestern portions of the Planning Area, which consists primarily of land that has been in agricultural use for many years. Agricultural activities and lands with historic agricultural use can result in soil that is contaminated with high residual levels of pesticides; also older, currently unknown USTs could be present. If encountered during earthmoving or other future construction activities associated with development proposed under the proposed General Plan Update in the undeveloped western portion of the Planning Area, construction workers and the environment could be exposed to hazardous materials.

Site-specific investigations for projects developed as a part of buildout of the General Plan would be required to address hazardous materials conditions. These activities would be conducted during subsequent environmental reviews and permitting, required for future development activities. California Government Code Section 65962.5 and Public Resources Code Section 21092.6 requires all project applicants to consult the Cortese List and determine whether any given project site is within a hazardous materials site on that list. If so, the project applicant is required to notify the City in writing prior to the issuance of a building permit. Phase I environmental site assessments would be required for projects where the presence of hazardous materials is known or suspected, and (if necessary), subsequent Phase II soil/groundwater testing and remediation could be required before development on a site-specific basis.

Due to the age of some of the facilities that are present in older portions of the Planning Area where infill and redevelopment are proposed, asbestos and lead-based paint could be encountered during demolition activities. If not handled properly, ACMs and lead-based paint could pose a human and environmental health hazard. However, demolition of structures containing ACMs and lead-based paint are regulated by EPA, CalEPA, and CARB, and regulations designed to protect workers during the demolition process are enforced by OSHA and Cal-OSHA. All project applicants, property owners, and individual homeowners in the City are required to abide by these regulations.

Finally, a variety of major underground nature gas and hazardous materials pipelines cross the City in both north-south and east-west directions, and in both existing developed areas and proposed future development areas. However, standard construction contracts require construction contractors for site-specific projects to locate buried underground pipelines prior to the start of earth-moving activities, by consulting plans on file with the City, Placer County (County), DigAlert, Underground Service Alert, and PHMSA.

The following proposed policies related to hazards associated with known contaminated and hazardous materials sites would be revised as a part of the General Plan Update, with additions shown in **bold, underlined** text and deletions shown in ~~striketrough~~ text:

- ▶ **Policy AQ1.21:** Protect City residents from the risks involved in the transport, distribution, storage, use, and disposal of hazardous materials, **and coordinate with other agencies and organizations to reduce existing sources of health risk.**
- ▶ **Policy AQ1.22:** **Support improvements to diesel engines, limits on idling, and incorporation of technology and management practices that reduce harmful emissions at the Rail Yard.**

- ▶ **Policy SAFE5.1:** Require the disclosure, ~~of the use, and storage,~~ and disposal of hazardous materials in ~~existing and proposed industrial and commercial activities and siting of hazardous waste disposal facilities in accordance with~~ to comply with ~~Placer County guidelines and state law~~ local, state, and federal safety standards.
- ▶ **Policy SAFE5.3:** Cooperate fully with both public and private agencies, ~~as defined in the City of Roseville Hazardous Materials Emergency Response Plan~~ in the event of a hazardous material emergency.

The proposed General Plan Update policy changes listed above would result in improved protection for Roseville citizens and the environment related to hazardous materials sites, and would not result in any adverse environmental impacts.

Conclusion

Existing General Plan Hazardous Materials Goal 1 and Hazardous Materials Policy 2 (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Policies SAFE5.1 and SAFE 5.3, and Policies AQ1.21 and AQ1.22 listed above, would ensure cooperation with agencies such as DTSC and SWRCB to reduce risk from known hazardous material sites and respond to any hazardous materials releases, and reduce harmful emissions at the Railyards.

Most planned new development is not expected to occur on sites listed in the GeoTracker or EnviroStor databases, because these sites exist within the existing developed areas of the City. For redevelopment or infill development areas with existing hazardous materials issues, proposed General Plan Update goals and policies, in addition to application of current regulations, would not absolutely prevent exposure to hazards and hazardous materials, but would use existing facility information to identify areas of hazardous materials use. Site-specific investigations for projects developed under the proposed General Plan Update will be required to address hazardous materials conditions. These activities would be conducted during subsequent environmental reviews, required for future development activities.

California Government Code Section 65962.5 and Public Resources Code Section 21092.6 requires all project applicants to consult the Cortese List and determine whether any given project site is within a hazardous materials site on the List. If so, the project applicant is required to notify the City in writing prior to the issuance of a building permit. Site-specific Phase I environmental site assessments would be required for projects where the presence of hazardous materials is known or suspected and, if necessary, subsequent Phase II soil/groundwater testing and remediation could be required before site development. Phase I environmental site assessments have already been performed for some of the Specific Plan EIRs in the western portion of the planning area, and mitigation measures requiring further investigation and remediation of hazardous materials, as necessary, were adopted as part of those EIRs. Following the completion of site-specific investigations, remediation of contaminated sites as required by DTSC, RWQCB or other regulatory agency (depending on which agencies are providing regulatory oversight) is required before development permits can be issued by the city. For existing hazardous materials sites where land use controls are in place, the City is required by law to consult with appropriate regulatory agency prior to issuance of a permit for construction, or for project operation that would involve a change in the existing land use.

To prevent future contamination due to projects developed under the General Plan, the City would continue to require Hazardous Materials Management Plans and, where necessary, Risk Management Prevention Plans pursuant to state law to ensure facilities that use hazardous materials or involve hazards are appropriately monitored and regulated. The use of toxic or hazardous materials in larger quantities requires the filing of a business plan for emergency response pursuant to Section 25503.5 of the California Health and Safety Code. All users are required to submit a list of hazardous and toxic materials with a discussion of potential chronic and acute long-term health hazards and toxicological effects, including those on children, from acute short-term or chronic long-term exposure. In addition, plans must be submitted specifying procedures for mitigating the emissions of toxic substances and groundwater monitoring and for identifying methods of hazardous waste disposal. At the time of application for building permits, all projects are reviewed for compliance with the Placer County Hazardous Waste Management Plan.

In combination with existing required federal and state regulations pertaining to hazardous site cleanup, ongoing remedial activities at known contamination sites, site-specific environmental site assessments and location of underground pipelines prior to site-specific earthmoving activities, and implementation of existing and proposed General Plan Update policies, would reduce the potential impacts of future development related to hazardous materials, and this impact would be **less than significant**.

Mitigation Measure

No mitigation is required.

IMPACT 4.10-4 **Impair Implementation of or Physical Interference with an Adopted Emergency Response Plan or an Emergency Evacuation Plan.** *Buildout of the General Plan would add additional traffic and residences requiring evacuation in case of an emergency. Implementation of proposed General Plan Update policies would ensure conformance with local emergency-response programs and continued cooperation with emergency-response service providers. This impact would be less than significant.*

The City participates in updates to and implementation of Multi-Hazard Mitigation Plans, which are designed to protect against the hazards that affect the City, protecting the lives and property of all of its citizens, as well as reducing the costs to the City. The Plan process is designed to provide a forum for collaboration, establishing the groundwork for future interagency cooperation in pre-disaster planning, emergency response, and evacuation, if necessary. Implementation of the proposed General Plan Update would create additional traffic and develop new residences and businesses requiring evacuation in case of an emergency.

During the planning and permitting of projects developed under General Plan buildout, the City Development Services Department, Planning Division will communicate with emergency service providers, particularly the Roseville Fire Department (which serves as the City's CUPA) on issues of mutual interest, such as emergency response plans. The City will follow guidance in the Emergency Operations Plan, which establishes an Emergency Management Organization (EMO) and assigns functions and tasks consistent with California's Standardized Emergency Management System (SEMS) and the National Incident Management System (NIMS).

The focus of General Plan policy, given the City's jurisdiction and the role of general plans, is on the location of development, design of circulation systems, and other physical elements that are required for emergency response. An efficient roadway and circulation system is vital for the evacuation of residents and the mobility of fire

suppression, emergency response, and law enforcement vehicles. Sections 5, 6, and 7 of the City of Roseville Design and Construction Standards contain a variety of requirements that are intended to provide safe access to property and on streets throughout the City for motorists and emergency vehicles including widths, sight lines, markings, signals, and location of driveways, turn lanes, streets, and traffic lights.

The following proposed General Plan Update goals and policies related to evacuation routes and emergency response are proposed for revision, with additions shown in **bold, underlined** text and deletions shown in ~~strikethrough~~ text:

- **Policy CIRC1.5: Design intersections and public rights-of-ways in accordance with state and federal accessibility requirements.**

The proposed General Plan Update policy changes listed above would ensure appropriate access, including in cases of emergency, and would not result in any adverse environmental impacts.

Conclusion

Existing General Plan Circulation-Functional Classification Goal 1, and Fire Protection Goal 2 and Policy 9 (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Policy CIRC1.5 listed above, in addition to implementation of the City's Multi-Hazard Mitigation Plan, Emergency Operations Plan, and City Design Standards and Guidelines, would ensure that future development would not interfere with emergency response or evacuation plans. This impact is considered **less than significant**.

Mitigation Measure

No mitigation is required.

IMPACT 4.10-5 *Exposure of People and Structures to Significant Risk of Urban and Wildland Fires. Buildout of the General Plan could potentially increase risk to fire for both people and property. However, implementation of proposed General Plan Update policies and actions, along with existing regulations would ensure that people and structures would not be exposed to a significant risk of loss of injury involving fires. This impact is considered less than significant.*

Areas at risk for extreme wildfires are designated by CAL FIRE as those lands where dense vegetation with severe burning potential prevails, as well as areas with limited access due to topography or lack of roads. The central and eastern portions of the Planning Area are heavily urbanized. The western portion of the Planning Area consists of agricultural land, including row crops and orchards. The Planning Area is not located in or near state responsibility areas or land classified as very high fire hazard severity zones. The Planning Area is designated by CAL FIRE as a Local Responsibility Area, and there are no Very High Fire Hazard Severity Zones in or adjacent to the Planning Area (CAL FIRE 2008). Therefore, the wildfire hazard risk for the City is considered low.

Grassland fires are a concern in urban areas, but the greater fire threat in the core of the City's urban areas is from structural fires. Fire and building codes are designed to reduce overall fire risk related to structural fires. Older buildings can be retrofitted to current safety standards. Fire stations, equipment, and personnel must be planned in coordination with development to ensure adequate fire suppression in the City's growing areas. Connected

transportation networks are important to ensuring emergency access to both the City's urban and rural areas, to facilitate rapid response to fires.

Fire protection services are provided by the Roseville Fire Department. All development is required to comply with the Fire Code, City of Roseville Design and Construction Standards, and with state requirements for defensible space surrounding rural properties and water for adequate fire flows.

The following proposed General Plan Update goals and policies related to fire risks in the City are proposed for revision, with additions shown in **bold, underlined** text and deletions shown in ~~striketrough~~ text:

- **Policy CIRC1.5: Design intersections and public rights-of-ways in accordance with state and federal accessibility requirements.**

The proposed General Plan Update policy changes listed above would ensure appropriate design for roadways and intersections, which would ensure adequate access, including for fire response. This policy would not result in any adverse environmental impacts.

Conclusion

Existing General Plan Circulation-Functional Classification Goal 1, Fire Protection Goals 1 and 2 and Policies 1, 4, 5, 6, and 9, and Privately-Owned Utilities Policy 2 (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Policy CIRC1.5 listed above, would ensure appropriate provision of access for fire-fighting equipment, provision of appropriate fire-fighting personnel and equipment, and the placement of new electrical utility lines underground, all of which would reduce the risk associated with fires.

State regulations ensure adequate emergency access and evacuation in the case of fire; installation of sprinkler systems, where needed, as well as other building and fire code requirements designed to protect the public health; and inclusion of defensible space in areas prone to wildfire. Along with City Design and Construction Standards related to roadways and ingress and egress points for emergency vehicles, implementation of the City's Multi-Hazard Mitigation Plan and Emergency Operations Plan, and implementation of existing and proposed General Plan Update policies would ensure that people or structures would not be exposed to a significant risk of loss of injury involving fires. With the incorporation of these policies and regulations, this impact would be **less than significant**.

Mitigation Measure

No mitigation is required.

4.11 PUBLIC SERVICES AND RECREATION

4.11.1 INTRODUCTION

This section describes potential impacts related to the provision of public services and facilities, including fire protection, law enforcement, public schools, and parks and recreation. To provide context for the impact analysis, this section begins with an environmental setting describing the existing conditions in the Planning Area related to public services and recreation. Next, the regulatory framework is described, which informs the selection of the significance thresholds used in the impact analysis. The regulatory framework also includes existing General Plan policies related to the impact analysis of this section. The section concludes with the applicable significance thresholds, the impacts of the proposed changes to adopted General Plan policies, recommended mitigation measures, and the significance conclusions.

As part of the impact analysis, Notice of Preparation (NOP) comments were reviewed to help guide the analysis, and any comments were integrated into the analysis. No NOP comments related to public services or recreation were received.

4.11.2 ENVIRONMENTAL SETTING

4.11.2.1 POLICE PROTECTION SERVICES

The Placer County Sheriff's Department is responsible for providing law enforcement services to the unincorporated areas immediately adjacent to the City, including the City's sphere of influence and Urban Reserve area. The Sheriff's Department also acts as the County coroner and serves legal papers in all areas of the County. The City of Roseville maintains an inter-agency coordination program between the Roseville Police Department and the Sheriff's Department. In addition, the City has inter-agency agreements with the Cities of Rocklin and Lincoln to provide 911 and dispatching services in the event of an evacuation or system failure.

The City of Roseville Police Department, headquartered at 1051 Junction Boulevard, provides primary law and traffic enforcement services within the City limits. In 2019, the police department was authorized for 137 sworn police officers and 65 civilian positions (Roseville Police Department 2019).

The department provides patrol duty, including parks and open space areas; responds to and investigates crimes and other calls for service; provides animal control services; and traffic safety (i.e., enforcing the Vehicle Code and responding to traffic collision or traffic hazard calls). The Roseville Police Department has divided the City into seven major patrol beats, east and west of I-80, that are further divided into reporting districts or neighborhood areas (Roseville Police Department 2019). In addition to routine patrol, traffic enforcement, and responding to calls for service, the Roseville Police Department assigns a beat officer to neighborhood areas on a long-term basis. Each beat officer monitors his or her assigned area for recurring crime, helps organize neighborhood groups, attends community meetings, and works with residents and businesses to solve problems. In 2019, patrol units responded to 77,872 calls for service, which resulted in 4,390 arrests and misdemeanor citations (Roseville Police Department 2018).

The Roseville Police Department staffs and houses its own communications center, which is the 9-1-1 PSAP (public safety answering point) for the City of Roseville. The communications center dispatches for Roseville Police and Fire. The Roseville Police Department has inter-agency agreements with the Placer County Sheriff's

Office, as well as the Cities of Rocklin and Lincoln to provide 911 and dispatching services in the event of an evacuation or system failure. In addition, the Roseville Police Department cooperates with the Union Pacific Railroad's private police department ensure provision of back-up services within the Union Pacific rail yard as needed.

The Roseville Police Department also offers non-traditional police services. Currently the department assigns sworn police officers to every public high school campus and offers numerous low- or no-cost recreational programs for youth through the Roseville Police Activities League. The Social Services Unit coordinates the department's response to social service-related problems, such as unsheltered individuals, delinquent or out-of-control youth, elder abuse, child neglect, and individuals with mental health concerns. The department also staffs a Crime Suppression Unit that focuses on community specific problems related to drugs, gangs, and human exploitation.

The police department sets a response goal of 3 minutes or less for 90 percent of emergency calls (City of Roseville 2016). However, the department has not adopted a formal staffing standard for the police department. This allows the department to better respond to changes in the frequency and nature of crimes in the city (City of Roseville 2016).

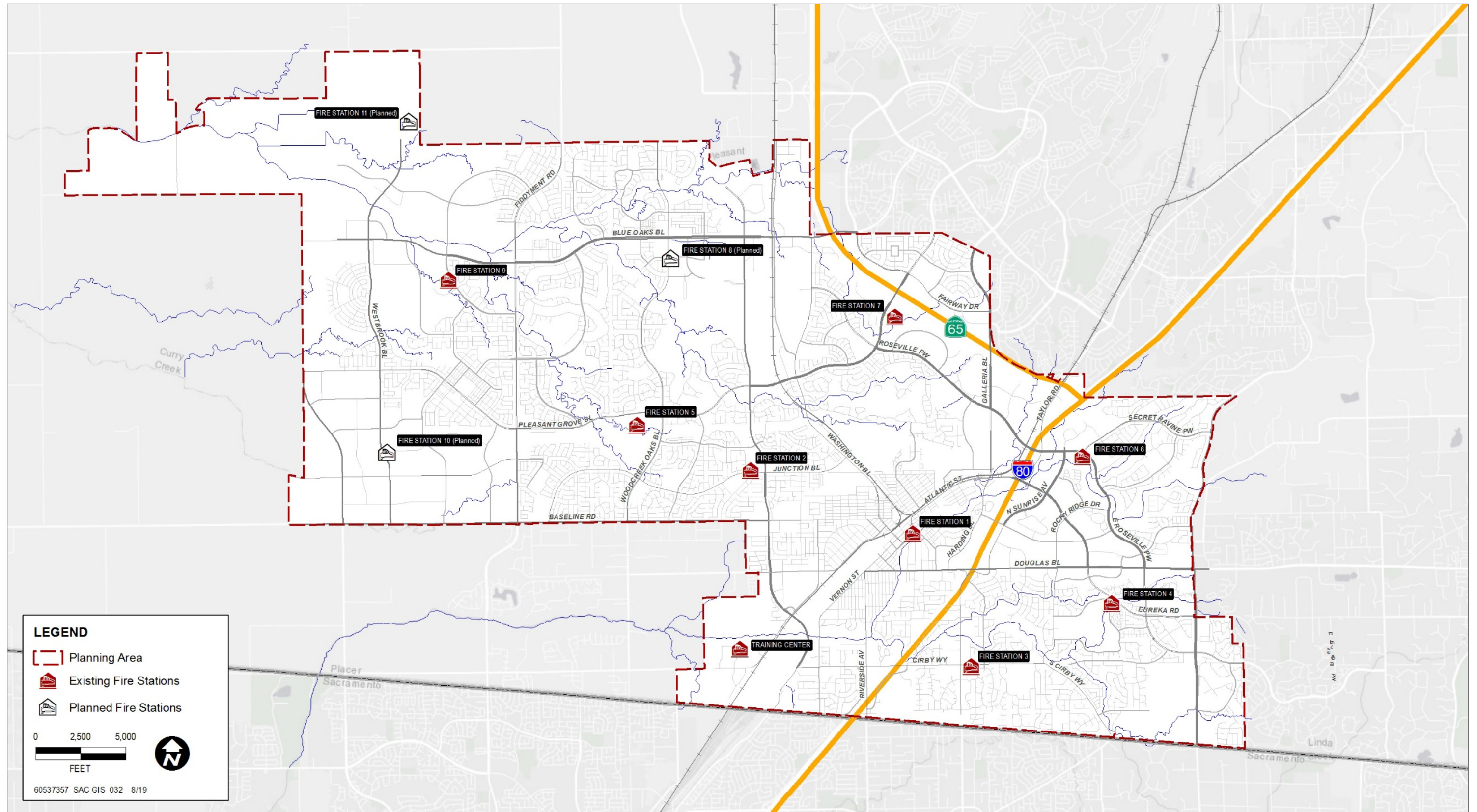
4.11.2.2 FIRE PROTECTION SERVICES

The Roseville Fire Department provides fire protection, fire suppression, emergency medical services, and hazardous materials management within the City. The Roseville Fire Department employs approximately 119 personnel and operates from eight fire stations within the City limits (City of Roseville 2019, Roseville Fire Department 2019). As shown on Exhibit 4.11-1, these fire stations are located at:

- ▶ Station No. 1 at 401 Oak Street
- ▶ Station No. 2 at 1398 Junction Boulevard
- ▶ Station No. 3 at 1300 Cirby Way
- ▶ Station No. 4 at 1900 Eureka Road
- ▶ Station No. 5 at 1565 Pleasant Grove Boulevard
- ▶ Station No. 6 at 1430 E. Roseville Parkway
- ▶ Station No. 7 at 911 Highland Pointe Drive
- ▶ Station No. 9 at 2451 Hayden Parkway

The department's frontline fire apparatus fleet consists of staffed engines, aerial ladder trucks, wildland engines, a hazardous materials response vehicle, a technical rescue vehicle, and command vehicles. Each station is staffed by a three-person paramedic engine company. Fire Stations 1 and 7 also include a four-person paramedic truck company. Stations 7 and 9 are designed to serve the Northwest, North Central, and the West Roseville Specific Plan areas. In addition, the department maintains an appropriate number of reserve apparatus and one engine is dedicated to the Fire Training Center.

Fire Department responses can generally be grouped into three categories. The first, fire calls, are defined as those related to fires, including structural, vegetation, and vehicle. Emergency medical service calls are identified as those calls related to medical emergencies. Non-fire calls refer to all other calls, such as investigations of possible fire hazards, citizen assists, false alarms, and other miscellaneous calls. As the City grows, the number of



Source: City of Roseville, 2017

Exhibit 4.11-1

Existing and Planned Fire Stations

This page intentionally left blank

incidents requiring a Fire Department has increased, with emergency medical service incidents making up the majority of responses. With improvements to building standards, fire prevention activities, and public education, fires represent approximately five percent of the total call volume.

Fire hazards include those related to structures and those related to vegetation in open spaces. Buildings constructed prior to 1980 pose a relatively greater fire risk since building codes have become progressively more effective, through design and construction standards, in improving fire safety. The California Department of Forestry and Fire Protection (CAL FIRE) has established a fire hazard severity classification system to assess the potential for wildland fires. The Planning Area is designated by CAL FIRE as a Local Responsibility Area, and there are no Very High Fire Hazard Severity Zones. However, the Fire Department reviews development that proposes open space or is located adjacent to open spaces to ensure appropriate fire safety provisions are included.

Fire stations are located strategically throughout the community in order to place resources within an acceptable response distance. Response time from these stations is one of the most important measurements of fire department performance. Time is critical – two commonly referred to criteria used to quantify the importance of fire department response time include (1) the time of flashover in a structure fire (where a fire goes beyond the control capability of a single alarm) and (2) the time where irreversible brain damage and chances of survival are greatly reduced for patients that are pulseless and non-breathing. The Fire Department has established response performance measures based on the Fire Department's current capabilities and resources, which are outlined in the Department's Standards of Cover document.

The Insurance Service Office (ISO) rating measures fire departments' effectiveness, based on available facilities and equipment, personnel, and quantity of water available for firefighting. Roseville rates high for urban areas among its neighboring jurisdictions, with an ISO rating of 2 on a scale of 1 to 10 (the lower the number, the higher the rating). Roseville's supply and availability of water for firefighting needs is sufficient to serve demands with buildout of the General Plan. Water pressure must be sufficient, but adequate water supply is the key to effective fire suppression.

The Roseville Fire Department has planned for three additional fire stations to meet future demands for fire protection services and to maintain adequate levels of service in the city. Station No. 8 is planned for the North Industrial planning area, Station No. 10 is planned for the Sierra Vista Specific Plan area, and Station No. 11 is planned for the Amoruso Ranch Specific Plan area (City of Roseville 2016).

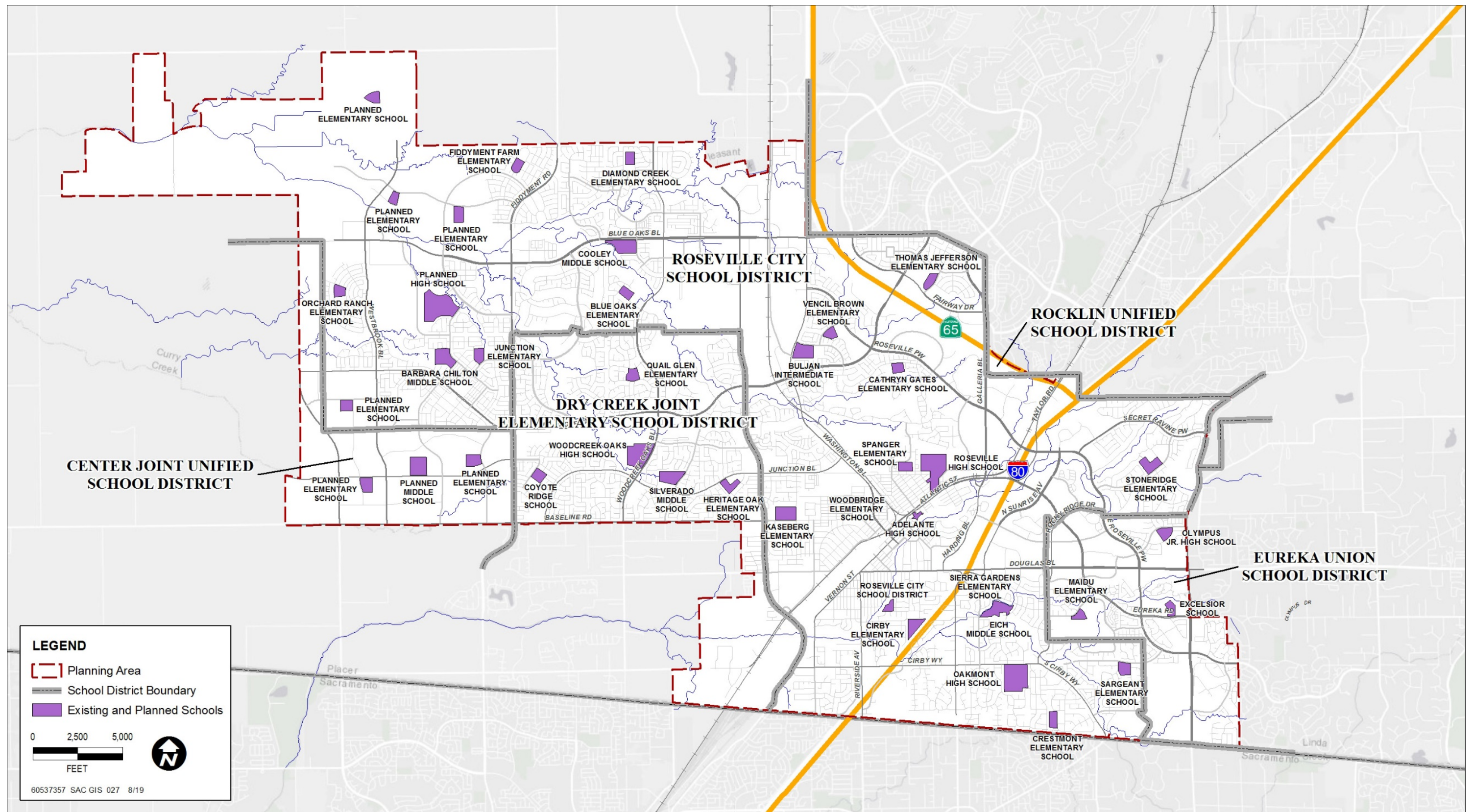
The City maintains mutual and automatic aid agreements with the Placer County Fire Department, which provides fire protection to areas west of the City; the South Placer Fire Protection District, which provides fire protection to areas east of the City; the Rocklin Fire Department, which provides fire protection to the north; and the Sacramento Metropolitan Fire District, which provides fire protection to the south. Virtually all fire departments and districts, including the City, are part of the statewide mutual aid agreement. This agreement provides that a fire department will help any other fire department when the need arises. A similar agreement exists between all fire agencies in Placer County.

4.11.2.3 PUBLIC SCHOOLS

School services in Roseville are provided by the Roseville City School District, Eureka Union School District, Dry Creek Joint Elementary School District, Center Joint Unified School District, and Roseville Joint Union High

School District. District boundaries are shown on Exhibit 4.11-2. Table 4.11-1 shows 2018-2019 enrollment and design capacity for schools from these districts that serve the City.

| Table 4.11-1 Schools Serving the City of Roseville | | | | |
|---|--|---------------|------------------------|----------|
| School | Location | Grades Served | Enrollment (2018-2019) | Capacity |
| Roseville City School District | | | | |
| Elementary | | | | |
| Blue Oaks | 8150 Horncastle Avenue | K-5 | 504 | 600 |
| Brown | 250 Trestle Drive | K-5 | 401 | 550 |
| Cirby | 4501 Bob Doyle Drive | K-5 | 387 | 550 |
| Crestmont | 1501 Sheridan Avenue | K-5 | 491 | 550 |
| Diamond Creek | 3151 Hopscotch Way | K-5 | 592 | 600 |
| Fiddymont Farm | 4001 Brick Mason Circle | K-5 | 605 | 600 |
| Gates | 1051 Trehowell Drive | K-5 | 571 | 600 |
| Jefferson | 750 Central Park Drive | K-5 | 469 | 600 |
| Junction | 2150 Ellison Drive | K-5 | 754 | 600 |
| Kaseberg | 1040 Main Street | K-5 | 329 | 550 |
| Orchard Ranch | 4375 Brookstone Drive | K-5 | 728 | 600 |
| Sergeant | 1200 Ridgecrest Way | K-5 | 444 | 500 |
| Spanger | 699 Shasta Street | K-5 | 415 | 550 |
| Woodbridge | 515 Niles Street | K-5 | 303 | 350 |
| Stoneridge | 2501 Alexandra Drive | K-5 | 642 | 650 |
| Middle/Intermediate | | | | |
| Buljan | 100 Hallissy Drive | 6-8 | 972 | 1,200 |
| Barbara Chilton | 4501 Bob Doyle Drive | 6-8 | 865 | 1,200 |
| Cooley | 9300 Prairie Woods Way | 6-8 | 907 | 1,200 |
| Eich | 1509 Sierra Gardens Drive | 6-8 | 949 | 1,200 |
| Roseville Joint Union High School District | | | | |
| Oakmont | 1710 Cirby Way, Roseville | 9-12 | 2,044 | 2,300 |
| Roseville | 1 Tiger Way, Roseville | 9-12 | 1,968 | 2,300 |
| Woodcreek | 2551 Woodcreek Oaks Boulevard, Roseville | 9-12 | 2,127 | 2,300 |
| Eureka Union School District | | | | |
| Excelsior | 2701 Eureka Road | 4-6 | 530 | 600 |
| Maidu | 1950 Johnson Ranch Drive | K-3 | 419 | 600 |
| Olympus Junior High | 2625 La Croix Drive | 6-8 | 458 | 600 |
| Dry Creek Joint Elementary School District | | | | |
| Coyote Ridge | 1751 Morningstar Drive | K-5 | 748 | 1,047 |
| Heritage Oak | 2271 Americana Drive | K-5 | 526 | 800 |
| Quail Glen | 1250 Canevari Drive | K-5 | 623 | 750 |
| Silverado Middle | 2525 Country Club Drive | 6-8 | 1,055 | 1,090 |
| Center Union School District | | | | |
| Oak Hill | 3909 North Loop Boulevard | K-6 | 738 | 800 |
| Wilson Riles Middle | 4747 PFE Road | 7-8 | 642 | 1,000 |
| Center High | 3111 Center Court Lane | 9-12 | 1,292 | 1,800 |
| Source: California Department of Education 2019, City of Roseville 2010, City of Roseville 2016, Dry Creek Joint Elementary School District 2015, Roseville City School District 2018 | | | | |



Source: City of Roseville 2017

Exhibit 4.11-2

Existing & Planned Schools& District Boundaries

This page intentionally left blank

The Roseville City School District serves the majority of elementary and intermediate school needs in the City. The district has fifteen elementary schools (grades K–5) and four middle schools (grades 6–8) (Exhibit 4.11-2). Enrollment for the 2018–2019 school year for the Roseville City School District was 11,344 students (California Department of Education 2019).

The Roseville Joint Union High School District provides educational services for the majority of the City’s high school students (grades 9–12). The Roseville Joint Union High School District currently operates three comprehensive high schools, a continuation school, adult school, and an independent study school within the City limits; one comprehensive high school within unincorporated Placer County; and one comprehensive high school within unincorporated Sacramento County. High school students within the City limits currently attend Roseville High School, Oakmont High School, Woodcreek High School (Exhibit 4.11-2). Enrollment for the 2018–2019 school year for the entire Roseville Joint Union High School District was 10,304 students and enrollment for district high schools serving the City was 6,139 (California Department of Education 2019).

The Eureka Union School District provides educational services for students in elementary (grades K-6) and middle (grades 7-8) school in the community of Granite Bay and the City. The district operates three schools that serve grades K-3, two schools that serve grades 4-6, and two schools that serve grades 7-8. Excelsior Elementary School, Maidu Elementary School, Olympus Junior High School are within the City limits and serve students in the eastern portion of the City (Exhibit 4.11-2). Enrollment for the 2018-2019 school year for the entire Eureka Union School District was 3,836 students and enrollment for district schools serving the City was 1,407 (California Department of Education 2019).

Dry Creek Joint Union School District provides educational services for students in portions of unincorporated Sacramento and Placer Counties and the City. The district operates six elementary schools (grades K-5), one K-8 school, and two middle schools (grades 6-8). Coyote Ridge Elementary School, Heritage Oak Elementary School, Quail Glen Elementary School, and Silverado Middle School are within the City limits and serve students in the southwestern portion of the City (Exhibit 4.11-2). Enrollment for the 2018-2019 school year for the entire Dry Creek Joint Union School District was 6,808 students and enrollment for district schools serving the City was 2,952 (California Department of Education 2019).

Center Unified School District provides educational services for students in elementary (grades K-6), middle (grades 7-8), and high (grades 9-12) school. The district operates four elementary schools, one middle school and two high schools in unincorporated Sacramento County. Three of these schools, Oak Hills Elementary School, Wilson Rile Middle School, and Center High School, serve students within the southwestern portion of the City (Exhibit 4.11-2). Enrollment for the 2018-2019 school year for the entire Center Unified School District was 4,229 students and enrollment for district schools serving the City was 2,672 (California Department of Education 2019).

Planned Facilities

The Roseville City School District anticipates needing six elementary schools, one in the Amoruso Ranch Specific Plan area, three in the West Roseville Specific Plan area, one in the Creekview Specific Plan area, and one in the Sierra Vista Specific Plan area, and one middle school in the West Roseville Specific Plan area to meet future growth within the City (City of Roseville 2016, Roseville City School District 2018). One of these planned elementary schools, Riego Creek Elementary, located at 3255 Pruett Drive in the West Roseville Specific Plan area, is currently under construction. Riego Creek Elementary School is expected to be operational by August

2020 and have a design capacity for 800 elementary school students (Roseville City School District 2019). The district's elementary school planned for the Sierra Vista Specific Plan area is expected to be constructed and operational by 2022 and have a design capacity for 600 elementary school students (Roseville City School District 2018).

The Roseville Joint Union High School District's West Park High School, located at 2401 High School Road, is under construction in the West Roseville Specific Plan area. The West Park High School is expected to be operational by August 2020 and have a design capacity for 2,300 high school students. Students in the West Park High School attendance boundary will attend Oakmont High School until completion of the West Park High School (Roseville Joint Union High School District 2019).

The Center Joint Unified School District has two elementary schools and one middle school planned for the Sierra Vista Specific Plan area (City of Roseville 2016). There is currently no timeframe for construction of these schools.

4.11.2.4 PARKS

Roseville's park and recreation facilities are operated by the City of Roseville Parks, Recreation & Libraries Department. The Department is responsible for the development and maintenance of the City's various recreational facilities, including community centers (Maidu Regional and Mahany), parks, public golf courses, public swimming pools, and open space areas. In addition, the Department manages a full range of recreation programs for the residents of the community.

The City of Roseville has an adopted standard of nine acres of parkland per 1,000 residents and defines "parkland" to include public developed parks, recreational open space, and joint-use park-school facilities. The nine-acre standard is further divided into six acres of developed parks per 1,000 residents and three acres of open space per 1,000 residents. The City parkland standard has historically been met through the dedication of parkland as a part of development. Developed parks include existing and planned City parks, as well as joint-use park-school parks and are shown on Exhibit 4.11-3 and discussed further below. In 2016, the City had 1,043 acres of parkland.

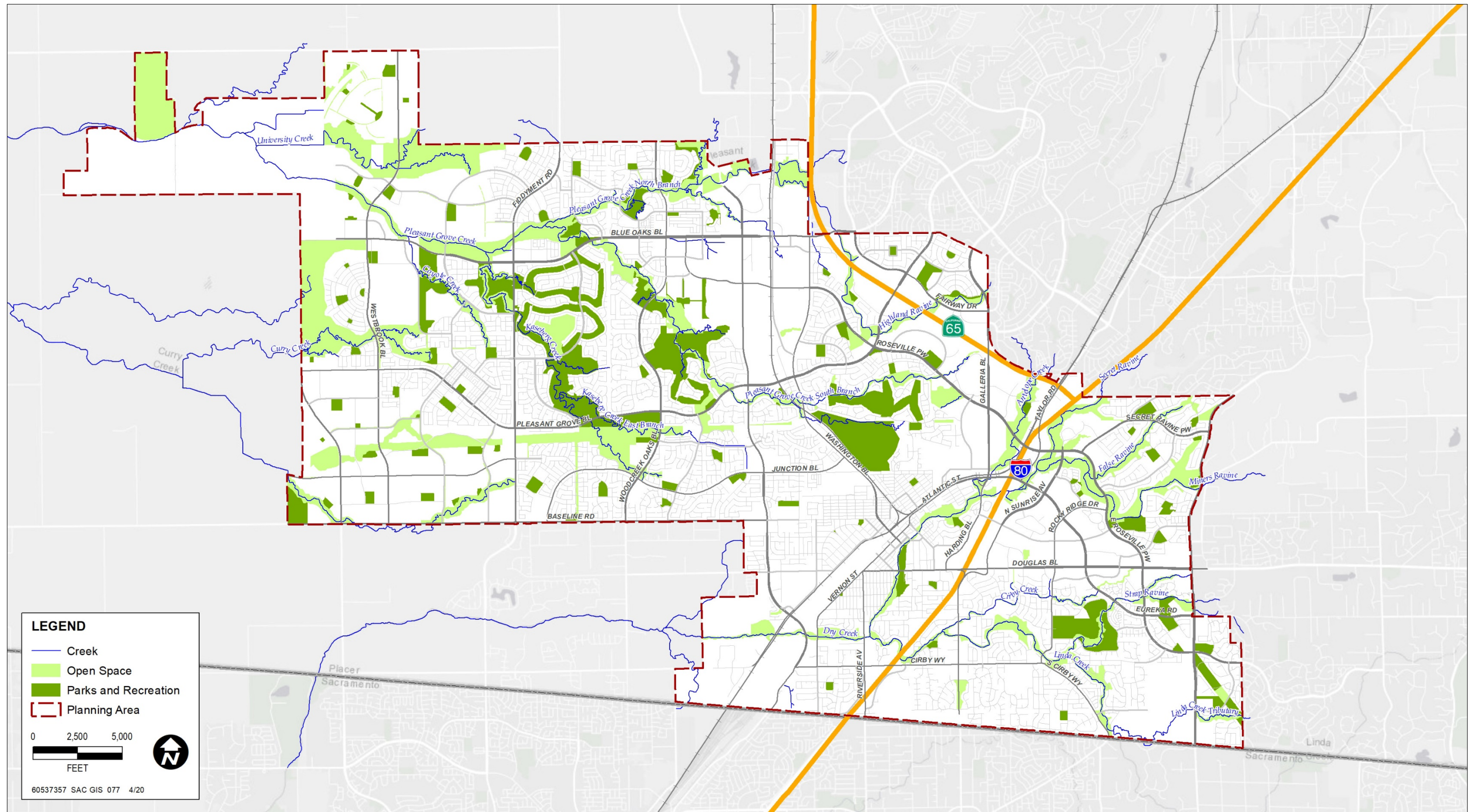
Parkland Definitions

The following discussion describes the components of Roseville's park and recreation system.

Traditional Parklands

Traditional parklands refer to City-owned sites that provide a variety of active and passive recreational spaces and facilities. These sites are the type of facilities most people envision when describing a park. Traditional parklands typically include formal/programmable facilities such as ball fields, multi-use turf areas, hard court areas and informal/self-directed amenities, such as walking and bicycling paths, non-programmed turf areas, and picnic and play areas. Such areas are normally counted on a 1:1 ratio toward the nine acres per 1,000 population standard.

The City has classified its traditional parkland sites into the following three primary categories. These include neighborhood parks, neighborhood/school parks, and citywide (regional) parks. These categories are based on factors including the size of the site, facilities provided, location, and area served.



Source: City of Roseville, 2017

Exhibit 4.11-3

Open Space and Parks and Recreation Areas

This page intentionally left blank

- ▶ **Neighborhood Park.** A neighborhood park range in size from 3 to 5 acres and can be generally defined as a landscaped park designed to serve a concentrated population or neighborhood. They are often developed as a recreation facility with a balance of passive/informal/self-directed and active/formal/programmable recreation areas serving all ages. Typical improvements are play areas, picnic tables (covered or uncovered), athletic fields, multi-use turf, hard courts, natural areas, pathways, security lighting, and in some cases, unique or single-purpose amenities. Park improvements shall consider a one hour to one-and-a-half hour stay per visit.
- ▶ **Neighborhood/School Park.¹** School park areas range in size from 5 to 10 acres and are facilities developed adjacent to school land that is available for City use. Facilities would focus on clustering active ball fields whenever possible in order to alleviate impacts to neighborhood parks and to provide more cost effective maintenance practices. The school and park facilities may be jointly used, and/or developed. They are often developed as an active/formal/programmable recreation facility serving all ages. Typical facilities may include play areas, athletic fields (non-lighted, except adjacent to high school sites), picnic areas, hard courts, game courts, joint off-street parking, pathways, and security lighting. Shared or joint-use facilities could include swimming pools, splash pads, gymnasiums, hard courts, sports courts, and specialty elements. Restrooms may be included, but are not required. The facilities could be subject to use restriction and/or maintenance agreements defined in a specific joint-use agreement between the school districts and the City. Park standards include consideration of a two- to two-and-a-half-hour stay per visit.
- ▶ **Citywide Park.** Citywide parks range in size from 4 to 200 acres or more and are designed to accommodate a wider variety and higher intensity of recreational uses than neighborhood parks, and are frequently identified as unique recreational centers serving the entire Roseville population and region. These facilities are designed to “cluster” active sport elements to accommodate city-wide or regional needs such as sports tournaments, special events, and/or tourism to provide more cost-effective maintenance practices. These parks may include unique recreational amenities, such as plazas, town centers, large specialty recreation facilities, swimming pools, splash pads, libraries, community centers, outdoor areas, competitive sports complexes, tennis courts, sports courts and sports lighting, concessions, nature centers, large children’s play areas, large group picnic facilities, trail systems, transit stops, outdoor amphitheaters, water-oriented facilities for boating, swimming, and fishing, restrooms, and park-and-ride within parking lots. Citywide facilities may be stand-alone or located adjacent to schools. Park standards include consideration of half-day, all-day, or multiple-day stays per visit.

Open Space Lands

Open space areas are defined as wetlands, vernal pool preserves, oak woodlands, watershed/riparian areas, and undeveloped buffer lands (aka greenbelts). These lands may be used as passive/informal/self-directed recreation for visual and aesthetic enjoyment. In addition, such areas may accommodate bikeway or other multi-use trail connections. Open space areas also provide value in terms of counteracting the effects of climate change and protecting special-status species and their habitat.

Other Green Space

Other green spaces include greenways and paseos. In most instances, these other green spaces are not included in the City’s parkland standard. Greenways/paseos are generally located in the West Riverside Specific Plan, Sierra

¹ The multi-use of school and park facilities is also addressed in the school component of the Public Facilities Element.

Vista Specific Plan/Westbrook, Creekview, the Hewlett-Packard Campus Oaks Master Plan, and Amoruso Ranch Specific Plan Areas, as well as the one existing greenway along the Sunrise Corridor.

- ▶ **Paseos.** Paseos are provided to promote walking and biking by establishing connectivity between residences, parks, schools, local businesses, trail systems, and other connections. They may include landscaping components, such as sidewalks, plant materials, and bike/pedestrian trails. Paseos vary in width from 25-100 feet, depending on the intended use and location. Paseos are open to the surrounding neighborhood by maintaining a street frontage to one side ensuring that paseos are not hidden.
- ▶ **Greenways.** Greenways are defined as wide, usually linear, landscape corridors. They usually consist of very simple landscaping features, such as turf, trees, shrubs, or no landscaping at all, and usually include sidewalks and bike/pedestrian trails. They typically link streets together to provide opportunities such as walking or biking, and they may be a prominent component of a Class I bike path system. They differ from paseos in that they can be undeveloped, may imply transportation and movement, and usually have greater widths and lengths. While containing some characteristics of open space areas, they may also contain some formal landscaping features and irrigation.

4.11.2.5 LIBRARIES

The City's library system provides facilities and services for people within the city as well as Placer, Sacramento, and Sutter Counties. The Downtown Library is located at 225 Taylor Street in Downtown Roseville adjacent to the Civic Center. The Maidu Library located in Maidu Regional Park in southeast Roseville. The Martha Riley Community Library is located at 1501 Pleasant Grove Boulevard within Mahany Park that includes meeting rooms and the Utility Exploration Center.

4.11.3 REGULATORY FRAMEWORK

4.11.3.1 FEDERAL

There are no relevant federal policies, regulations, or laws related to public services and recreation.

4.11.3.2 STATE

California Occupational Safety and Health Administration

In accordance with California Code of Regulations Title 8 Sections 1270 "Fire Prevention" and 6773 "Fire Protection and Fire Equipment," the California Occupational Safety and Health Administration has established minimum standards for fire suppression and emergency medical services. The standards include, but are not limited to, guidelines on the handling of highly combustible materials; fire hose sizing requirements; restrictions on the use of compressed air; access roads; and the testing, maintenance, and use of all firefighting equipment.

Fire Codes and Guidelines

The California Fire Code (CFC) contains regulations relating to construction, maintenance, and use of buildings. Topics addressed in the code include fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, hazardous materials storage and use, provisions intended to protect and assist fire responders, industrial processes, and many other general and specialized fire safety requirements

for new and existing buildings and the surrounding premises. The California Fire Code contains specialized technical regulations related to fire and life safety.²

State School Funding

California Education Code Section 17620 authorizes school districts to levy a fee, charge, dedication, or other requirement against any development project for the construction or reconstruction of school facilities, provided that the district can show justification for levying of fees. California Government Code Section 65995 limits the fee to be collected to the statutory fee unless a school district conducts a School Facility Needs Assessment (California Government Code Section 65995.6) and meets certain conditions.

Senate Bill 50 (Chapter 407, Statutes of 1998) instituted a school facility program by which school districts can apply for state construction and modernization funds. This legislation imposed limitations on the power of cities and counties to require mitigation of school facilities impacts as a condition of approving new development. It also provided the authority for school districts to levy fees at three different levels:

- ▶ **Level I fees** are the current statutory fees allowed under Education Code Section 17620. As mentioned above, this code section authorizes school districts to levy a fee against residential and commercial construction to fund school construction or reconstruction. These fees are adjusted every 2 years in accordance with the statewide cost index for Class B construction as determined by the State Allocation Board.
- ▶ **Level II developer fees** are outlined in Government Code Section 65995.5. This code section allows a school district to impose a higher fee on residential construction if certain conditions are met. These conditions include having a substantial percentage of students on multitrack year-round scheduling, having an assumed debt equal to 15–30% of the district’s bonding capacity (the percentage is based on revenue sources for repayment), having at least 20% of the district’s teaching stations housed in relocatable classrooms, and having placed a local bond on the ballot in the past 4 years that received at least 50% plus one of the votes cast. A facility needs assessment must demonstrate that the need for new school facilities for unhoused pupils is attributable to projected enrollment growth from the construction of new residential units over the next 5 years.
- ▶ **Level III developer fees** are outlined in Government Code Section 65995.7. This code section authorizes a school district that has been approved to collect Level II fees to collect a higher fee on residential construction if state funding becomes unavailable. This fee is equal to twice the amount of Level II fees. However, if a district eventually receives state funding, this excess fee may be reimbursed to the developers or subtracted from the amount of state funding.

² An important requirement for fire suppression is adequate fire flow, which is the amount of water, expressed in gallons per minute (gpm), available to control a given fire and the length of time that this flow is available. The availability of sufficient water flows and pressure is a basic requirement of the California Building Standards Code. The total fire flow needed to extinguish a structural fire is based on a variety of factors, including building design, internal square footage, construction materials, dominant use, height, number of floors, and distance to adjacent buildings. Minimum requirements for available fire flow at a given building are dependent on standards set in the California Fire Code. These fire flow requirements are 1,500 gpm for low- and medium-density residential (2-hour duration) and 2,500 gpm for high-density residential (3-hour duration).

School Site Selection and Criteria

CDE School Facilities Planning Division (SFPD) has prepared the *Guide to School Site Analysis and Development* (CDE 2000), which provides criteria for locating appropriate school sites in California. CDE's authority for approving proposed sites is contained in Education Code Section 17251 and in Title 5, CCR Section 14010. CDE's approval is a condition for school districts to receive state funds for the acquisition of sites under the state's School Facilities Program administered by the State Allocation Board. Districts using only local funds are still encouraged to seek CDE approval for the benefits that such outside review can provide.

CDE provides specific recommendations for school size in the publication *Guide to School Site Analysis and Development* (CDE 2000). This document suggests a ratio of 1:2 between buildings area and development grounds area. CDE is aware that in a number of cases, primarily in urban settings, smaller sites cannot accommodate this ratio. In such cases, CDE's SFPD may approve an amount of acreage less than the recommended gross site size and building-to-grounds ratio.

Certain health and safety requirements for school site selection are governed by state regulations and SFPD policies. These requirements are outlined in the *School Site Selection and Approval Guide* and relate to:

- ▶ proximity to airports, high-voltage power transmission lines, railroads, and major roadways;
- ▶ presence of toxic and hazardous substances;
- ▶ hazardous facilities and hazardous air emissions within 1/4-mile;
- ▶ proximity to high-pressure natural-gas lines, propane storage facilities, gasoline lines, pressurized sewer lines, or high-pressure water pipelines;
- ▶ noise;
- ▶ results of geological studies or soil analyses;
- ▶ traffic and school bus safety; and
- ▶ safety issues related to joint-use facilities.

Quimby Act (California Code 66477)

The Quimby Act (California Government Code Section 66477) was established by the California Legislature in 1965 to preserve open space and parkland in rapidly urbanizing areas of the state. The Quimby Act provides two standards for the dedication of land for use as parkland. If the existing area of parkland in a community is greater than 3 acres per 1,000 residents, then the community may require dedication based on a standard of up to 5 acres per 1,000 persons residing in the subdivision based on the current ratio of parkland per 1,000 residents. If the existing amount of parkland in a community is less than 3 acres per 1,000 residents, then the community may require dedication based on a standard of only 3 acres per 1,000 persons residing in the subdivision.

The Quimby Act requires a city or county to adopt standards for recreational facilities in its general plan if it is to adopt a parkland dedication or fee ordinance. The City has adopted its own parkland standards that exceeds the Quimby Act standards of 3 acres per 1,000 persons and currently provides approximately 8 acres per thousand.

It should be noted that the Quimby Act applies only to the acquisition of new parkland; it does not apply to the physical development of new park facilities or associated operations and maintenance costs. Therefore, the Quimby Act effectively preserves open space needed to develop park and recreation facilities, but it does not ensure the development of the land or the provision of park and recreation services to residents. In addition, the Quimby Act applies only to residential subdivisions. Nonresidential projects could contribute to the demand for park and recreation facilities without providing land or funding for such facilities. Quimby Act fees are collected by the local agency (e.g., park district, city, or county) in which the new residential development is located.

4.11.3.3 LOCAL

Existing City of Roseville General Plan

The existing Roseville General Plan (City of Roseville 2016) includes the following goals and policies related to public services and recreation.

Parks and Recreation Goal 1: Provide adequate park land, recreational facilities and programs within the City of Roseville through public and private resources.

Parks and Recreation Goal 2: Provide residents with both active and passive recreation opportunities by maximizing the use of dedicated park lands and open space areas.

- ▶ **Policy 1:** The City shall ensure the provision of nine acres of park land per 1,000 residents, except in certain instances in the Riverside and Downtown Specific Plan areas.
- ▶ **Policy 2:** Retain flexibility in applying parks standards, in terms of size, facilities and service areas, so that existing and future needs can be met.
- ▶ **Policy 3:** Consider allocating park credits for lands that provide active and passive recreational value.
- ▶ **Policy 4:** Base the provision of parks and recreation facilities on the needs of Roseville residents and assess these needs periodically.
- ▶ **Policy 5:** Cooperate with other jurisdictions to provide regional recreation facilities, where appropriate.
- ▶ **Policy 8:** Require that parks and recreational facilities be phased or fully completed so as to be available as adjacent residential uses are developed.
- ▶ **Policy 10:** Continue to provide a wide variety of programs, activities, and educational opportunities for the community.
- ▶ **Policy 12:** Ensure that new public parks and recreation facilities, open space, paseos, landscape areas and greenways provide adequate funding for initial development, as well as ongoing maintenance and operation.

Schools Goal 1: The provision of adequate school facilities is a community priority. The school districts and the City will work closely together to obtain adequate funding for new school facilities. If necessary, and where legally feasible, new development may be required to contribute, on the basis of need generated, 100% of the cost for new facilities.

Schools Goal 3: School facilities shall be available for use in a timely manner.

Schools Goal 4: The City will work with all school districts within the region to provide educational opportunities for all students.

- ▶ **Policy 1:** The City and the school districts will work cooperatively to explore all local and State funding sources in order to secure adequate funding for new school facilities.
- ▶ **Policy 2:** Adequate facilities must be shown to be available in a timely manner before approval will be granted to new residential development.
- ▶ **Policy 3:** Financing for new school facilities will be identified and secured before new development is approved.
- ▶ **Policy 4:** State facilities will be provided in response to needs identified by the districts and the City.
- ▶ **Policy 5:** The City and the school districts will work together to develop criteria for the designation of school sites and consider the opportunities for reducing the cost of land for school facilities. The City shall encourage the school districts to comply with City standards in the design and landscaping of school facilities.
- ▶ **Policy 7:** Designate public/quasi-public land uses in clusters so that the use of schools, parks, open space, libraries, child care, and community activity and service centers create a community or activity focus.

Police Services Goal: Maintain a professional law enforcement agency that proactively prevents crime; controls crime that the community cannot prevent; and, reduces fear and enhances the security of the community.

- ▶ **Policy 1:** Provide a high level of visible patrol services within the City.
- ▶ **Policy 2:** Respond to both emergency and routine calls for service in a timely manner consistent with department policy.
- ▶ **Policy 3:** Ensure that the Police Department utilizes modern technology and provides adequate training to maximize job performance.
- ▶ **Policy 5:** Provide extensive community-based service and education programs designed to prevent crime and emphasizes citizen protection and involvement.
- ▶ **Policy 6:** Continue to enforce, update, and expand the Building Security Ordinance.
- ▶ **Policy 8:** Coordinate with park rangers in patrolling parks and open space areas and continue coordination with other law enforcement agencies.

Fire Protection Goal 1: Protect against the loss of life, property, and the environment by the application of appropriate prevention, education, and operational measures.

- ▶ **Policy 1:** Continue to pursue and promote fire prevention programs and standards.
- ▶ **Policy 2:** Strive to achieve the following service levels:

- 8 minute 12 second Total Response Time
 - 11 minute 30 second Effective Response Force
 - 90 Second Call Processing Time
 - 90 Second Turnout Time
 - 5 minute 12 second Travel Time
 - Maintain ISO rating of 3 or better
- ▶ **Policy 3:** Monitor Fire Department service levels annually, concurrent with the City budget process and via quarterly reports.
 - ▶ **Policy 4:** Provide highly trained personnel to ensure effective suppression of fires, and safety for firefighters.
 - ▶ **Policy 5:** Seek to reduce fires by fully investigating the cause, origin and circumstances of each fire; collect and preserve evidence; coordinate with authorities in detection, apprehension, and prosecution of arsonists; pursue each investigation to its conclusion; and use resultant findings to develop more effective fire prevention programs.
 - ▶ **Policy 6:** Phase the timing of the construction of fire stations to be available to serve the surrounding service area.

Circulation–Functional Classification Goal 1: Provide guidance to the long-range planning of the City’s roadway system including design standards, right-of-way requirements and coordination with surrounding jurisdictions.

- ▶ **Circulation–Functional Classification Policy 5:** Design intersections and public rights-of-ways in accordance with state and federal accessibility requirements.

City of Roseville 2019 Design and Construction Standards

Section 8 of the Roseville design standards require a minimum flow of water for fire protection in accordance with the Roseville Fire Department and California Fire Code. For single-family detached houses, water mains must provide a flow of 1,500 gallons per minute in addition to the peak normal maximum daily consumption needs for a neighborhood. The required fire flow for multi-family, commercial, business, industrial, and school areas is determined on a case-by-case basis by the Roseville Fire Department, but may not exceed 4,000 gallons per minute, in addition to the peak normal daily consumption needs.

Fire hydrants shall be placed at street intersections wherever possible. Fire hydrants and blow-offs not located at intersections shall be installed on property lines between lots. Fire hydrants and blow-offs shall have a maximum spacing of 500 feet measured along the street frontage in residential areas and a maximum spacing of 350 feet in all other areas. Hydrants shall be required within a cul-de-sac or dead-end street measuring more than 250 feet as measured from the curb return of the intersecting street and the end of the bulb or street.

Sections 5, 6, and 7 of the Roseville design standards contain requirements that are intended to provide safe access to property and on streets throughout the City for motorists and emergency vehicles, including driveways, turn lanes, streets, and traffic lights.

City of Roseville Municipal Code

Neighborhood Park Fee

Chapter 4.37, “Neighborhood Park Fee,” of Title 4 is intended to implement the general plan by assuring that adequate neighborhood and school/parks and recreation facilities are financed and provided to serve the city. The fee varies in amount depending on the neighborhood (and corresponding population) in which the park is located. This fee increases annually each July 1st based on the inflation rate for construction costs from the previous year. It is collected from all new residential units. Based on neighborhoods, this fee is intended to provide sufficient funds to develop neighborhood parks within a specific plan area.

Citywide Park Fee

Chapter 4.38, “Citywide Park Fee,” of Title 4 ensures compliance with the applicable zoning ordinance and general plan requirements for the city-wide park and recreation infrastructure funding. This fee is collected from all new residential dwelling units within the City limits and is adjusted each July 1st based on the inflation rate for construction costs from the previous year. The Citywide Park Fee is allocated for large-scale active recreation facilities intended to serve the entire City, typically located within identified citywide parks.

Public Facilities Fee

Chapter 4.52, “Public Facilities Fee,” of Title 4 is intended to provide funds for capital projects, necessary to maintain service required by the general plan within existing service areas and existing portions of the city which are developed or for which land use has already been granted, and to ensure compliance with the applicable zoning ordinance and general plan requirements for the facilities funding. Fees are imposed on new residential development, commercial, industrial, and business/professional development in accordance with Sections 4.52.050 to 4.52.090 of Chapter 4.52.

Ordinance 2434 (School Facilities Mitigation Plan)

To ensure adequate funding for new school facilities the City Council adopted Ordinance 2434 (School Facilities Mitigation Plan) in February 1991. This ordinance encourages the payment of fees, participation in a Mello-Roos Community Facilities District, and school facility mitigation plans for new development proposed within over-crowded districts. With the enactment of SB 50, Ordinance 2434 cannot be made mandatory, but can be negotiated as part of the development agreement process. With voluntary participation by the applicants, however, the funding sources encouraged by Ordinance 2434 may be greater than the state-mandated fees. These mitigation fees vary depending upon the school district.

If the applicant chooses to submit a mitigation plan, the plan must explain how the project developer would participate in financing additional interim and permanent school facilities needed to serve the applicant’s residential development project. The mitigation plan would be reviewed by the school districts(s) in which the project is situated. The district(s) may approve, disapprove, or modify the mitigation plan based upon the funding and facilities needs identified in the construction schedule or plan by each district.

Adopted Specific Plans and Mitigation Measures

Currently, the City has adopted 14 Specific Plans. A Specific Plan is a comprehensive planning and zoning document that implements the General Plan by providing development and conservation standards for a defined geographic location within the Planning Area. Each Specific Plan contains guidelines for site, architectural, landscaping, lighting, roadway networks, pedestrian/bicycle paths, open space corridors, parks, and other aspects of design. Each adopted Specific Plan involved preparation of an EIR, which evaluated potential impacts related to public services and recreation. All impacts were found to be less than significant, and no mitigation measures were required. Copies of the adopted Specific Plans and their associated EIRs are available upon request from the City of Roseville Development Services Department, Planning Division.

4.11.4 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

4.11.4.1 METHODOLOGY

This proposed General Plan Update does not include any changes to land use designations, expansion of the City's Planning Area, or other major physical changes to areas planned for development compared to the existing General Plan, but does include changes to goals, policies, and implementation measures, which are analyzed as a part of this EIR. This EIR analyzes buildout of the Planning Area consistent with the existing General Plan land use designations and compares this to the existing physical conditions, which constitute the baseline for determining whether potential impacts are significant.

Impacts related to public services were identified by comparing existing service capacity and facilities, staffing, and equipment against future demand associated with the full buildout of the General Plan Land Use Map. The City describes the new or expanded public facilities that may be required to serve development consistent with the General Plan. The analysis determines whether the changes in service levels would require new or expanded public facilities, the construction of which could result in adverse impacts on the physical environment. Policies and implementation measures of the proposed General Plan Update that would reduce these impacts have been identified throughout this EIR. The City will review future projects for environmental impacts, applying proposed General Plan Update policies and implementation measures to reduce impacts, as feasible.

4.11.4.2 THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines, a public services or recreation impact is considered significant if the proposed project would:

- ▶ 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 fire protection, police protection, schools, or parks;
- ▶ 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 the construction or expansion of recreational facilities which might have an adverse physical effect on the environment.

4.11.4.3 ISSUES NOT CONSIDERED FURTHER IN THIS EIR

All issues related to public services and recreation are discussed below.

4.11.4.4 IMPACT ANALYSIS

IMPACT 4.11-1 **Increased Demand for Police Protection Facilities.** *The increase in the number of people in the City and amount of development would require additional Roseville Police Department staff in order for the department to maintain its present level of service. The addition of new staff would not result in the need for new or physically altered police protection facilities, the construction of which could potentially have adverse impacts on the physical environment, to maintain acceptable response times or other performance objectives for police protection. This impact is considered **less than significant**.*

Law enforcement services in Roseville are provided by the Roseville Police Department. The Roseville Police Department provides patrol duty, including in parks and open space areas; responds to and investigates crimes and other calls for service; provides animal control services; and enforces vehicle laws. The Roseville Police Department has not adopted a formal staffing standard for the police department. Rather, the police department sets a response goal of 3 minutes or less for 90 percent of emergency calls.

Buildout of the Planning Area would accommodate the development of new homes, businesses, and facilities within the planning area, which would result in additional population and visitors coming to the City. The increase in the number of people in the City and amount of development would require additional Roseville Police Department staff in order for the department to maintain its present level of service (City of Roseville 2016). The City's General Fund, primarily supported by sales tax and property tax revenues, funds Roseville Police Department services and staffing. Additional development within the City will also generate additional tax revenue to support the hiring of the necessary additional personnel. Analyses conducted for the adopted Specific Plans within the City (see the Regulatory Framework section above), found that sufficient additional physical facilities would be provided within each Specific Plan Area, as necessary, to support adequate law enforcement services in the City. Since the City has determined that facilities would be sufficient to accommodate demand anticipated with buildout of the General Plan, the addition of new staff would not result in the need for new or physically altered police protection facilities, the construction of which could potentially have adverse impacts on the physical environment, to maintain acceptable response times or other performance objectives for police protection (City of Roseville 2016). The City has determined that the City's existing facilities will be used to accommodate future demand under buildout of the General Plan.

There are no proposed General Plan Update goals and policies related to police protection services that are proposed for revision.

Conclusion

Implementation of existing General Plan Police Services Goal 1 and Policies 1, 2, 3, 5 and 8 (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), would ensure adequate police protection services would meet the needs of the increasing population and non-residential development consistent with the General Plan, and would allow the Roseville Police Department to meet its response goal of three minutes or less for 90 percent of all emergency calls. The goals and policies of the existing General Plan emphasize the use of modern technology and adequate training to maximize effective law

enforcement services for the community. Community-based service and education programs would be designed to prevent crime and emphasize citizen protection and involvement that allow citizens to monitor their communities for criminal activity. In addition, implementation measures require the Roseville Police Department staff to review all development proposals to ensure crime prevention considerations are addressed (see Appendix A of the existing General Plan).

As stated above, it is not expected that implementation of the proposed General Plan Update would result in the need for additional police protection facilities. If future requests for land use amendments cause the need for new facilities, the facilities would be located within the planning area analyzed in this EIR. The existing General Plan includes policies and implementation measures that are specifically designed to reduce or avoid environmental impacts of construction, including construction of public facilities. The policies and implementation measures related to each environmental topic area are shown throughout Chapter 4.0 of this EIR. There are no additional significant impacts related to construction of law enforcement facilities beyond the construction impacts that are analyzed throughout this EIR. As appropriate, future facility construction plans would be subject to project-level CEQA analysis and mitigation, allowing additional opportunities for mitigation, if necessary. Therefore, there would be no significant adverse physical environmental effect associated with construction and operation of new police protection facilities, and this impact is considered **less than significant**.

Mitigation Measure

No mitigation is required.

IMPACT 4.11-2 **Increased Demand for Fire Protection Services and Facilities.** *Buildout of the General Plan would result in additional population and structures within the Planning Area that would create additional demands for fire protection services over current demand levels. The addition of new staff would not result in the need for new or physically altered fire protection facilities, the construction of which could potentially have adverse impacts on the physical environment, to maintain acceptable response times or other performance objectives for fire protection. This impact is considered less than significant.*

Buildout of the General Plan would result in additional population and structures within the planning area that would create additional demands for fire protection services over current demand levels. Fire stations, equipment, and personnel must be planned in coordination with development to ensure adequate fire suppression in the City's growing areas. New fire stations have been planned for the North Industrial planning area (Station No. 8), the Sierra Vista Specific Plan area (Station No. 10), and the Amoruso Ranch Specific Plan area (Station No. 11) to meet new demands for fire suppression and maintain adequate response times.

The construction of these new fire protection facilities could have adverse effects on the physical environment. All new fire protection facilities would be constructed within the Planning Area. The locations of Station No. 8, Station No. 10, and Station No. 11 were identified in the Campus Oaks Master Plan Addendum and Initial Study, the Sierra Vista Specific Plan EIR, and the Amoruso Ranch Specific Plan EIR, respectively, and the environmental impacts of the construction and operation of these stations were analyzed at a programmatic level in those CEQA documents (City of Roseville 2010, City of Roseville 2015, City of Roseville 2016). Future facility construction plans would be subject to project-level CEQA analysis and mitigation, if necessary.

The following proposed General Plan Update goals and policies related to fire protection services in Roseville are proposed for revision, with **bold, underlined** text for additions and ~~strikethrough~~ text for deletions:

- ▶ **Policy SAFE4.2: Continue to follow service level response times, as listed in the City's Standards of Cover document.** ~~Strive to achieve the following service levels:~~
 - ▶ ~~Strive to achieve the following service levels:~~
 - ▶ ~~8 minute 12 second Total Response Time~~
 - ▶ ~~11 minute 30 second Effective Response Force~~
 - ▶ ~~90 Second Call Processing Time~~
 - ▶ ~~90 Second Turnout Time~~
 - ▶ ~~5 minute 12 second Travel Time~~
 - ▶ ~~Maintain ISO rating of 3 or better~~
- ▶ **Policy CIRC1.5: Design intersections and public rights-of-ways in accordance with state and federal accessibility requirements.**

The change to Policy SAFE4.2 responds to updates to the adopted Standards of Cover document that have occurred since the existing General Plan was adopted. Instead of repeating the information in the Standards of Cover, the policy has been amended to require following the service level response times in the Standards of Cover document as updated, ensuring the General Plan will always reference the latest information related to the City's level of service for fire protection. The new Policy CIRC1.5 ensures appropriate access, including for fire response. These policy changes would not result in any adverse environmental impacts.

Conclusion

Existing General Plan Circulation–Functional Classification Goal 1, Fire Protection Goals 1 and 2 and Policies 1, 3, 4, 5, and 6 (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Policy CIRC1.5, listed above, are intended to protect against the loss of life, property, and the environment by providing emergency access, promoting fire prevention programs and standards, monitoring department service levels, providing highly trained personnel to ensure effective suppression of fires, and phasing the timing of the construction of fire stations to be available to serve the surrounding service area. In addition, the Roseville Fire Department staff will review all development proposals to ensure development plans comply with California Fire Code and City Design and Construction Standards. Incorporation of all California Fire Code and City Design and Construction Standards into new development would reduce the dependence on fire department equipment and personnel by reducing fire hazards. In addition, implementation measures require the Roseville Fire Department staff to review all development proposals to ensure access to lands for firefighting purposes, street access to all structures, fire prevention programs, and the enforcement of building and fire codes and City ordinances are addressed and require Specific Plans to identify location and size of fire facilities (see Appendix A of the proposed General Plan Update).

There are no additional significant impacts related to construction of new fire facilities beyond the construction impacts that are analyzed throughout this EIR. As appropriate, future facility construction plans would be subject to project-level CEQA analysis and mitigation, further ensuring compliance with regulations and allowing additional opportunities for mitigation, if necessary. Therefore, there would be no significant adverse physical environmental effect associated with construction and operation of new fire protection facilities, and this impact is considered **less than significant**.

Mitigation Measure

No mitigation is required.

IMPACT 4.11-3 **Increased Demand for School Services and Facilities.** *Buildout of the General Plan accommodates the construction of between 20,000 to 25,000 housing units that generate approximately 10,000 additional K-12 students. The impacts of construction and operation of school facilities has been analyzed throughout this EIR. The proposed General Plan Update includes mitigating policies and measures, where necessary, that would reduce or avoid impacts. School impact fees would be collected in accordance with SB 50 to ensure the development of adequate school facilities, and the California Legislature has declared that payment of the State-mandated school impact fee is deemed to be full and adequate mitigation under CEQA (California Government Code Section 65996). The impact is considered less than significant.*

Buildout of the General Plan could accommodate the construction of between 20,000 to 25,000 housing units that could generate approximately 10,000 additional K-12 students. School services in Roseville are provided by the Roseville City School District, Eureka Union School District, Dry Creek Joint Elementary School District, Center Joint Unified School District, and Roseville Joint Union High School District.

Based upon the growth projections, it is anticipated that the Roseville City School District will require six additional elementary schools and one additional middle school in the West Roseville, Creekview, Amoruso Ranch Specific Plan areas, and the Center Joint Unified School District will require two additional elementary schools and one additional middle school in the Sierra Vista Specific Plan area to meet growth demands associated with the current General Plan land use allocation. Locations for these facilities have been identified in the West Roseville, Creekview, Amoruso Ranch, and Sierra Vista Specific Plans.

The construction of these new school facilities shown in Exhibit 4.11-2 could have adverse effects on the physical environment. New school facilities would be constructed within the Planning Area. The locations of new schools have been identified in the West Roseville, Creekview, Amoruso Ranch, and Sierra Vista Specific Plan areas and the environmental impacts of the construction and operation of these school facilities were analyzed at a programmatic level in the EIRs prepared for those specific plans as discussed in the Regulatory Framework section above. Future facility construction plans would be subject to project-level CEQA analysis and mitigation, if necessary.

New development would pay the State-mandated school impact fees that are being levied at the time of development in accordance with SB 50. Furthermore, project applicants for future development consistent with the General Plan may enter into voluntary mutual benefit impact fee agreements to further mitigate school impacts in accordance with City Ordinance 2434. Developer fees may be used to finance new schools and equipment and to reconstruct existing facilities to maintain adequate housing for all students.

It is possible that future residential development within the City would generate demand for school facilities that cannot be met within the City or cannot be met for some period of time while additional schools are under construction. For example, future students in the Sierra Vista Specific Plan area may require busing to Center Joint Unified School District schools in Sacramento County while schools planned for the specific plan area are under construction. Transportation of future students to schools with additional capacity could result in indirect impacts related to transportation, such as air pollutant emissions, greenhouse gas emissions, and transportation noise. The timing and specifics necessary to fully evaluate construction of school projects are unknown and would be determined by the respective school districts. It is speculative to assess whether any future school project would create an impact that is different from the impacts analyzed in this EIR.

The following goal and policies related to school facilities and services would be revised as a part of the proposed General Plan Update, with **bold, underlined** text for additions and ~~striketrough~~ text for deletions:

Goal PF3.1: The provision of adequate school facilities is a community priority. The school districts and the City will work closely together to obtain adequate funding **and site identify locations** for new school facilities. ~~If necessary, and where legally feasible, new development may be required to contribute, on the basis of need generated, 100% of the cost for new facilities.~~

- ▶ **Policy PF3.1:** The City ~~and the school districts~~ will work cooperatively **with the school districts** to explore all local and State funding sources in order to secure adequate funding for new school facilities.
- ▶ **Policy PF3.2:** Financing for new school facilities ~~will be encouraged to~~ **should be** identified and secured before new development is approved, **where feasible**.
- ▶ **Policy PF3.4:** The City and the school districts will work together to develop criteria for the designation of school sites, ~~and consider the opportunities for reducing the cost of land for school facilities,~~ **and work to minimize the impact of school traffic on the adjacent neighborhoods vehicular traffic by ensuring** ~~Encourage~~ **opportunities for bicycle and pedestrian connections**. The City shall encourage the school districts to comply with City standards in the design and landscaping of school facilities.
- ▶ **Policy PF3.5:** **For proposed joint -use facilities,** ~~t~~The City and the school districts ~~will prepare a joint use study for each school facility to determine the feasibility of joint use facilities. If determined to be feasible, a joint use agreement will be pursued~~ **will pursue joint -use agreements** to maximize public use of facilities, minimize duplication of services provided, **and identify operational and maintenance responsibilities,** and ~~facilitate shared financial and operational responsibilities.~~

The proposed General Plan Update policy changes listed above reflect the role of the City in ensuring adequate school facilities. The policy changes improve the clarity of the General Plan, improve school safety by reducing traffic, and provide mutual benefits through joint-use agreements for school and park facilities. No adverse environmental impacts would occur.

Conclusion

The focus of the existing General Plan School Services Goal 3 and Policies 3 and 6 (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Goal PF3.1 and Policies PF3.1–3.5 listed above, is on financing, timing,

and siting of school facilities. The City would ensure through the development review process that development proposals would be provided to the affected school district(s) for review and comment and the City will consider district comments in reviewing development proposals.

The siting of new schools is regulated by the California Department of Education, not the City of Roseville. Development of new school facilities will depend on the pace, location, and character of residential development, future regulations and standards of the California Department of Education, and changes in the City's demographics, among other factors. As appropriate, future facility construction plans would be subject to project-level CEQA analysis and mitigation, further ensuring compliance with laws and regulations and allowing additional opportunities for mitigation, if necessary. School impact fees would be collected in accordance with SB 50 to ensure the development of adequate school facilities. Because the California Legislature has declared that payment of the State-mandated school impact fee is deemed to be full and adequate mitigation under CEQA (California Government Code Section 65996), this impact is considered **less than significant**.

Mitigation Measure

No mitigation is required.

IMPACT 4.11-4 **Need for New or Expanded Parks and/or Recreation Facilities and Potential for Accelerated or Substantial Deterioration of Existing Parks and Recreation Facilities from Increased Use.** *Buildout of the General Plan would result in the development of new residences in Roseville, which would add new population and increase demand for new and existing parks, as well as recreation facilities. This additional population would be likely to use existing park facilities potentially resulting in the accelerated physical deterioration of existing facilities. Buildout of the General Plan could accommodate approximately 1,100 additional acres of developed parkland, the construction of which could result in adverse impacts on the physical environment. However, the impacts of construction and operation of these facilities has been analyzed throughout this EIR, and within EIRs for each of the City's Specific Plans. The proposed General Plan Update includes mitigating policies and measures, where necessary, that would reduce or avoid impacts. In addition, dedication of parkland or payment of in-lieu fees could also be used by the City to improve, expand, and maintain existing City parks to ensure that accelerated deterioration does not occur. This impact is considered **less than significant**.*

The City has defined park lands to include public developed parks, recreational open space, and joint-use park-school facilities. The City has an adopted standard of 9 acres of park land per 1,000 residents, which has historically been met through the dedication of parkland as a part of development. As of 2018, the City had approximately six acres of developed parkland per 1,000 residents. This is because, although all new development in the City is required to dedicate sufficient land to meet the City's parkland standard, portions of the City were developed prior to the adoption of this standard.

Buildout of the General Plan could accommodate the construction of between 20,000 to 25,000 housing units that generate approximately 198,000 persons. This new population would increase demand for new and existing parks, as well as recreation facilities. This additional population would be likely to use existing park facilities. It is likely that, for local and community-serving parks, residents would use park facilities closest to their homes. Regional serving park facilities would be anticipated to have a broader draw.

It is estimated that the updated General Plan could accommodate 1,100 acres additional acres of developed parkland, the construction of which could result in adverse impacts on the physical environment. New park facilities would be constructed within the Planning Area, and therefore, the impacts of construction and operation of these facilities has been analyzed throughout this EIR.

The following goals and policies related to parks and recreation and services would be revised as a part of the proposed General Plan Update, with **bold, underlined** text for additions and ~~striketrough~~ text for deletions:

Goal PR1.1: Provide adequate park land, recreational facilities, and **a wide variety of programs, activities, and educational opportunities** ~~programs within the City of Roseville through~~ **using** public and private resources.

Goal PR1.2: **Maximize the use of dedicated park lands and open space areas to provide** residents with both active/**formal/programmable** and **passive/informal/non-programmed** recreation opportunities ~~by maximizing the use of dedicated park lands and open space areas.~~

- ▶ **Policy PR1.1:** The City shall ensure the provision of nine acres of parkland per 1,000 residents, **but may waive parkland acreage and fee requirements in targeted reinvestment areas, such as along mixed-use corridors in the Infill Area and the Downtown and Riverside Gateway Specific Plan Areas** ~~except in certain instances in the Riverside and Downtown Specific Plan areas.~~
- ▶ **Policy PR1.2:** Retain flexibility in applying park**lands** standards, in terms of size, facilities, and service areas, so that existing and future needs can be met.
- ▶ **Policy PR1.3:** **The City may** ~~consider allocating park credits for lands~~ **open space lands** that provides active and/**or** passive recreational value **to residents as counting toward the parkland standards.**
- ▶ **Policy PR1.4:** **The City will consider payment of in-lieu fees for both development and parkland as an alternative to dedication of land in order to achieve the parkland standard.**
- ▶ **Policy PR1.5:** **The City shall prioritize discretionary and grant funding for areas of the community that are underserved in terms of access to passive and active recreation opportunities.**
- ▶ **Policy PR1.6:** **Identify opportunities to develop additional parks or other public recreation facilities in underserved areas of the community where access to such facilities exceeds a one-half mile walking distance for residents.**
- ▶ **Policy PR1.7:** **Continue to collaborate with the local school district on planning, financing, and development of joint-use park and recreational facilities.**
- ▶ **Policy PR1.12:** ~~Require that p~~**P**arks and recreational facilities **in new development areas** ~~be phased or fully completed so as to~~ **should** be available as **by the time** adjacent residential uses are ~~developed~~ **occupied.**
- ▶ **Policy PR1.14:** Ensure that **adequate funding is provided for initial development and ongoing maintenance and operation of** new public parks, and recreation facilities, open space, paseos, ~~landscape areas and greenways. provide adequate funding for initial development, as well as ongoing maintenance and operation.~~

Most of the proposed General Plan Update policy changes listed above are intended to improve clarity and would help to ensure that adequate numbers and types of park facilities are designated, developed, maintained, and operated to serve Roseville citizens, with a focus on underserved areas. The City standard of nine acres of parkland per 1,000 residents is proposed to be amended to include a provision allowing the standard to be waived in targeted reinvestment areas. This change would respond to infill and corridor redevelopment projects, which due to their location in developed areas do not have the same opportunities to dedicate parkland acreage. All projects would continue to be required by state law to meet Quimby Act parkland dedication standards, but the proposed policy change allows the City to evaluate its own, more stringent standard, and determine the most appropriate application for reinvestment projects. Because minimum parkland standards would continue to be met, this change would not have any adverse impacts related to the provision of parkland. The proposed policy changes would not have any adverse environmental impact.

Conclusion

As the city's population increases and demographics shift, continual assessment will be required to determine whether the quantity of parklands and quality of recreational programs are meeting the changing needs of City residents. Existing General Plan Parks and Recreation Policies 4 and 5 (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Goals PR1.1 and 1.2 and Policies PR1.1–1.7, 1.12 and 1.14 listed above, identify the City's policy approach to ensuring adequate provision of parkland as the City grows. This will protect against overuse of existing facilities that may cause their deterioration. The proposed General Plan Update establishes the overall parkland standard as nine acres of park land per 1,000 residents. General Plan policies and measures provide flexibility in applying parks standards, in terms of size, facilities, and service areas, so that existing and future needs can be met. As a method to achieve the City's parkland standards, alternative land dedications may be considered for lands that provide active and passive recreational value and/or by the payment of in-lieu fees. In-lieu fees provided by new development can also be used by the City to improve, expand, and maintain existing city parks to ensure that accelerated deterioration does not occur. In addition, implementation measures ensure new development provides parklands dedication or pays in-lieu fees and require Specific Plans to include parks facilities consistent with existing General Plan policies and consider future recreation needs based on projected population (see Appendix A of the existing General Plan).

There are no additional significant impacts related to construction of parks beyond the construction impacts that are analyzed throughout this EIR. As appropriate, future construction plans would be subject to project-level CEQA analysis and mitigation, further ensuring compliance with regulations and allowing additional opportunities for mitigation, if necessary. Therefore, this impact is considered **less than significant**.

Mitigation Measure

No mitigation is required.

This page intentionally left blank

4.12 UTILITIES AND SERVICE SYSTEMS

4.12.1 INTRODUCTION

This section describes potential impacts related to existing utilities and service systems in the Planning Area associated with the proposed General Plan Update, including water supply, wastewater service, solid waste disposal, and electrical and natural gas infrastructure. To provide context for the impact analysis, this section begins with an environmental setting describing the existing conditions in the Planning Area related to utilities and service systems. Next, the regulatory framework is described, which informs the selection of the significance thresholds used in the impact analysis. The regulatory framework also includes existing General Plan policies related to the impact analysis of this chapter. The section concludes with the applicable significance thresholds, the impacts of the proposed changes to adopted General Plan policies, recommended mitigation measures, and the significance conclusions.

As part of the impact analysis, Notice of Preparation (NOP) comments were reviewed to help guide the analysis. No NOP comments related to utilities or service systems were received.

Impacts related to stormwater management are addressed in Section 4.13, “Hydrology and Water Quality.” Section 4.15, “Energy,” describes electrical and natural gas resources and current demand for the City and considers impacts related to electrical and natural gas demands for buildout of the General Plan.

4.12.2 ENVIRONMENTAL SETTING

4.12.2.1 WATER SUPPLY

The City of Roseville provides water service to the majority of residents within the City limits (West Yost 2016). Some areas within the City limits are supplied by either Citrus Heights Water District, San Juan Water District, or Placer County Water Agency where it is feasible and beneficial to do so. The following discussion provides an overview of the City’s water supply infrastructure and potable and recycled water supplies and demand.

Water Supply Infrastructure

The City’s water distribution system includes raw water facilities to deliver surface water supplies to the City’s water treatment plant and the potable water facilities, which deliver potable water to City water customers. In addition to the potable water system, the City also operates a recycled water distribution system.

Raw water facilities include infrastructure owned and operated by the U.S. Bureau of Reclamation, as well as those owned and operated by the City. U.S. Bureau of Reclamation (Bureau) facilities include an 84-inch intake pipeline and pumping plant at the Folsom Dam. The Bureau’s pumping plant has capacity for the San Juan Water District, Roseville, and portions of the City of Folsom. Pumping capacity at the Folsom Dam is 150 cubic feet per second (96.9 mgd). Once through the pumping plant, water is conveyed through an 84-inch pipeline and a 72-inch alternative pipeline to the “Hinkel Y,” where flows to San Juan Water District and Roseville are split. Raw water for Roseville then flows through parallel 48- and 60-inch raw water pipelines to the City’s water treatment plant.

The Roseville water treatment plant is located on Barton Road south of Douglas Boulevard and east of the City limits. The water treatment plant is capable of treating up to 100 million gallons per day (mgd) of raw water

delivered from its source at Folsom Lake. In addition, the City is planning to participate in the future Placer County Water Agency (PCWA) Ophir water treatment plant project to provide treated surface water to the City.

The City's potable water supply system consists of six storage tanks with a total storage capacity of 32 million gallons, four pump stations (the Dual Purpose Pump Station, the Highland Reserve North Pump Station, the Pleasant Grove Pump Station, and the PFE Pump Station), and distribution pipelines that range in size from 4 to 66 inches in diameter. Future water distribution pipelines, water storage tanks, and pump stations are planned for construction in the West Roseville Specific Plan Area and Sierra Vista Specific Plan Area to serve the western portion of the Planning Area. The distribution system is designed to deliver an adequate supply of water at an acceptable pressure level for domestic and fire flow purposes.

Existing Water Supplies

Surface Water

The City has three sources of water supply: surface water, groundwater, and recycled water for irrigation. The City currently has contracts for up to 66,000 acre-feet of American River water supplies diverted from the Folsom Reservoir. Of this supply, 32,000 acre-feet originate from Central Valley Project supplies, 10,000 acre-feet from the Middle Fork project of the Placer County Water Agency, and 4,000 acre-feet from a contract with the San Juan Water District (Placer County LAFCO 2017, West Yost 2016). The City also has two options for 10,000 acre-feet each of additional PCWA water supplies. The 4,000 acre-feet of water supplies from the San Juan Water District is available to the City only during normal and wet water years. The City's current surface water entitlements are summarized in Table 4.12-1. An additional 1,500 acre feet per year (afy) of surface water supplies are expected to be available beginning in 2030 from the future PCWA Ophir water treatment plant project (West Yost 2016).

| Table 4.12-1 City of Roseville Current Surface Water Entitlements | |
|---|---------------------|
| Water Supply Source | Amount (afy) |
| Central Valley Project, Folsom Reservoir | 32,000 |
| Placer County Water Agency - Middle Fork Project | 10,000 |
| Optional Placer County Water Agency water | 10,000 |
| Optional Placer County Water Agency water | 10,000 |
| San Juan Water District contract ¹ | 4,000 |
| Total | 66,000 |
| Notes: afy = acre-feet per year | |
| ¹ San Juan Water District water supplies are available to the City only during normal and wet water years. | |
| Source: Placer County LAFCO 2017, West Yost 2016 | |

The City, as a signatory to the Water Forum Agreement,¹ has agreed to ensure that water conservation and demand management—necessary steps to achieve Water Forum Agreement objectives—are integrated into future

¹ The coequal objectives of the Water Forum Agreement are (1) to provide a reliable and safe water supply for the region's economic health and planned development through the year 2030; and (2) to preserve the fishery, wildlife, recreational, and aesthetic values of the lower American River.

growth and water planning activities in its service area. Table 4.12-2 shows the projected surface water contracted supplies and water supply reliability in normal, single-dry, and multiple-dry years in Roseville (West Yost 2016).

| Table 4.12-2 City of Roseville Contracted Surface Water Supplies and Water Supply Reliability (afy) | | | | |
|--|-------------------------------------|---------------|---------------|---------------|
| Water Supply Sources | Projected Amount (afy) ¹ | | | |
| | 2020 | 2025 | 2030 | 2035 |
| Existing and Planned Sources – Contracted Volume | | | | |
| Central Valley Project, Folsom Reservoir | 32,000 | 32,000 | 32,000 | 32,000 |
| Placer County Water Agency – Middle Fork Project | 30,000 | 30,000 | 30,000 | 30,000 |
| Placer County Water Agency – Ophir WTP | -- | -- | 1,500 | 1,500 |
| San Juan Water District | 4,000 | 4,000 | 4,000 | 4,000 |
| Total | 66,000 | 66,000 | 67,500 | 67,500 |
| Normal Year | | | | |
| Central Valley Project, Folsom Reservoir | 32,000 | 32,000 | 32,000 | 32,000 |
| Placer County Water Agency – Middle Fork Project | 30,000 | 30,000 | 30,000 | 30,000 |
| Placer County Water Agency – Ophir WTP | -- | -- | 1,500 | 1,500 |
| San Juan Water District | 4,000 | 4,000 | 4,000 | 4,000 |
| Total | 66,000 | 66,000 | 67,500 | 67,500 |
| Single Dry Year | | | | |
| Central Valley Project, Folsom Reservoir | 8,000 | 8,000 | 8,000 | 8,000 |
| Placer County Water Agency – Middle Fork Project | 30,000 | 30,000 | 30,000 | 30,000 |
| Placer County Water Agency – Ophir WTP | -- | -- | 1,500 | 1,500 |
| San Juan Water District | -- | -- | -- | -- |
| Total | 38,000 | 38,000 | 39,500 | 39,500 |
| Multiple-Dry Years 1 and 2 | | | | |
| Central Valley Project, Folsom Reservoir | 24,000 | 24,000 | 24,000 | 24,000 |
| Placer County Water Agency – Middle Fork Project | 30,000 | 30,000 | 30,000 | 30,000 |
| Placer County Water Agency – Ophir WTP | -- | -- | 1,500 | 1,500 |
| San Juan Water District | -- | -- | -- | -- |
| Total | 54,000 | 54,000 | 55,500 | 55,500 |
| Multiple-Dry Year 3 | | | | |
| Central Valley Project, Folsom Reservoir | 16,000 | 16,000 | 16,000 | 16,000 |
| Placer County Water Agency – Middle Fork Project | 30,000 | 30,000 | 30,000 | 30,000 |
| Placer County Water Agency – Ophir WTP | -- | -- | 1,500 | 1,500 |
| San Juan Water District | -- | -- | -- | -- |
| Total | 46,000 | 46,000 | 47,500 | 47,500 |
| Notes: afy = acre-feet per year | | | | |
| Sources: West Yost 2016; data compiled by AECOM in 2020 | | | | |

Groundwater

The City of Roseville is located in the North American River Groundwater subbasin (Basin Code 5-021.64), which is a component of the larger Sacramento Valley Groundwater Basin. The North American subbasin underlies northern Sacramento, southern Sutter, and western Placer counties. The subbasin is bounded by the Bear River on the north, the Feather River and Sacramento Rivers on the west, the American River on the south, and a north/south line extending from the Bear River south to Folsom Lake that passes about 2 miles east of the City of Lincoln. DWR estimated that the storage capacity of the North American subbasin is approximately 4.9 million acre feet (af), and it is not in overdraft (West Yost 2016). Total groundwater usage from agricultural and urban demands in western Placer County was approximately 97,000 afy in 2012. Under these pumping conditions, the groundwater levels at the southern end of the basin have been stable since about 1982 and the levels have risen slightly at the northern end of the basin, indicating that 97,000 afy is also within the safe yield of the basin. (See Section 4.13, “Hydrology and Water Quality,” for further discussion of the North American subbasin.)

The City’s current groundwater well facilities consists of six groundwater wells (4 of which are ASR Wells) that are capable of delivering approximately 48 acre-feet per day of water supply, if run full time, which is the equivalent of approximately 17,000 afy. These wells are maintained to serve customers as part of the City’s supply portfolio during normal demand years as well as for back-up water supply and to improve water supply reliability during drought and emergency conditions (West Yost 2016).

The City also recently approved a program for aquifer storage and recovery that would increase the basin’s reliability. The aquifer storage and recovery program allows the City to store potable water in the aquifer for use when needed. Under the program, the City would be allowed to inject surface water into the aquifer during wet years or during the rainy season. The City would be able to pump stored groundwater to support water demands. The City anticipates construction of an additional 2 to 6 ASR wells in the next 2 to 5 years to support its aquifer storage and recovery program. At buildout, the City groundwater facilities would include up to 12 Wells that could store up to 10,000 AFY of water (West Yost 2016).

Recycled Water

The City treats wastewater at its Dry Creek Wastewater Treatment Plan (WWTP) and Pleasant Grove WWTP that meets Title 22 requirements for “full unrestricted reuse.” Recycled water is used by the City for landscape irrigation, golf course irrigation, construction uses, and to provide cooling water for the Roseville Energy Park.

In 2015, the recycled water system delivered approximately 4,060 afy of recycled water to the City (1,966 afy from the Dry Creek WWTP and 2,094 afy from the Pleasant Grove WWTP). System expansion is planned for more intensive use of recycled water in the western portion of the City as new development occurs. As shown in Table 4.12-3, recycled water demands are expected to increase to 5,643 afy in 2035 (West Yost 2016). According to the City’s 2015 Urban Water Management Plan (UWMP), the recycled water supply is considered to be 100 percent reliable in all water year types (West Yost 2016).

| Table 4.12-3 Actual and Projected Recycled Water Demand, 2015–2035 | |
|---|--------------|
| Year | Demand (afy) |
| 2015 | 4,060 |
| 2020 | 4,421 |
| 2025 | 4,791 |
| 2030 | 5,259 |
| 2035 | 5,643 |
| Notes: afy = acre-feet per year Source: West Yost 2016 | |

Water Conservation

Roseville has supported efforts to reduce water demand through conservation and other measures. In 1991, the City developed and adopted the Roseville Water Conservation and Drought Mitigation Ordinance. This ordinance was updated in 2013 and most recently in May 2015 (Ordinance 5491). Under this ordinance, the City has authority to declare water shortage conditions and implement drought related water conservation measures. The City can initiate this process by declaring a drought stage (Stage One through Stage Five) and imposing the appropriate and corresponding drought response measures. Table 4.12-4 identifies the potential water conservation assuming a 20 percent of normal year demand.

| Table 4.12-4 City of Roseville Water Conservation (up to 20 Percent of Normal Year Demand) (afy) | | | | | |
|---|------|-------|-------|-------|-------|
| Hydrologic Condition | 2015 | 2020 | 2025 | 2030 | 2035 |
| Normal | -- | -- | -- | -- | -- |
| Single Dry | -- | 3,054 | 5,300 | 6,574 | 9,262 |
| Multiple Dry (Year 1) | -- | -- | -- | -- | -- |
| Multiple Dry (Year 2) | -- | -- | -- | -- | -- |
| Multiple Dry (Year 3) | -- | -- | -- | -- | 1,836 |
| Notes: afy = acre-feet per year Source: West Yost 2016 | | | | | |

Projected Water Demand

The City's UWMP, which was adopted by the City Council on May 18, 2016, addresses water supply and demand issues, water supply reliability, water conservation, water shortage contingencies, and recycled water use within the City's service area. In accordance with SBx7-7, the UWMP estimates water demands are based on an estimated gallons per capita per day target chosen by the City.

Projections of future water demand within the City's service area have been made based on land use, population, and housing projections for General Plan buildout. The projections apply to the area within the City's water service area boundary (West Yost 2016).

Table 4.12-5 summarizes the City's actual and future water potable water demands over the UWMP's 20-year planning period (i.e., 2015 to 2035) during normal water years. The UWMP assumes water demands in single-dry years will be the same as normal water years and this would be consistent over multiple-dry years. As shown in Table 4.12-5, potable water demands are expected to increase from 22,881 afy in 2015 to 48,762 afy in 2035.

| Table 4.12-5 Actual and Projected Potable Water Demand, 2015–2035 | | |
|--|------|--------------|
| | Year | Demand (afy) |
| | 2015 | 22,881 |
| | 2020 | 41,055 |
| | 2025 | 43,300 |
| | 2030 | 46,074 |
| | 2035 | 48,762 |
| Notes: afy = acre-feet per year | | |
| Source: West Yost 2016 | | |

4.12.2.2 WASTEWATER COLLECTION AND TREATMENT

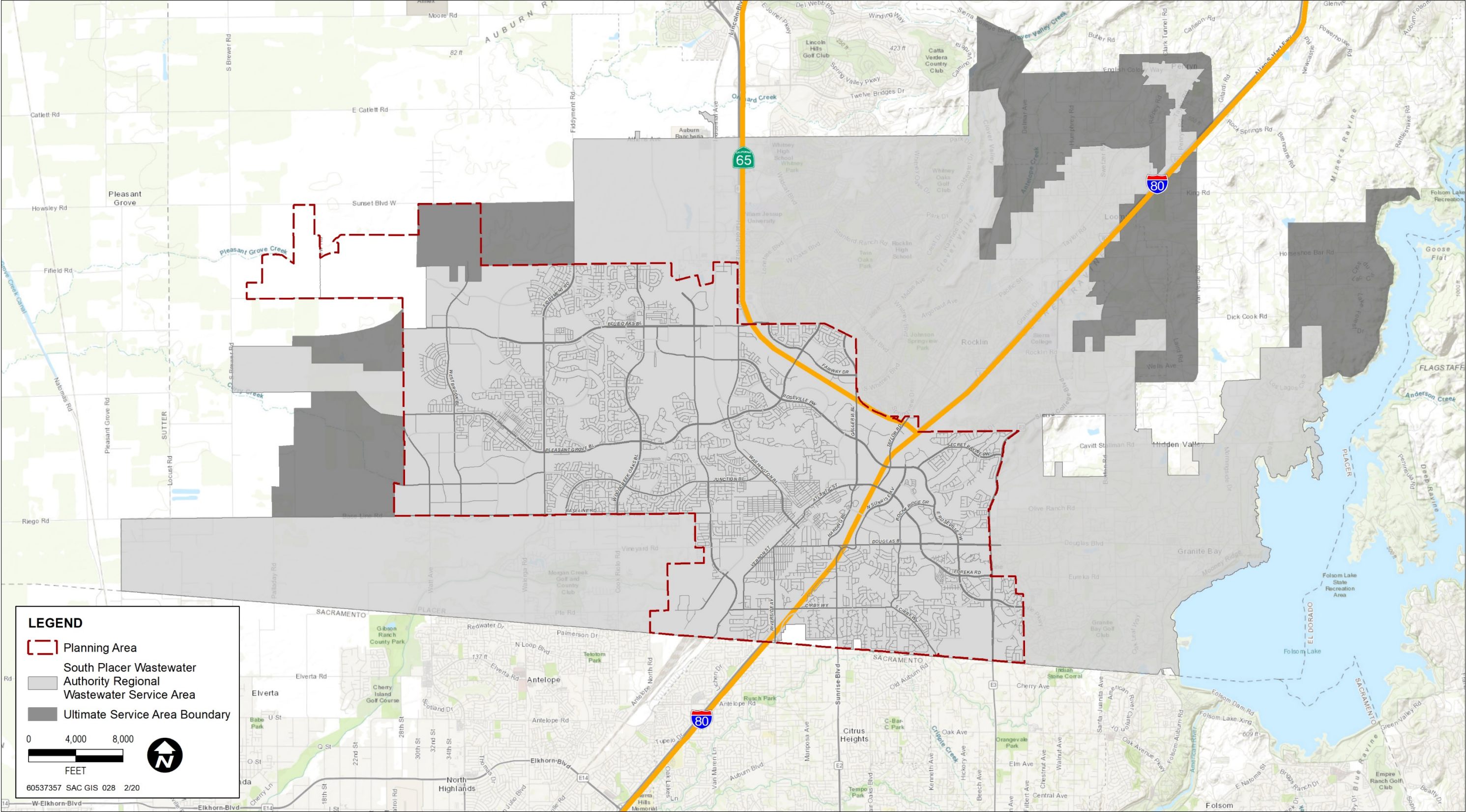
The City's Wastewater Collection Division is a division of Environmental Utilities Department. The Wastewater Collection Division is responsible for management, operation, maintenance, and capacity of the City's sanitary sewer collection system, which includes inspecting, cleaning, repairing and monitoring the gravity sewer lines, force mains, and lift station.

The Wastewater Collection Division provides service to approximately 137,213 sewer customers (City of Roseville 2019a). The wastewater collection and conveyance system consists of 782 miles sewer pipe ranging in size of 4 to 72 inches in diameter and 16 neighborhood lift stations that convey an average dry weather flow of approximately 17 million gallons per day (mgd) (City of Roseville 2019a).

Wastewater Treatment Facilities

Wastewater from the City is currently treated at the Dry Creek WWTP and the Pleasant Grove WWTP. Both regional facilities are owned and operated by the City of Roseville on behalf of the Regional Partners consisting of the City, the South Placer Municipal Utility District (SPMUD), and portions of unincorporated Placer County (primarily Morgan Creek, Granite Bay and Sunset Industrial Area). A small portion of the City service area flows to the Sacramento Area Sanitation District and is treated at the Sacramento Regional Wastewater Treatment Plant. This area consists of approximately 350 residential dwelling units.

The South Placer Regional Wastewater and Recycled Water Systems Evaluation (Wastewater Systems Evaluation) was prepared in June 2007 and updated in December 2009 (RMC 2009). As shown on Exhibit 4.12-1, the 2005 service area boundary includes areas within Roseville, Rocklin, Loomis, and portions of Granite Bay and unincorporated Placer County. The South Placer Wastewater Authority (SPWA) Wastewater Systems Evaluation provided baseline and projected characterizations of its regional wastewater and recycled water systems. In addition, the SPWA Wastewater Systems Evaluation identified short- and long-term Capital Improvement Projects needed to meet current and future build-out flow projections within the 2005 service area boundary for trunk sewers larger than 15 inches. The SPWA Wastewater Systems Evaluation determined that buildout of the 2005 service area boundary would result in 16.34 mgd average dry weather flow at the Dry Creek WWTP and 16.52 mgd average dry weather flow at the Pleasant Grove WWTP, totaling 32.86 mgd average dry weather flow (RMC 2009).



Source:

Exhibit 4.12-1 **Regional Wastewater Service Area**

This page intentionally left blank

In addition to buildout of the 2005 service area boundary, SPWA Wastewater Systems Evaluation evaluated future Urban Growth Areas to determine an ultimate SPWA service area boundary. The Urban Growth Areas considered recently approved and pending specific plans and other development proposals, including Amoruso Ranch, Creekview, Curry Creek, Enviro Tech, Orchard Creek, Placer Ranch, Placer Vineyard, Sierra Vista, Regional University, SPMUD, and additional areas of unincorporated Placer County. The SPWA Wastewater Systems Evaluation determined that buildout of the ultimate SPWA service area, which includes the 2005 service area boundary and Urban Growth Areas, would result in 19.98 mgd at the Dry Creek WWTP and 25.67 mgd at the Pleasant Grove WWTP totaling 45.65 mgd average dry weather flow in the ultimate SPWA service area (RMC 2009).

Dry Creek Wastewater Treatment Plant

The Dry Creek WWTP is located on the southern edge of the City on an 80-acre parcel at 1800 Booth Road. The Dry Creek WWTP provides tertiary-level wastewater treatment through the process of screening, grit removal, primary clarification, aeration, secondary clarification, filtration and ultraviolet disinfection, in addition, the Dry Creek WWTP provides a biological process that achieves full nitrification and de-nitrification. As stated above, the Dry Creek WWTP produces recycled water that meets Title 22 requirements for full unrestricted reuse.

The Dry Creek WWTP is permitted to treat 18 mgd average dry weather flow and 45 mgd peak wet weather flow. The current average dry weather flow is approximately 9.3 mgd, of which approximately 6.0 mgd is generated by the City (Placer County LAFCO 2017). The Dry Creek WWTP currently has a peak wet weather flow of 25.1 mgd. The Dry Creek WWTP is currently operating at 50 percent of rated flow capacity.

Pleasant Grove Wastewater Treatment Plant

The Pleasant Grove WWTP in the western portion of the Planning Area on a 110-acre parcel at 5051 Westpark Drive. The Pleasant Grove WWTP currently serves the north and northwest areas of the City of Roseville, the Stanford Ranch area of the SPMUD service area, the Sunset Industrial Area of Placer County, and will serve the City of Roseville's approved Creekview Specific Plan and Amoruso Ranch Specific Plan Areas.

The Pleasant Grove WWTP provides tertiary-level treatment through the process of screening, grit removal, extended aeration, secondary clarification, filtration, and ultraviolet disinfection. The plant provides a biological process that achieves full nitrification and de-nitrification, and produces recycled water that meets Title 22 regulations for full, unrestricted use.

The Pleasant Grove WWTP was designed to treat 12 mgd average dry weather flow; however, due to high organic loading from water conservation and other factors, the Pleasant Grove WWTP's effective treatment capacity is approximately 9.5 mgd (City of Roseville 2017). The Pleasant Grove WWTP presently treats 7.1 mgd average dry weather flow and is operating at about 60 percent of rated flow capacity.

Recent and anticipated acceleration of growth within the SPWA service area resulted in the need to expand the Pleasant Grove WWTP's treatment capacity. Based on growth projections for the SPWA service area, average dry weather flows are projected to exceed 9 mgd around 2025 and be equal to or exceed the Pleasant Grove WWTP's treatment capacity of 9.5 mgd by 2027 (City of Roseville 2017). As a result, the City proposed an increase treatment capacity of the existing Pleasant Grove WWTP so that it can meet its original 12 mgd design capacity (City of Roseville 2017). The Pleasant Grove WWTP expansion project will increase the organic treatment

capacity of the plant by adding primary clarification, sludge thickening, and anaerobic digestion to the treatment process. Increasing the organic treatment capacity of the existing Pleasant Grove WWTP from 9.5 mgd to be consistent with the original design capacity of 12 mgd average dry weather flow will accommodate the anticipated wastewater treatment demands through approximately 2040 (City of Roseville 2017). The expansion project is currently under construction and is anticipated to be complete in 2022 (City of Roseville 2018).

4.12.2.3 SOLID WASTE COLLECTION AND DISPOSAL

Roseville, along with the City of Lincoln, City of Rocklin, and Placer County formed the Western Placer Waste Management Authority that provides for solid waste management. Under this agreement, the Western Placer Waste Management Authority is assigned the lead role in cooperative policy making with respect to solid waste issues. The Western Placer Waste Management Authority owns and operates the Western Regional Sanitary Landfill, located at 3195 Athens Road in unincorporated Placer County, which serves the western portion of the County, including Roseville.

Collection of solid waste within the City is operated and managed by Roseville's Environmental Utilities Department, Solid Waste Utility. Fees are charged to cover the costs of collection and disposal. Temporary refuse collection and disposal, as in construction and demolition, may be handled by private haulers licensed through the City of Roseville, which hold a Non-Exclusive Franchise Agreement. In 2018, the City disposed of approximately 119,700 tons of solid waste (CalRecycle 2018).

To reach State-mandated recycling goals, the City participated, through the Western Placer Waste Management Authority, in the development of the Material Recovery Facility at the Western Regional Sanitary Landfill. Most of the solid waste generated in the City is first transported to the Material Recovery Facility. The Material Recovery Facility separates and recovers waste products for recycling, reuse, or conversion to energy resources. The Material Recovery Facility has a mixed waste processing capacity of 1,900 tons per day and a permitted processing capacity of 1,750 tons per day (CalRecycle 2019a). In addition to processing mixed solid waste, the Material Recovery Facility includes a green waste compost facility. The compost portion of the facility has an annual processing capacity of 75,000 cubic yards (CalRecycle 2019a). This program contributes to achieving recycling goals as prescribed by the State. Non-recyclable solid waste is transferred to the Western Regional Sanitary Landfill.

The Western Regional Sanitary Landfill is specified as a Class III non-hazardous site, and a private firm under contract to the Western Placer Waste Management Authority manages its operation. According to CalRecycle, the Western Regional Sanitary Landfill has a maximum permitted throughput of 1,900 tpd and has a total maximum permitted capacity of 36.4 million cubic yards (CalRecycle 2019b). The Western Regional Sanitary Landfill has a remaining capacity of approximately 29.1 million cubic yards and an anticipated closure date of January 1, 2058 (CalRecycle 2019b). This projection does not take into account any additional recycling or source reduction efforts that are not already in place.

Approximately 465 acres west of the Western Regional Sanitary Landfill and across Fiddymont Road were acquired are available for a landfill expansion. Additionally, the Western Placer Waste Management Authority has also purchased the parcel east of the Western Regional Sanitary Landfill. Both parcels provide opportunity for expanding the Western Regional Sanitary Landfill to increase capacity; however, plans for expansion of Western Regional Sanitary Landfill capacity beyond 2058 have not been developed or approved to date.

4.12.2.4 ELECTRICAL AND NATURAL GAS INFRASTRUCTURE

The City of Roseville Electric Department (Roseville Electric) provides electrical service to customers within the City limits. Roseville Electric consists of transmission and generation facilities, sub-transmission and substation facilities, and distribution facilities that serve existing development. PG&E is the natural gas service provider for the city. PG&E's underground transmission pipelines are located throughout City rights-of-way to serve existing development. Expansion of electrical and natural gas facilities would be required to serve new development during buildout of the General Plan.

4.12.3 REGULATORY FRAMEWORK

4.12.2.5 FEDERAL

There are no relevant federal policies, regulations, or laws related to utilities and service systems.

4.12.2.6 STATE

California Urban Water Management Planning Act (California Water Code Sections 10610-10656)

In 1983, the California Legislature enacted the Urban Water Management Planning Act, which requires every urban water supplier that provides water to 3,000 or more customers, or over 3,000 acre-feet of water annually, to make every effort to ensure the appropriate level of reliability in its water service to meet the needs of its customers during normal, dry, and multiple-dry years. The UWMP is required in order for a water supplier to be eligible for the DWR-administered state grants, loans, and drought assistance. The UWMP provides information on water use, water resources, recycled water, water quality, reliability planning, demand management measures, best management practices, and water shortage contingency planning for a specified service area or territory.

In accordance with State requirements, the City prepared an UWMP, which details the City's water service area, treatment and distribution facilities, available water supplies, water reliability efforts, water conservation programs, and future systems to meet projected growth (West Yost 2016). The UWMP was adopted by the City Council on May 18, 2016.

Senate Bill 610

The State of California has enacted legislation that is applicable to the consideration of larger projects under CEQA. SB 610 (Chapter 643, Statutes of 2001; Section 21151.9 of the Public Resources Code and Section 10910 et seq. of the Water Code) requires the preparation of "water supply assessments" for large developments (i.e., more than 500 dwelling units or nonresidential equivalent). These assessments, prepared by "public water systems" responsible for serving project areas, address whether existing and projected water supplies are adequate to serve the project, while also meeting existing urban and agricultural demands and the needs of other anticipated development in the service area in which the project is located. If the UWMP did not account for the project's water demand, or if the public water system has no UWMP, the project's WSA must discuss whether the system's total projected water supplies (available during normal, single-dry, and multiple-dry water years during a 20-year projection) would meet the project's water demand in addition to the system's existing and planned future uses, including agricultural and manufacturing uses.

Sustainable Groundwater Management Act

The Sustainable Groundwater Management Act (SGMA) of 2014 provides for local control of groundwater sustainability with State oversight. The law became effective January 1, 2015 and states that groundwater resources should be managed sustainably for long-term reliability and multiple economic, social, and environmental benefits for current and future beneficial uses. The SGMA requires local agencies to develop and implement groundwater sustainability plans in high and medium priority groundwater basins throughout California.

Local agencies must form groundwater sustainability agencies by 2017, then agencies in critically overdrafted basins must develop plans by 2020, while agencies in all other high and medium priority basins must prepare plans by 2022. (See Section 4.13, “Hydrology and Water Quality,” for further discussion.)

California Green Building Standards Code

The standards included in the 2019 California Green Building Standards Code (CALGreen Code) (Title 24, Part 11 of the California Code of Regulations) became effective on January 1, 2020. The CALGreen Code was developed to enhance the design and construction of buildings, and the use of sustainable construction practices, through planning and design, energy efficiency, water efficiency and conservation, material conservation and resource efficiency, and environmental air quality (California Building Standards Commission 2019). The most significant efficiency improvements to the residential standards in the 2019 CALGreen Code include improvements for attics, walls, water heating, and lighting and standards for residential plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) to reduce indoor demand for potable water.

Chapters 4 and 5 of the 2019 CALGreen Code requires residential and nonresidential developments to comply with a local water efficient landscape ordinance or the current California Department of Water Resources’ Model Water Efficient Landscape Ordinance, whichever is more stringent. Both chapters require all residential and nonresidential construction contractors to reduce construction waste and demolition debris by 65 percent. Code requirements include preparing a construction waste management plan that identifies the materials to be diverted from disposal by efficient usage, recycling, reuse on the project, or salvage for future use or sale; determining whether materials will be sorted on-site or mixed; and identifying diversion facilities where the materials collected will be taken. The code also specifies that the amount of materials diverted should be calculated by weight or volume, but not by both. In addition, the 2019 CALGreen Code requires that 100 percent of trees, stumps, rocks, and associated vegetation and soils resulting primarily from land clearing be reused or recycled.

California Integrated Waste Management Act

The California Integrated Waste Management Act (CIWMA) of 1989 is the result of two pieces of legislation, AB 939 and SB 1322. The CIWMA was intended to minimize the amount of solid waste that must be disposed of by transformation and land disposal by requiring all cities and counties to divert 25 percent of all solid waste from landfill facilities by January 1, 1995, and 50 percent by January 1, 2000.

The CIWMA created the California Integrated Waste Management Board (now known as CalRecycle). CalRecycle is the agency designated to oversee, manage, and track California’s 92 million tons of waste generated each year. CalRecycle provides grants and loans to help cities, counties, businesses, and organizations meet the state’s waste reduction, reuse, and recycling goals. In addition to many programs and incentives, CalRecycle

promotes the use of new technologies for the practice of diverting resources away from landfills. CalRecycle is responsible for ensuring that waste management programs are primarily carried out through local enforcement agencies (LEAs).

Placer County Environmental Health Services has been certified by CalRecycle as the LEA to enforce state solid waste statutes and regulations within the County.

The California Integrated Waste Management Board of 1989 requires local agencies to implement source reduction, recycling, and composting that would result in a minimum of 50 percent diversion of solid waste from landfills, thereby extending the life of landfills.² For 2018, the target solid waste generation rate for Roseville was 8.9 pounds per day (ppd) per resident and 14.4 ppd per employee, and the actual measured generation rate was 4.8 ppd per resident and 8.2 ppd per employee, which is approximately 4.1 ppd and 6.2 ppd, respectively, less than the target solid waste generation rate (CalRecycle 2018).

Disposal Measurement System Act of 2008 (Senate Bill 1601)

The Legislature amended the California Integrated Waste Management Act in 2007 through SB 1016. SB 1016 maintains the 50 percent diversion rate requirement established by AB 939, but established a per capita disposal measurement system to make the process of goal measurement, as established by AB 939, simpler, timelier, and more accurate. The new disposal-based indicator—the per capita disposal rate—uses only two factors: a jurisdiction’s population (or in some cases employment) and its disposal, as reported by disposal facilities.

SB 1016 also requires CalRecycle to issue an order of compliance if it finds that the jurisdiction has failed to make a good faith effort to implement its source reduction and recycling element or its household hazardous waste element pursuant to a specified procedure. CalRecycle is required to comply with certain requirements in making this determination, including considering the extent to which the jurisdiction has maintained its per capita disposal rate.

Assembly Bill 341 (Statutes of 2012), Solid Waste Diversion

Effective July 1, 2012, AB 341 establishes a policy goal for California that at least 75 percent of the solid waste generated be source-reduced, recycled, or composted by 2020. The bill also requires that a business, defined to include a commercial or public entity that generates more than four cubic yards of commercial solid waste per week or is a multi-family residential dwelling of five units or more, arrange for recycling services. Under the law, local jurisdictions must implement a commercial solid waste recycling program that consists of education, outreach and monitoring of businesses, and it requires that local jurisdictions submit progress reports, including education, outreach, monitoring, and enforcement efforts and exemptions. The City has revised its Source Reduction and Recycling Element to include this requirement and has a commercial solid waste recycling program in place.

² As of 2007, the 50 percent diversion requirement is measured in terms of per-capita disposal expressed as pounds per day (ppd) per resident and per employee. The new per capita disposal and goal measurement system uses an actual disposal measurement based on population, disposal rates reported by disposal facilities, and evaluates program implementation efforts.

Mandatory Commercial Organics Recycling (Assembly Bill 1826 [Statutes of 2014])

AB 1826, passed in 2014 and effective in April of 2016, requires local businesses to recycle organic waste, depending on the amount of waste they generate per week. It also requires that local jurisdictions implement an organic waste recycling program to divert organic waste generated by businesses, including multi-family residences. It phases in the mandatory recycling of commercial organics over time.

4.12.2.7 LOCAL

Existing City of Roseville General Plan

The existing Roseville General Plan (City of Roseville 2016) includes the following goals, policies, and implementation measures related to utilities and service systems.

Water System Goal 1: Maintain a water system that adequately serves the existing community and planned growth levels, ensuring the ability to meet projected water demand and to provide needed improvements, repairs, and replacements in a timely manner.

Water System Goal 2: Provide water services to all existing and future Roseville water utility customers. The provision of services by another provider may be considered where it is determined that such service is beneficial to the City and its utility customers or the provisions of City services is not feasible.

Water System Goal 4: Actively pursue water conservation measures.

Water System Goal 5: Actively pursue supplemental water supplies.

- ▶ **Policy 1:** Secure sufficient sources of water to meet the needs of the existing community and planned growth.
- ▶ **Policy 2:** Provide sufficient water treatment capacity and infrastructure to meet projected water demand.
- ▶ **Policy 3:** Initiate, upon 75% of treatment plant capacity, expansion studies to determine necessary improvements to meet projected water demand.
- ▶ **Policy 4:** Establish a process for monitoring growth trends to anticipate water consumption needs.
- ▶ **Policy 5:** Ensure all development provides for and pays a fair share of the cost for adequate water distribution, including line extensions, easements, and plant expansions.
- ▶ **Policy 8:** Develop and pursue alternatives to continue delivery of PCWA and San Juan Water District (SJWD) water to Roseville.
- ▶ **Policy 10:** Develop and implement water conservation standards and measures as necessary elements of the water system.
- ▶ **Policy 11:** Implement and manage the aquifer storage and recovery program.

Wastewater and Recycled Water System Goal 1: Participate in a cooperative regional approach to wastewater treatment and discharge in order to maintain a system that adequately services planned growth within the City.

Wastewater and Recycled Water System Goal 2: Provide wastewater services to all existing and future Roseville development through the City's wastewater utility. The provision of services by another provider may be considered when it is determined that such service is beneficial to the City and its utility customers or the provision of City services is not feasible.

Wastewater and Recycled Water System Goal 3: Actively pursue the use of recycled water where appropriate and expand recycled water distribution system to deliver and meet estimated City demands for landscape irrigation.

- ▶ **Policy 1:** Expand recycled water distribution system to deliver and meet estimated irrigation demands.
- ▶ **Policy 3:** Initiate upon 75 percent utilization of treatment plant capacity, expansion studies to determine necessary improvements to meet projected wastewater treatment demands.
- ▶ **Policy 4:** Ensure that wastewater treatment capacity is available and that wastewater generation is minimized.

Solid Waste, Source Reduction & Recycling Goal 1: Provide a healthy, safe, and economical system for solid waste collection and disposal.

Solid Waste, Source Reduction & Recycling Goal 2: Provide solid waste collection and disposal services to all existing and future Roseville development through the City's Solid Waste Utility. The provision of services by another provider may be considered where it is determined that such service is beneficial to the City and its customers or the provision of City services is not feasible.

Solid Waste, Source Reduction & Recycling Goal 3: Continue to participate in local and regional approaches to source reduction, material recovery, recycling, and solid waste disposal.

- ▶ **Policy 1:** Ensure existing and future recycling sites and operations remain viable through application of land use compatibility standards.
- ▶ **Policy 2:** Comply with the source reduction and recycling standards mandated by the State by reducing the projected quantity of solid waste disposed at the regional landfill by 50 percent, as well as any mandated future reductions.
- ▶ **Policy 3:** Require a waste characterization profile as part of the initial study, under the California Environmental Quality Act (CEQA), for largescale commercial and industrial development projects.
- ▶ **Policy 4:** Maintain a minimum 10-year reserve capacity at the landfill.
- ▶ **Policy 5:** Develop public education and recycling programs.

Water and Energy Conservation Goal 1: Preserve scarce resources by recognizing the importance of conservation in water and energy management.

Water and Energy Conservation Goal 2: Balance conservation efforts with water and energy supplies for the maximum benefit of Roseville's residents.

- ▶ **Policy 1:** Develop and implement water conservation standards.
- ▶ **Policy 3:** Explore potential uses of treated wastewater.
- ▶ **Policy 5:** Develop and adopt a landscape ordinance that provides standards for the use of drought tolerant, and water-conserving landscape practices for both public and private projects.
- ▶ **Policy 6:** Develop and implement public education programs designed to increase public participation in energy, water conservation and recycled water use.

Electrical Utility Goal 1: Maintain a municipal electric utility that provides an efficient, economical, and reliable electric system.

- ▶ **Policy 1:** Secure new electric resources and transmission as necessary to meet projected demand levels.
- ▶ **Policy 2:** Provide improvements to the sub-transmission and distribution system, consistent with facility planning studies, to ensure a reliable source of electricity is maintained.

Privately-Owned Utilities Goal 1: Work with privately-owned utility companies to ensure adequate service is provided in a timely manner for Roseville customers.

- ▶ **Policy 2:** Require the installation of communication and electric lines underground except when infeasible or impractical.
- ▶ **Policy 4:** Work with non-City-owned utility providers to insure that uses and equipment are planned and constructed in a manner consistent with adopted land use policies and design guidelines, to the extent feasible.

Extension of City Services – New Development, Water

2. The City Council may approve the extension of domestic water service to new development outside the City limits if the Council finds that:
 - a) The property owner signs a recorded, irrevocable agreement to annex the property into the City of Roseville when such annexation is requested by the City;
 - b) The property is located within the City of Roseville sphere of influence;
 - c) The costs associated with the extension of service are borne by the property owner;
 - d) The extension of service does not adversely affect the level of service experienced by utility customers within the City limits;
 - e) The area served complies with the adopted City water conservation policies and Urban Water Management Plan;
 - f) The request for service has been reviewed by the appropriate City advisory commissions or committees; and,
 - g) The development is consistent with the policies of the Roseville General Plan and all City development standards.

Existing City of Roseville General Plan - Water System Implementation Measures

- 4. Dedications and Exactions.** The City shall require, as a condition of project approval, dedication of land and easements or the payment of appropriate fees and exactions to help offset municipal costs of expansion of water treatment and delivery system facilities. Fees will be developed and updated as necessary to fund required projects.
- 5. Specific Plans.** Ensure that specific plans are consistent with the goals and policies of the General Plan. Specific plans shall specify total projected water demand based on land use designations within the plan area. Acknowledging the imprecision of such projections, the plans shall provide detailed criteria for project development to ensure that the water needs of future residents are met. Through development agreements, identify water needs and the provision of expanded water treatment capacity and delivery systems and responsibilities prior to project approval.
- 6. Development Review Process.** Refer any development proposal that has an impact on water sources, supply, or infrastructure to the Environmental Utilities Department for review and comment. Consider the Department's comments during review of the proposed project. Environmental review of a project shall include determination of adequate water sources, water treatment capacity, and distribution systems. The City may implement impact fees or other mechanisms to finance needed improvements.
- 7. Development Agreements.** The City shall require proponents of new development to enter into an agreement specifying their fair share obligations for the provision of water system facilities. The intent of the agreement shall be to provide 100% of the needed water system facilities, unless the City makes findings that there are special circumstances (economic or social benefit to the City and its residents), and will indicate from what sources and in what time frames the facilities will be provided.

Existing City of Roseville General Plan - Wastewater and Recycled Water Implementation Measures

- 3. Fees, Dedications and Exactions.** The City shall continue to require, as a condition of project approval, that new development pay connection fees and bear the fair share cost of extensions and expansions, including the dedication of easements for wastewater and recycled water facilities. This requirement shall help offset the cost of expansion of wastewater treatment facilities and collection and delivery systems for both wastewater and recycled water made necessary by the growth.
- 7. Development Review Process.** Refer any development proposal that has an impact on the wastewater or recycled water systems to the Environmental Utilities Department. Consider the Department's comments during the review of the proposed project. Environmental review of a project shall include wastewater treatment plant and collection system capacity and potential alternatives to treatment and discharge, as well as recycled water distribution capacities and capabilities.
- 8. Development Agreements.** The City shall require proponents of new development to enter into an agreement specifying their fair share obligations for the provisions of wastewater and recycled water system facilities. The intent of the agreement shall be to provide 100% of the needed system, unless the City makes findings that there are special circumstances (economic or social benefit to the City and its residents), and will indicate from what source and time frames the facilities will be provided.

9. **Specific Plans.** Ensure that specific plans are consistent with the goals and policies of the General Plan. Specific Plans shall specify total projected wastewater generation, impacts, and treated wastewater use potential based on land use designations within the plan area. Through development agreements, identify the provision of expanded wastewater treatment capacity, reuse, and delivery systems and designate responsibilities.

Roseville Aquifer Storage and Recovery Program

The City's Aquifer Storage and Recovery (ASR) program allows the City to maximize sustained use of the groundwater basin in conjunction with surface water supplies, while providing a strong backup water supply during critically dry years consistent with the City's commitments contained in the Water Forum Agreement. The program is designed to inject and store surplus drinking water in the underlying aquifer during periods of normal and above normal precipitation. This stored drinking water would be extracted and used to meet peak demands during dry years. The City currently operates one groundwater injection well. At full buildout of the program, the City envisions a network of up to 12 groundwater injection wells that could store up to 10,000 afy of water (City of Roseville 2019a).

Roseville Water Efficient Landscape Ordinance

The City's Water Efficient Landscape Ordinance (Title 14, Chapter 14.18 of the Municipal Code), defines the standards and procedures for the design, installation, and management of landscaping, to comply with the Water Conservation in Landscaping Act of 2006 (Government Code Sections 65591 et. seq.) The Water Efficient Landscape Ordinance is intended to improve conditions in the City's urban area by:

1. Creating the conditions to support life in the soil by reducing compaction, incorporating organic matter that increases water retention, and promoting productive plant growth that leads to more carbon storage, oxygen production, shade, habitat and esthetic benefits.
2. Minimizing energy use by reducing irrigation water requirements, reducing reliance on petroleum based fertilizers and pesticides, and planting climate appropriate shade trees in urban areas.
3. Conserving water by capturing and reusing rainwater and graywater wherever possible and selecting climate appropriate plants that need minimal supplemental water after establishment.
4. Protecting air and water quality by reducing power equipment use and landfill disposal trips, selecting recycled and locally sourced materials, and using compost, mulch and efficient irrigation equipment to prevent erosion.
5. Protecting existing habitat and creating new habitat by choosing local native plants, climate adapted non-natives and avoiding invasive plants. Utilizing integrated pest management with least toxic methods as the first course of action.

Prior to issuance of a building permit or improvement plans, a project applicant must submit a landscape package to the City for review and approval. The landscape package must include a landscape plan that identifies the plants to be used and their evapotranspiration rate, along with a soil management report.

The Water Efficient Landscape Ordinance helps the City conserve surface and groundwater at public plazas, commercial areas, shopping centers, pedestrian/bicycle trails, City “gateway” entrances, and private residences.

City of Roseville 2019 Design and Construction Standards

The purpose of the City’s Design and Construction Standards is to provide direction in the application of improvements which are to be dedicated to the public and accepted by the City for maintenance or operation, and to provide for coordinated development of those facilities to be used by and for the protection of the public. This includes certain private works, as well as improvements to be installed within existing City rights-of-way and easements.

Section 9 of the City’s Design and Construction Standards provides criteria for design of sewer systems. Compliance with these standards reduces impacts related to wastewater conveyance by ensuring that wastewater collection and conveyance facilities are properly sized to convey the flows from development.

Construction and Demolition Recycling Ordinance

The Construction and Demolition and Recycling Ordinance (City Municipal Code Title 19, Chapter 19.17 makes construction and demolition debris recycling mandatory for all new building construction; all new non-residential construction with a valuation greater than \$200,000; all demolition projects; and any residential project that increase a building’s area, volume, or size. Materials required to be recycled include scrap metal, inert materials (concrete, asphalt paving, bricks, etc.), corrugated cardboard, wooden pallets, and clean wood waste. A Waste Management Plan must be completed to identify waste that would be generated by a project, as well as the proposed recycling and hauling methods. During construction and/or demolition, a waste diversion report must be maintained on the project area and submitted to the City at project completion. The waste diversion report must verify that a minimum 65 percent of the debris generated from the project was recycled or reused.

Adopted Specific Plans and Mitigation Measures

Currently, the City has adopted 14 Specific Plans. A Specific Plan is a comprehensive planning and zoning document that implements the General Plan by providing development and conservation standards for a defined geographic location within the Planning Area. Each Specific Plan contains guidelines for site, architectural, landscaping, lighting, roadway networks, pedestrian/bicycle paths, open space corridors, parks, and other aspects of design. Each adopted Specific Plan involved preparation of an EIR, which evaluated potential impacts related to utilities. Where appropriate, mitigation measures were adopted and incorporated into the specific plan. Adopted mitigation measures for utilities include the requirement that developers divert 50 percent of the waste stream from landfills; and that developers must demonstrate that sufficient water supplies are available to serve individual projects and pay fair share of funding for water treatment and capacity, and demonstrate that WWTP capacity is available to serve individual projects, prior to the issuance of development permits. Copies of the adopted Specific Plans and their associated EIRs are available upon request from the City of Roseville Development Services Department, Planning Division.

4.12.4 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

4.12.4.1 METHODOLOGY

This proposed General Plan Update does not include any changes to land use designations, expansion of the City's Planning Area, or other major physical changes to areas planned for development compared to the existing General Plan, but does include changes to goals, policies, and implementation measures, which are analyzed as a part of this EIR. This EIR analyzes buildout of the Planning Area consistent with the existing General Plan land use designations and compares this to the existing physical conditions, which constitute the baseline for determining whether potential impacts are significant.

Impacts related to utility and service systems that would result from buildout of the General Plan are evaluated at the programmatic level by comparing existing infrastructure, its available capacity, and ability to serve future demand on utilities that would be caused by buildout. Once future demands have been estimated, the analysis determines whether the increased demand would result in the need for new or expanded facilities, the construction of which could possibly result in adverse impacts on the physical environment. Policies and implementation measures of the proposed General Plan Update that would reduce these impacts have been identified throughout this EIR.

Evaluation of potential utility and service system impacts was based on a review of the following regional and local planning documents pertaining to the City of Roseville and its Planning Area:

- ▶ *Existing City of Roseville General Plan* (City of Roseville 2016),
- ▶ *City of Roseville Municipal Service Review Update* (Placer County LAFCO 2017),
- ▶ *City of Roseville 2015 Urban Water Management Plan* (West Yost 2016),
- ▶ *City of Roseville Sewer System Management Plan* (City of Roseville 2016a),
- ▶ *South Placer Regional Wastewater and Recycled Water Systems Evaluation Updated Final Report* (RMC 2009).

4.12.4.2 THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines, a utilities and service systems impact is considered significant if the proposed project would:

- ▶ require or result in the relocation or construction of new or expanded water, wastewater treatment facilities, or storm water drainage, electrical power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects;
- ▶ have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years;

- ▶ result in a determination by the wastewater treatment provider which serves or may serve the project that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments;
- ▶ 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; or
- ▶ comply with federal, State, or local management and reduction statutes and regulations related to solid waste.

4.12.4.3 ISSUES NOT CONSIDERED FURTHER IN THIS EIR

All issues related to utilities and service systems are discussed below.

4.12.4.4 IMPACT ANALYSIS

IMPACT 4.12-1 **Require or Result in the Relocation of or the Construction of New or Expanded Utilities and Service Systems Facilities, the Construction of Which Could Cause Significant Environmental Effects.**
*Buildout of the General Plan would require the relocation of or the construction of new or expanded water and wastewater infrastructure, stormwater drainage facilities, and electrical and natural gas infrastructure. The impacts of construction of these facilities have been analyzed throughout this EIR. The proposed General Plan Update includes mitigating policies and measures, where necessary, that would reduce or avoid most impacts to a less-than-significant level. Because buildout of the General Plan would contribute to the need to develop the Ophir water treatment plant, new development under the General Plan would indirectly contribute to significant and unavoidable air quality impacts from construction of the water treatment plant, this impact is considered **significant**.*

Buildout of the General Plan could require relocation of or construction of new or expanded utilities and service systems. Buildout of the General Plan could result in the expansion of the existing Dry Creek WWTP (see Impact 4.12-3, below). Long-term water treatment plant capacity would be provided by the construction of the Ophir water treatment plant by the PCWA, which would be built on a site just south of the existing City of Auburn wastewater treatment plant. Water supply infrastructure, such as water transmission mains, pumping stations, and storage tanks; wastewater conveyance infrastructure, such as gravity sewer pipelines, force mains, and pumping stations; and stormwater drainage facilities will be required in currently undeveloped areas where no such infrastructure currently exists. The majority of these new facilities are within the Amoruso Ranch Specific Plan, Creekview Specific Plan, and Sierra Vista Specific Plan areas. Existing infrastructure could require upgrades to serve development – particularly Downtown, along Riverside Avenue, Douglas Boulevard, Harding Boulevard, and other areas where the City is encouraging infill development as a part of this proposed General Plan Update.

Additional electrical infrastructure would be provided by Roseville Electric. Additional electrical infrastructure would require a new substation within the Creekview Specific Plan Area and 60-kilovolt overhead transmission lines. PG&E is the natural gas service provider for the city. Expansion of natural gas facilities would be required to serve the growing population of the region, and would be constructed in coordination with development.

The construction of these new or expanded utilities and service systems could have adverse effects on the physical environment. Except for the Ophir water treatment plant, expanded and new utilities and service systems would

be constructed within the footprint of the Planning Area. Impacts associated with new or expanded utilities and service systems were identified in Specific Plan EIRs, such as those prepared for the Creekview, Amoruso Ranch, and Sierra Vista Specific Plans. Construction of structures could change the aesthetic environment in the vicinity of those facilities. It is possible that improvements could adversely affect vernal pool fairy shrimp, vernal pool tadpole shrimp, valley elderberry longhorn beetle, steelhead, tricolored blackbird, Swainson's hawk and California black rail, other migratory birds, riparian woodland, wetlands, or habitat for other rare plant and wildlife species (see Section 4.8, "Biological Resources"). Construction activities could disturb previously known or unknown subsurface prehistoric and historic resources, human remains, and tribal cultural resources and generate criteria air pollutant emissions, precursors, and greenhouse gas (GHG) emissions (see Section 4.9, "Cultural Resources," Section 4.4, "Air Quality," and Section 4.5, "Greenhouse Gas Emissions"). Routine maintenance activities and ongoing operations would generate criteria air pollutant emissions, precursors, and GHG emissions, as well. It is possible that any expansion of the Dry Creek WWT capacity could increase odor-generating potential. Existing regulations would likely prevent significant adverse effects to groundwater or surface water quality. It is possible that new or expanded facilities could be located in a floodplain. Depending on the design, location, phasing, and operations of new or expanded facilities, there could be one or more direct or cumulative impacts. Physical impacts associated with construction and operation of utilities and service systems are evaluated throughout this EIR.

The construction of the Ophir WTP (previously referred to as the Foothill Phase II WTP and Pipeline Project) was addressed in the Foothill Phase II Water Treatment Plant and Pipeline Final EIR (Placer County Water Agency 2005) and is hereby incorporated by reference. The findings of the Ophir WTP EIR were that construction-related activities (including site grading) would generate short-term emissions of criteria pollutants, including suspended and inhalable particulate matter and equipment exhaust emissions, which would adversely affect air quality. These impacts to air quality were determined to be significant and unavoidable. However, impacts to the remaining issues analyzed by the Ophir WTP EIR were found either to be less than significant or would be reduced to less than significant through the implementation of adopted mitigation measures.

Because construction of new or expanded utility systems could affect all of the resource areas evaluated throughout this EIR, in addition to the analyses of potential construction and operations impacts please see proposed General Plan Update goals and policies listed in each topic area section of Chapter 4.0. In addition, the following goals and policies related to the provision of utilities would be revised as a part of the proposed General Plan Update, with additions shown in **bold, underlined** text and deletions shown in ~~striketrough~~ text:

Goal PF4.1: Reliability: m~~Maintain a resilient and highly reliable electric system with sufficient resource capacity and reserves to meet current and future demand.~~~~municipal electric utility that provides an efficient, economical, and reliable electric system.~~

- ▶ **Policy PF4.1:** Secure new **supply-side and demand-side** electric resources, ~~and transmission~~ as necessary, to meet ~~projected demand levels~~ **forecasted demand and reserve requirements**.
- ▶ **Policy PF4.2:** Provide improvements to the sub-transmission and distribution system, consistent with facility planning studies, to ~~ensure~~ **maintain** a reliable source of electricity ~~is maintained~~.

- **Policy PF5.4:** Work with non-City-owned utility providers to ~~insure~~ **ensure** that uses and equipment are planned and constructed in a manner consistent with adopted land use policies and design guidelines, ~~to the extent feasible.~~

Goal PF6.1: Maintain a water system that adequately serves the existing community and planned growth levels **through buildout**, ensuring the ability to meet projected water demand and to provide needed improvements, repairs, and replacements in a timely manner.

Goal PF6.6: Maintain systems that are resilient and reliable for treatment, conveyance, and energy infrastructure.

- **Policy PF6.2:** Provide sufficient water treatment capacity and infrastructure to meet projected water demand through City **buildout of the General Plan**.
- **Policy PF6.3:** Initiate, upon 75% ~~percent~~ of treatment plant capacity, expansion studies to determine necessary improvements, **if any**, to meet projected water demand.
- **Policy PF6.4:** ~~Establish a process for monitoring~~ **Monitor** growth trends to anticipate **and plan for future** water consumption **demand** needs.

Goal PF7.2: Provide wastewater services to all existing and future ~~Roseville~~ development through the City's wastewater utility. The provision of services by another provider may be considered when it is determined that such service is beneficial to the City and its utility customers or the provision of City services is not feasible.

- **Policy PF7.2:** Initiate, upon 75 percent utilization of treatment plant capacity, expansion studies to determine necessary **demand management and capacity** improvements to meet projected wastewater treatment demands.
- **Policy PF7.3:** Ensure that wastewater treatment capacity is available ~~for proposed~~ **planned development and intensification** and that wastewater generation is minimized.

The proposed General Plan Update policy changes listed above improve the clarity of the General Plan and would not result in any adverse environmental impacts.

Conclusion

Existing General Plan Water and Recycled Water Systems Goal 3 and Policy 1; and Privately-Owned Utilities Goal 1 and Policy 2 (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Goals PF4.1 and Policy PF4.1, PF4.2, and PF5.4; Goals PF6.1 and PF6.6 and Policies PF6.2, PF6.3, PF6.4; and Goal PF7.2 and Policies PF7.2 and PF7.3 listed above, along with existing and proposed General Plan Update policies listed throughout this EIR, would reduce the impacts related to construction of new or expanded utilities and service systems within the footprint of the Planning Area. As appropriate, future facility construction plans would be subject to project-level CEQA analysis and mitigation, further ensuring compliance with regulations and allowing additional opportunities for mitigation, if necessary. The direct impact is considered **less than significant**.

Except for the Ophir water treatment plant, expanded and new utilities and service systems would be constructed within the footprint of the Planning Area, and were anticipated and evaluated within Specific Plan EIRs. Because buildout of the General Plan would contribute to the need to develop the off-site Ophir water treatment plant, new development under the General Plan would indirectly contribute to significant and unavoidable construction-related air quality impacts. Therefore, this indirect impact is considered **significant**.

Mitigation Measures

No feasible mitigation measures are available beyond those already adopted in the Ophir WTP EIR, the mitigating policies described throughout this EIR, the General Plan's implementation measures, and mitigation measures included throughout Chapter 4 of this EIR.

Significance after Mitigation

There are no additional feasible mitigation measures that could be imposed by the City to further mitigate the indirect contribution from buildout of the General Plan to short-term impacts from construction of the Ophir WTP. Therefore, indirect impacts are considered **significant and unavoidable**.

IMPACT 4.12-2 **Have Sufficient Water Supplies.** *Buildout of the General Plan would increase water demand. By adhering to the goals, policies, and implementation measures proposed in the proposed General Plan Update, as well as local and State laws and regulations, the City would ensure adequate water supply is available to meet future demand. The City's UWMP determined that water supply is projected to be sufficient in normal water years over the UWMP's 20-year planning period (i.e., 2015 to 2035). Although water supply in single-dry years and some multiple-dry years is insufficient to meet demand within the City service area over the 20-year planning period, water conservation and/or groundwater use will ensure sufficient water supplies are available to meet demands. Therefore, this impact is considered **less than significant**.*

Buildout of the General Plan would increase potable and non-potable water demands. Because specific development proposals for these land uses are not considered in this EIR, the exact increase in water demand water cannot be determined. However, based on per capita water demand per person, at buildout of the General Plan the water demand would be 36,630 afy (assuming the relationship between residential and non-residential water demand does not change between present and buildout of the General Plan). Therefore, the following analysis is based on the City's UWMP, which was adopted in June 2016, and addresses water supply and demand issues, water supply reliability, water conservation, water shortage contingencies, and recycled-water usage for the areas within City's service area. The City's UWMP accounted for existing and future land uses in Roseville and its planning area (West Yost 2016). As shown in Table 4.12-5, potable water demands are expected to increase from 22,881 afy in 2015 to 48,762 afy in 2035.

This impact analysis examines the estimated increase in water demand in relation to the existing water use conditions to estimate the availability and adequacy of water supply. The City's water supply consists of surface water, groundwater in dry years or in times of emergencies, and recycled water for irrigation. The City currently has contracts for up to 66,000 acre-feet of American River water supplies diverted from the Folsom Reservoir. Existing and projected water demands in the City service area will be met by the water supplies described above and contract entitlements for each agency are summarized in Table 4.12-1. In addition, the City intends to purchase 1,500 afy of surface water supplies beginning in 2030 from the future PCWA Ophir water treatment plant project.

The City's current groundwater well facilities consists of six groundwater wells. These wells are maintained primarily for back-up water supply and to improve water supply reliability during drought and emergency conditions. The City intends to construct additional groundwater wells over the next 15 years for a total of 12 wells (West Yost 2016). All existing wells have ASR injection capability, and all future wells are planned to incorporate the same injection capability. In the future, the ASR program would allow the City to change the pattern of water withdrawal from Folsom Reservoir from peak demand times in summer to better water availability times in winter, but could also be used as a replacement for surface water in dry years (West Yost 2016).

Recycled water is used by the City for landscape irrigation, golf course irrigation, construction uses, and to provide cooling water for the Roseville Energy Park. As shown in Table 4.12-3, recycled water demands are expected to increase from 4,060 afy in 2015 to 5,643 afy in 2035 (West Yost 2016). According to the UWMP, the recycled water supply is considered to be 100 percent reliable in all water year types (West Yost 2016).

Table 4.12-6 identifies surface water supplies and demand within the City over the UWMP's planning period in normal, single-dry, and multiple-dry years. Water supply is projected to be sufficient in normal water years over the UWMP's 20-year planning period (i.e., 2015 to 2035). However, reductions in water supply availability from the Bureau, which would occur in accordance with the Water Forum Agreement, may result in deficits in water supply in single-dry years, and in certain multiple dry years (Table 4.12-2) (West Yost 2016). The City has identified water conservation as one strategy to alleviate the potential water deficits that could occur in single-dry years and multiple dry years. As shown on Table 4.12-4, potential water conservation, assuming a 20 percent of normal year demand consistent with the Roseville Water Conservation and Drought Mitigation Ordinance, would alleviate potential water supply deficits in single-dry and some multiple-dry years. In the future, groundwater pumping could be available to alleviate water supply deficits (West Yost 2016).

The following goals and policies related to water supply and demand would be revised as a part of the proposed General Plan Update, with additions shown in **bold, underlined** text and deletions shown in ~~striketrough~~ text:

Goal PF6.1: Maintain a water system that adequately serves the existing community and planned growth levels **through buildout**, ensuring the ability to meet projected water demand and to provide needed improvements, repairs, and replacements in a timely manner.

Goal PF6.4: Actively pursue water ~~conservation~~ **efficiency** measures **to ensure compliance with all State of California mandates**.

Goal PF6.5: Actively pursue ~~supplemental~~ **diverse** water supplies, **including surface, groundwater, and other sources for water supply reliability and system improvements that increase reliability**.

- ▶ **Policy PF6.1:** Secure **and maintain** sufficient **and diverse** sources of water to meet the needs of the existing community and planned growth.
- ▶ **Policy PF6.2:** Provide sufficient water treatment capacity and infrastructure to meet projected water demand through City **buildout of the General Plan**.
- ▶ **Policy PF6.4:** ~~Establish a process for monitoring~~ **Monitor** growth trends to anticipate **and plan for future** water ~~consumption~~ **demand** needs.

| Table 4.12-6 City of Roseville Comparison of Water Supply and Demand, 2015–2035 | | | | | |
|--|--|--------|--------|--------|--------|
| Total Water Supplies and Demand ^{1, 2, 3} | Actual and Projected Demands (afy) ^{1, 4} | | | | |
| | 2015 | 2020 | 2025 | 2030 | 2035 |
| Normal Year | | | | | |
| Total Supply | 58,900 | 58,900 | 58,900 | 60,400 | 60,400 |
| Total Demand | 22,881 | 41,054 | 43,300 | 46,074 | 48,762 |
| Difference (Supply minus Demand) | 36,019 | 17,845 | 15,600 | 14,326 | 11,638 |
| Single-Dry Year | | | | | |
| Total Supply | 38,800 | 38,000 | 38,000 | 39,500 | 39,500 |
| Total Demand | 22,881 | 41,054 | 43,300 | 46,074 | 48,762 |
| Difference (Supply minus Demand) | 15,919 | -3,054 | -5,300 | -6,574 | -9,262 |
| Multiple-Dry Year 1 | | | | | |
| Total Supply | 51,394 | 51,394 | 51,394 | 52,894 | 52,894 |
| Total Demand | 22,881 | 41,054 | 43,300 | 46,074 | 48,762 |
| Difference (Supply minus Demand) | 28,513 | 10,340 | 8,094 | 6,820 | 4,132 |
| Multiple-Dry Year 2 | | | | | |
| Total Supply | 54,000 | 54,000 | 54,000 | 55,500 | 55,500 |
| Total Demand | 22,881 | 41,054 | 43,300 | 46,074 | 48,762 |
| Difference (Supply minus Demand) | 31,119 | 12,949 | 10,700 | 9,426 | 6,738 |
| Multiple-Dry Year 3 | | | | | |
| Total Supply | 45,426 | 45,426 | 45,426 | 46,926 | 46,926 |
| Total Demand | 22,881 | 41,054 | 43,300 | 46,074 | 48,762 |
| Difference (Supply minus Demand) ¹ | 22,545 | 4,372 | 2,126 | 852 | -1,836 |
| Notes: afy = acre-feet per year | | | | | |
| ¹ Water supplies are based on contracted supply and the historic percent reliability for each water year. | | | | | |
| ² Water demands do not take into account for conservation measures in dry years. | | | | | |
| ³ See Table 4.12-1 for total supplies from current surface water entitlements. | | | | | |
| ⁴ The City's diversions from the American River are limited by the Water Forum Agreement. The City agreed to limit diversions under its American River supply contracts to no more than 58,900 afy in normal years, and no more than 39,800 afy during the driest and critically dry years. | | | | | |
| Sources: West Yost 2016; data compiled by AECOM in 2019 | | | | | |

- **Policy PF6.5:** ~~Ensure all development provides for and pays a~~ **New development shall pay a** fair share of the cost for adequate water **supply, treatment and** distribution, including **extension of** water ~~line~~ mains extensions, easements **acquisitions**, and **treatment** plant expansions, **water storage, groundwater wells**, and **pumping expansions, and dry year reliability**.
- **Policy PF6.8:** Develop and **expand** ~~pursue~~ alternatives to continue delivery **conjunctive use of water** with ~~from~~ **in collaboration with neighboring public agencies** PCWA and SJWD water to Roseville.
- **Policy PF6.10:** Develop and implement water ~~conservation~~-efficiency standards and measures as necessary elements of the water system.

- **Policy PF6.11:** ~~Continue Implement and~~ **the management and expansion of** the **groundwater and** aquifer storage and recovery program **to increase resiliency and reliability of water supply during all supply conditions.** ~~Any additions to, or expansions of the City's system shall include like facilities, infrastructure, and technologies for aquifer storage and recovery.~~

Goal PF9.1: Preserve scarce resources by recognizing the importance of **efficiency** ~~conservation~~ in water and energy management.

Goal PF9.2: Balance ~~conservation~~ **efficiency** efforts with water and energy supplies for the maximum benefit of Roseville's residents.

- **Policy PF9.1:** Develop and implement water ~~conservation~~ **efficiency** standards.
- **Policy PF9.4:** Develop and ~~adopt a landscape ordinance that provides~~ **implement** standards for the use of drought tolerant, and water-~~conserving~~ **efficient** landscape practices for both public and private projects.
- **Policy PF.5:** Develop and implement public education programs designed to increase public participation in energy, water ~~conservation~~**efficiency**, and recycled water use.

The proposed General Plan Update policy changes listed above would result in improved provisions for water supply, as well as additional clarity for the General Plan, and would not result in any adverse environmental impacts.

Conclusion

As shown in Table 4.12-6, water supply is projected to be sufficient in normal water years over the UWMP's 20-year planning period (i.e., 2015 to 2035). Although Table 4.12-6 shows that water supply in single-dry years and some multiple-dry years is insufficient to meet demand within the City service area over the 20-year planning period, water conservation and/or groundwater use will ensure sufficient water supplies to meet demands (West Yost 2016). Therefore, the City would have sufficient water supplies available to serve buildout of the General Plan from existing or permitted entitlements in normal, single-dry, and multiple-dry water years.

Existing General Plan Water System Goal 2 and Water and Energy Conservation Policy 3, and Extension of City Services – New Development, Water (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Goal PF6.1, PF6.4, PF6.5 and Policies PF6.1, PF6.2, PF6.4, PF6.5, PF6.8, PF6.10, and PF6.11; Goals PF9.1 and PF9.2 and Policies PF9.1, PF9.4, and PF.5 listed above focus on maintaining a water system that adequately serves the existing community and planned growth levels through buildout, ensuring the ability to meet projected water demand through diversification of water supplies, and actively pursuing water efficiency measures to ensure compliance with all State of California mandates. The General Plan Water and Energy Conservation goals and policies encourage water conservation and protection and a comprehensive program to encourage conservation. The City will also require the use of water conservation technologies to reduce indoor demand for potable water in accordance with the 2019 CALGreen Code and require new development to incorporate appropriate landscaping to reduce water demand in accordance with the City's Water Efficient Landscape Ordinance.

Implementation Measures in the proposed General Plan Update require any development proposal that has an impact on the water supplies submit project plans to the Environmental Utilities Department for review and comment. Individual development projects proposed as a part of buildout of the General Plan that are subject to environmental review would be required to assess water supply availability to ensure that the City has sufficient water supplies to meet demand and projects are required to identify adequate water supply sources. Specific Plans are required to provide detailed criteria for project development to ensure that the water needs of future residents are met.

Furthermore, State law requires demonstration of adequate long-term water supply for large development as defined by SB 610 (i.e., more than 500 dwelling units or nonresidential equivalent) through preparation of a WSA that discuss whether the system's total projected water supplies (available during normal, single-dry, and multiple-dry water years during a 20-year projection) would meet the project's water demand in addition to the system's existing and planned future uses.

With compliance with existing and future local and State laws and regulations and implementation of the proposed General Plan Update policies, the City would have sufficient water supplies available to serve buildout of the General Plan from existing or permitted entitlements in normal, single-dry, and multiple-dry water years. This impact is considered **less than significant**.

Mitigation Measure

No mitigation is required.

IMPACT 4.12-3 **Adequacy of Wastewater Treatment Capacity.** *Buildout of the General Plan would result in new residential, commercial, office, and industrial development that would generate additional wastewater that increases demand for wastewater treatment. By adhering to the goals, policies, and implementation measures proposed in the proposed General Plan Update, the City would ensure adequate wastewater treatment capacity is available to meet future demand. Therefore, this impact is considered **less than significant**.*

Buildout of the General Plan would result in new residential, commercial, office, industrial development, and public facilities that would generate additional wastewater that increases demand for wastewater treatment. Based on the City's 2019 Design Standards for gallon per day per acre for land use categories and the acreage of land uses shown in Table 2-1 in Chapter 2, the wastewater flow at buildout of the General Plan would be 8.9 mgd (Table 4.12-7).

Wastewater from the City is currently treated at the Dry Creek WWTP and the Pleasant Grove WWTP. The Dry Creek WWTP is permitted to treat 18 mgd average dry weather flow and the current average dry weather flow is approximately 9.3 mgd. The SPWA Wastewater Systems Evaluation determined that buildout of the 2005 service area boundary would result in 16.34 mgd average dry weather flow at the Dry Creek WWTP and that buildout of the ultimate SPWA service area, which includes the 2005 service area boundary and Urban Growth Areas, would result in 19.98 mgd at the Dry Creek WWTP. Capacity expansion for the Dry Creek WWTP could be required to provide for the long-term wastewater treatment demands.

| Table 4.12-7 General Plan Update Average Dry Weather Flow | | | |
|--|---------------|--|--------------------------------|
| Land Use | Acreage | Flow Rate (gallon per day per acre) | Average Dry Weather Flow (mgd) |
| Residential | 13,00 | 190 | 2.5 |
| Commercial/Office | 3,125 | 850 | 2.6 |
| Industrial | 2,340 | 850 | 1.99 |
| Public/Quasi-Public | 2,700 | 660 | 1.8 |
| Parks | 2,140 | 10 | 0.02 |
| Open Space | 3,100 | 0 | 0 |
| Urban Reserve | 100 | -- | 0 |
| Transfer Station | 25 | | 0 |
| Total | 26,000 | -- | 8.9 |
| Notes: mgd = million gallons per day Source: City of Roseville 2019b | | | |

The Pleasant Grove WWTP's effective treatment capacity is approximately 9.5 mgd and presently treats 7.1 mgd average dry weather flow. As discussed above, the City proposed an increase treatment capacity of the existing Pleasant Grove WWTP so that it can meet its original 12 mgd design capacity (City of Roseville 2017). Increasing the organic treatment capacity of the existing Pleasant Grove WWTP from 9.5 mgd to be consistent with the original design capacity of 12 mgd average dry weather flow will accommodate the anticipated wastewater treatment demands through approximately 2040 (City of Roseville 2017). The expansion project is currently under construction and is anticipated to be complete in 2020 (City of Roseville 2018).

The following proposed General Plan Update goals and policies related to wastewater treatment in Roseville are proposed for revision, with additions shown in **bold, underlined** text and deletions shown in ~~striketrough~~ text:

Goal PF7.2: Provide wastewater services to all existing and future ~~Roseville~~ development through the City's wastewater utility. The provision of services by another provider may be considered when it is determined that such service is beneficial to the City and its utility customers or the provision of City services is not feasible.

- ▶ **Policy PF6.3:** Initiate, upon 75% ~~percent~~ of treatment plant capacity, expansion studies to determine necessary improvements, **if any,** to meet projected water demand.
- ▶ **Policy PF7.3:** Ensure that wastewater treatment capacity is available **for proposed-planned development and intensification** and that wastewater generation is minimized.

The proposed General Plan Update policy changes listed above would improve the clarity of the General Plan, and would not result in any adverse environmental impacts.

Conclusion

Existing General Plan Water and Recycled Water Systems Goal 1 and Policy 5 (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), as well

as revised proposed General Plan Update Goal PF7.2 and Policies PF6.3 and PF7.3 listed above, would minimize potential wastewater treatment impacts by ensuring that wastewater treatment capacity is available for proposed development and that wastewater generation is minimized. Proposed General Plan Update Policy PF6.3 listed above would require the City to initiate expansion studies to determine necessary improvements to meet projected wastewater treatment demands upon 75 percent utilization of treatment plant capacity. Implementation Measures in the proposed General Plan Update require any development proposal that has an impact on the wastewater system to submit project plans to the Environmental Utilities Department for review and comment, and projects are required to identify wastewater treatment plant capacity and potential alternatives to treatment and discharge. Specific Plans are required to specify total projected wastewater generation, impacts, and treated wastewater use potential based on land use designations within their plan area, and through development agreements, identify the provision of expanded wastewater treatment capacity.

As stated above, the Pleasant Grove WWTP would have adequate capacity to serve demand from buildout of the General Plan demand in addition to their existing commitments. In the future, the Dry Creek WWTP could require upgrades to provide adequate capacity to serve demand from buildout of the proposed General Plan Update in addition to their existing commitments. By adhering to the goals, policies, and implementation measures proposed in the proposed General Plan Update, the City would ensure adequate wastewater treatment capacity is available to meet future demand. Therefore, the impact is considered **less than significant**. Physical environmental effects from the potential expansion of the Dry Creek WWTP are discussed above in Impact 4.12-1.

Mitigation Measure

No mitigation is required.

IMPACT 4.12-4 **Generation of Solid Waste in Excess of Capacity and Compliance with Solid Waste Statues and Regulations.** *Buildout of the General Plan would accommodate an increase in population and employees. Future development would be required to comply with applicable federal, State, or local solid waste regulations or statues. In addition, the proposed General Plan Update would not generate solid waste in excess of state or local standards or in excess of capacity of local infrastructure. The Western Regional Sanitary Landfill has sufficient landfill capacity available to accommodate solid-waste disposal needs for development under the General Plan. Therefore, impacts related to sufficient landfill capacity and compliance with applicable statutes and regulations related to solid waste are considered **less than significant**.*

Buildout of the General Plan could increase the population of Roseville by up to 62,200 individuals and increase the number of employees by 38,000 to 68,000 at full buildout, with an associated increase in solid waste streams.³ In 2018, CalRecycle estimated a statewide solid-waste disposal generation rate of 4.8 ppd per resident and 8.2 ppd per employee (CalRecycle 2018). Based on this generation rate, buildout could generate an additional 305 to 428 tons of solid waste per day (149 tpd per person plus 156 to 279 tpd per employee) above exiting

³ With buildout of the 2035 General Plan, the City is estimated to increase the total population from approximately 135,800 persons to approximately 198,000 persons resulting in a net increase of 62,200 individuals, and increase the number of jobs from 82,000 to between 120,000 and 150,000, resulting in a net increase of 38,000 to 68,000 new employees.

conditions.^{4, 5} This estimate is conservative (high) because recycling and waste diversion reduces this amount and is likely to increasingly reduce the waste stream that is sent to landfills in the future as more restrictive regulations require diversion of larger fractions of the waste stream.

Most of the solid waste generated in the City is first transported to the Material Recovery Facility, which separates and recovers waste products for recycling, reuse, or conversion to energy resources. In addition to processing mixed solid waste, the Material Recovery Facility includes a green waste compost facility. This program contributes to achieving recycling goals as prescribed by the State.

Non-recyclable solid waste is transferred from the MFR to the Western Regional Sanitary Landfill, which is located at 3195 Athens Road in unincorporated Placer County north of Roseville. According to CalRecycle, the Western Regional Sanitary Landfill has a maximum permitted throughput of 1,900 tpd and has a total maximum permitted capacity of approximately 36.4 million cubic yards. The Western Regional Sanitary Landfill has a remaining capacity of approximately 29.1 million cubic yards and an anticipated closure date of January 1, 2058 (CalRecycle 2019b). Because the estimated increase in throughput associated with buildout of the proposed General Plan Update is estimated to increase this amount by 305 to 428 tpd, the increase in solid waste disposal demand would be within the maximum daily throughput capacity of this facility (1,900 tpd). In addition, buildout of the proposed General Plan Update is anticipated to occur before the closure date of the Western Regional Sanitary Landfill. Based on available information, the Western Regional Sanitary Landfill has adequate capacity to serve buildout of the proposed General Plan Update.

In addition, future development accommodated under the proposed General Plan Update would be required to comply with applicable federal, State, or local solid waste regulations or statutes, including the City's Construction and Demolition and Recycling Ordinance, 2016 CALGreen Code, and AB 1826 (mandatory commercial organics recycling). Furthermore, the City would continue to comply with AB 1601, which requires implementation of a commercial solid waste recycling program.

The following policies related to solid waste collection and disposal would be revised as a part of the proposed General Plan Update, with additions shown in **bold, underlined** text and deletions shown in ~~striketrough~~ text:

- ▶ **Policy PF8.2:** Comply with the source reduction and recycling standards ~~mandated by the State~~ by reducing the projected quantity of solid waste disposed at the regional landfill ~~by 50%, as well as any mandated future reductions.~~
- ▶ **Policy PF8.3:** Require a waste characterization profile ~~as part of the initial study, under the California Environmental Quality Act (CEQA),~~ for **proposed** large-scale commercial and industrial development projects.
- ▶ **Policy PF8.5:** Develop **and implement** public education and recycling programs.

⁴ Based on CalRecycle's estimated 2018 annual per capita disposal rate of 4.8 pounds per resident per day, the estimated increase in population (62,200 persons) would generate approximately 297,600 pound per day of solid waste, which equates to 148.8 tpd (CalRecycle 2018).

⁵ Based on CalRecycle's estimated 2018 annual per capita disposal rate of 8.2 pounds per employee per day and an estimated increase of between 38,000 and 68,000 employees, approximately 311,600 to 557,600 pound per day of solid waste would be generated per day, which equates to 155.8 to 278.8 tpd (CalRecycle 2018).

The proposed General Plan Update policy changes listed above would result in improved clarity, and would not result in any adverse environmental impacts.

Conclusion

Existing General Plan Solid Waste, Source Reduction & Recycling Goals 1, 2, and 3 and Policies 1, 4 (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Policies PF8.2, PF8.3, and PF8.5 listed above, would reduce solid waste through compliance with the source reduction and recycling standards mandated by the State by reducing the projected quantity of solid waste disposed at the regional landfill, by requiring a waste characterization profile for proposed large-scale commercial and industrial development projects, and by developing public education and recycling programs. Additional policies of the proposed General Plan Update are intended to ensure existing and future recycling sites and operations remain viable through application of land use compatibility standards and maintaining a minimum 10-year reserve capacity at the Western Regional Sanitary Landfill. Implementation Measures in the proposed General Plan Update require any development proposal that has an impact on solid waste submit project plans to the Environmental Utilities Department for review and comment, and requires specific plans to identify solid waste generation, impacts on the regional landfill, and opportunities for source reduction and recycling.

Future development under the General Plan would be required to comply with applicable federal, State, or local solid waste regulations or statutes, including the City's Construction and Demolition and Recycling Ordinance, 2016 CALGreen Code, and AB 1826. In addition, buildout of the General Plan would not generate solid waste in excess of State or local standards or in excess of capacity of local infrastructure. The Western Regional Sanitary Landfill has sufficient landfill capacity available to accommodate solid-waste disposal needs for development under buildout of the General Plan. Therefore, impacts related to sufficient landfill capacity and compliance with applicable statutes and regulations related to solid waste are considered **less than significant**.

Mitigation Measure

No mitigation is required.

4.13 HYDROLOGY AND WATER QUALITY

4.13.1 INTRODUCTION

This section describes potential impacts related to surface and groundwater hydrology and water quality, along with flooding, in the Planning Area associated with the proposed General Plan Update. To provide context for the impact analysis, this section begins with an environmental setting describing the existing conditions in the Planning Area related to hydrology and water quality. Next, the regulatory framework is described, which informs the selection of the significance thresholds used in the impact analysis. The regulatory framework also includes existing General Plan policies related to the impact analysis of this section. The section concludes with the applicable significance thresholds, the impacts of the proposed changes to adopted General Plan policies, recommended mitigation measures, and the significance conclusions.

As part of the impact analysis, Notice of Preparation (NOP) comments were reviewed to help guide the analysis. Comments were received from the Central Valley Regional Water Quality Control Board (RWQCB) and from Reclamation District (RD) 1000. Comments from the Central Valley RWQCB were related to data contained in the Basin Plan regarding beneficial uses, impaired waterbodies, and permitting requirements. Comments from RD 1000 were related to downstream stormwater flooding concerns in RD 1000 facilities and the need for hydraulic studies for individual, site-specific projects. The City reviewed and considered this information during preparation of this hydrology and water quality section.

Impacts related to water supply and water treatment are discussed in Section 4.12, “Utilities and Service Systems,” of this EIR.

4.13.2 ENVIRONMENTAL SETTING

The Planning Area is located at the western margin of the Sacramento Valley and the eastern margin of the Sierra Nevada foothills. Drainage generally slopes westward, from the foothills to the valley floor. The climate is Mediterranean in nature, with hot, dry summers and temperate, rainy winters.

4.13.2.1 SURFACE WATER RESOURCES

Watersheds

A watershed is a land area that channels rainfall and snowmelt to creeks, streams, and rivers, and eventually to outflow points such as reservoirs, bays, and the ocean. Watersheds include streams that convey water, provide habitat for plants and animals, serve as wildlife movement corridors, and provide opportunities for recreation.

At a regional level, the Planning Area is within the Sacramento River Basin watershed, which covers approximately 26,500 square miles and is bounded by the Sierra Nevada to the east, the Coast Ranges to the west, the Cascade Range and Trinity Mountains to the north, and the Sacramento-San Joaquin Delta to the south. The Sacramento River is the principal river in the watershed. The principal tributaries to the Sacramento River are the Pit and McCloud Rivers, which join the Sacramento River from the north, and the Feather and American Rivers, which join the Sacramento River from the east.

There are 14 smaller watersheds in Placer County. As shown in Exhibit 4.13-1, the Planning Area is located within portions of four of these watersheds: Pleasant Grove Creek, Curry Creek, Dry Creek, and Steelhead Creek,

which are discussed in further detail below. As also shown in Exhibit 4.13-1, the Planning Area is traversed by a number of westward-flowing creeks within each watershed (detailed below). All of the streams in the Planning Area ultimately discharge to the Sacramento River.

Pleasant Grove Creek. The Pleasant Grove Creek watershed totals approximately 30,000 acres, approximately 15,500 acres of which is within the Planning Area. Pleasant Grove Creek is the main surface water feature. Several tributaries flow into Pleasant Grove Creek including South Branch Pleasant Grove Creek, Kaseburg Creek, Coyote Creek, and University Creek. Pleasant Grove Creek discharges into the Pleasant Grove Creek Canal west of the Planning Area in Sutter County, which flows into the Natomas Cross Canal and thence into the Sacramento River near Verona. Pleasant Grove Creek and its tributaries were historically dry or very nearly dry in the summer months, but are now mostly perennial due to urban development and rice farming (Placer County 2006). Elevations in this subwatershed within the Planning Area range from approximately 265 feet near Fairway Drive, decreasing to approximately 65 feet in at the northwestern border of the Planning Area next to Pleasant Grove Creek. Pleasant Grove Creek receives the treated effluent from the City of Roseville's Pleasant Grove Wastewater Treatment Plant.

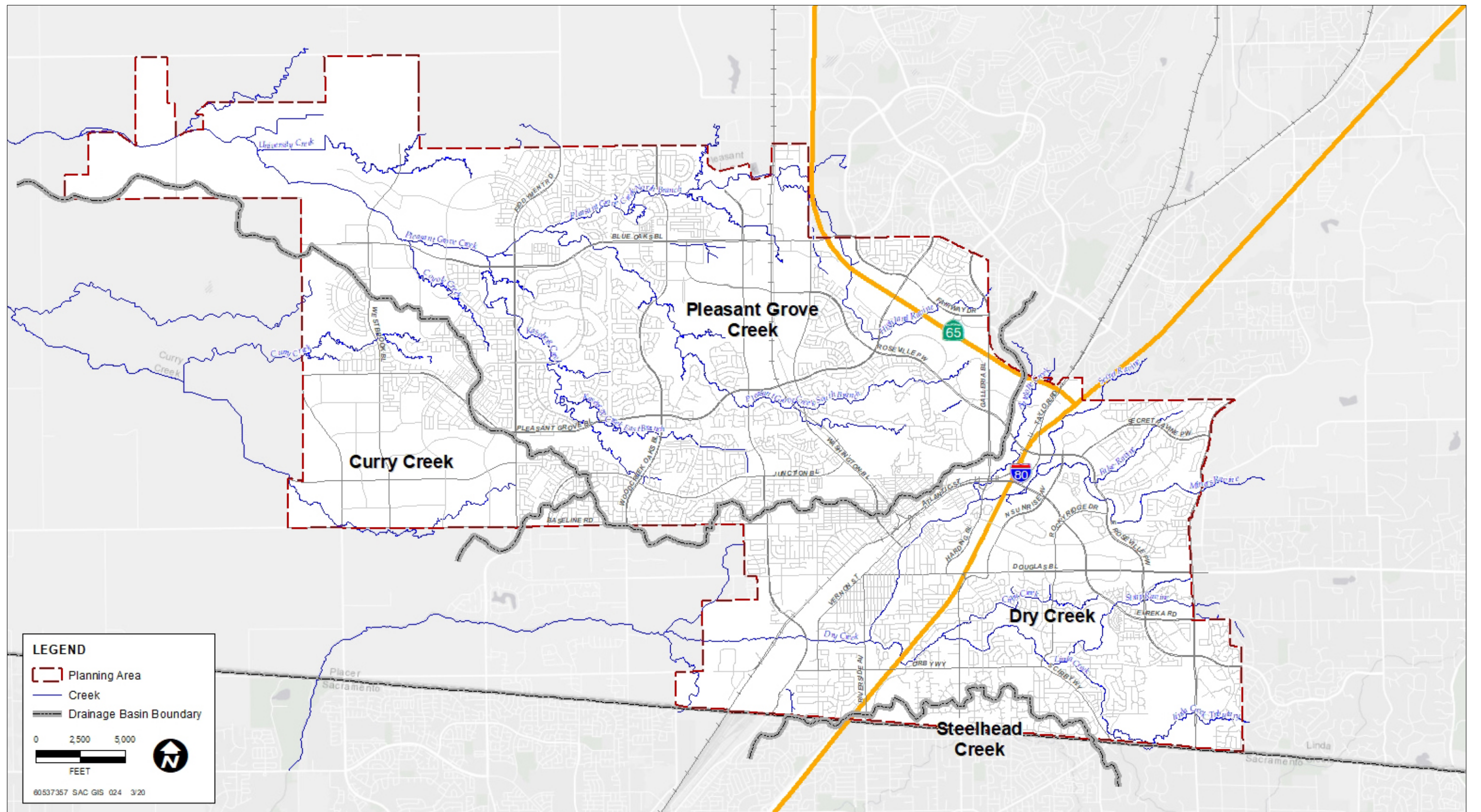
Curry Creek. The Planning Area includes approximately 3,600 acres of the Curry Creek watershed. Although identified as a separate watershed, Curry Creek is currently considered to be a tributary of Pleasant Grove Creek. Curry Creek discharges into the Pleasant Grove Creek Canal approximately 0.5 mile south of the Pleasant Grove Creek confluence with the canal in Sutter County, west of the Planning Area. Curry Creek was historically dry or very nearly dry in the summer months, but is now mostly perennial due to urban development and rice farming (Placer County 2006).

Dry Creek. The Dry Creek watershed encompasses approximately 64,600 acres, approximately 9,000 acres of which is within the Planning Area. Its main surface water feature is Dry Creek. Several smaller tributary creeks flow into Dry Creek, including Antelope, Cirby, Linda, Miner's Ravine, False Ravine, Strap Ravine, and Secret Ravine. Dry Creek flows west through the Planning Area and into Sacramento County, where it discharges into the Natomas East Main Drainage Canal (NEMDC)/Steelhead Creek (Placer and Sacramento Counties 2003, Placer County Flood Control and Water Conservation District [PCFCWCD] 2011). Elevations in this watershed in the Planning Area range from approximately 400 feet at the eastern end of Secret Ravine Parkway to 120 feet at the Sacramento County line. Dry Creek receives the treated effluent from the City of Roseville's Dry Creek Wastewater Treatment Plant.

Steelhead Creek. The Steelhead Creek watershed comprises approximately 25,000 acres in the greater Sacramento metropolitan area, including Natomas and northeastern Sacramento County (Citrus Heights). Approximately 300 acres of this watershed is in the southern portion of the Planning Area, south of Cirby Way. Steelhead Creek, also known as the NEMDC, flows into the Sacramento River immediately upstream from the confluence of the American and Sacramento rivers. (DWR 2008.)

Surface Water Quality

Water quality is the primary factor by which overall watershed and ecosystem health is measured. The quality of water in local streams affects the ability of fish and other aquatic species to grow and reproduce, the types and abundance of riparian plant species, and the ability of terrestrial wildlife to use the stream for drinking water. Streams in the Planning Area ultimately drain into the Sacramento River, which serves as a source of drinking and irrigation water for millions of Californians.



Source: City of Roseville 2017

Exhibit 4.13-1 Subwatersheds and Surface Waters

This page intentionally left blank

Water quality in the Sacramento River is regulated primarily by the Central Valley Regional Water Quality Control Board (Central Valley RWQCB), which has established narrative and numeric standards for the Sacramento River in its *Water Quality Control Plan for the Sacramento River and San Joaquin River Basins* (Basin Plan) (Central Valley RWQCB 2018). The Basin Plan sets beneficial uses for certain specifically identified waterbodies. Section 303(d) of the federal Clean Water Act requires states to maintain a list of impaired waterbodies, and to establish Total Maximum Daily Loads (TMDL) for each. A TMDL is the calculation of the maximum amount of a pollutant allowed to enter a waterbody, so that the waterbody will meet water quality standards for that particular pollutant, and will not change the identified beneficial uses. Water quality in a stream is measured by determining the level of various parameters, through various chemical and physical analyses. Some of these parameters are chemical in nature; for example, pesticides, herbicides, and fertilizers, mercury from historic mining activities, total dissolved solids, and pH. Other non-chemicals parameters include temperature, dissolved oxygen, and coliform bacteria.

As described above, creeks in the Planning Area discharge either to the NEMDC/Steelhead Creek, or to the Pleasant Grove Creek Canal. These two waterbodies ultimately discharge into the Sacramento River. The Basin Plan designates the following beneficial uses for Sacramento River water from the Colusa Basin Drain to the I Street Bridge: municipal and domestic supply, agricultural irrigation, contact and non-contact recreation, warm and cold freshwater habitat, warm and cold migration, warm and cold spawning, wildlife habitat, and navigation (Central Valley RWQCB 2018). Applying the Central Valley RWQCB's "tributary rule," the beneficial uses of any specifically identified water body generally also apply to all its tributaries.

Several streams within and downstream of the Planning Area are included on the State Water Resources Control Board's (SWRCB) 303(d) list of impaired water bodies for a variety of pollutants such as pesticides, toxicity, dissolved oxygen, and indicator bacteria. These streams include Dry Creek, Pleasant Grove Creek, South Branch Pleasant Grove Creek and unnamed tributaries, Kaseburg Creek, Curry Creek, NEMDC/Steelhead Creek, Natomas Cross Canal, and the Sacramento River from Knight's Landing to the Delta (SWRCB 2017). TMDLs are still being developed for most of the listed pollutants (Central Valley RWQCB 2019). Even if a stream is not included on the SWRCB's 303(d) list, any upstream tributary to a 303(d)-listed stream could contribute pollutants to the listed segment.

In addition, the *Dry Creek Watershed Coordinated Resource Management Plan* (Placer and Sacramento Counties 2003) and the *Pleasant Grove and Curry Creek Ecosystem Restoration Plan* (Placer County 2006), included water quality measurements. Water quality in both creeks was found to be relatively high.

Treated tertiary effluent from the City's Pleasant Grove Wastewater Treatment Plant is discharged directly to Pleasant Grove Creek in the Planning Area. Treated effluent from the City's Dry Creek Wastewater Treatment Plant is discharged directly to Dry Creek in the Planning Area. In accordance with state requirements, surface water quality samples are collected on a weekly basis and analyzed for a variety of constituents to ensure that the discharge does not adversely affect water quality in Pleasant Grove Creek, Dry Creek, or the Sacramento River.

Stream Channel Morphology

In addition to water quality, the aquatic and riparian habitat quality of a stream system is also directly related to the geomorphic, hydrologic, and hydraulic processes acting on it. The width of the stream channel, variability of the flood plain, the amount of sediment and the way in which it is deposited, and the type of area in which the stream is located all interact to define the types of riparian plant species that can grow, the abundance and types of

aquatic macroinvertebrates¹ (many of which serve as food for fish), and the types of fish that can inhabit and reproduce in any given stream channel.

Development in the Planning Area watersheds over the past 150 years has affected the morphology of the stream channels, which in turn has affected the riparian and aquatic communities. For example, historic placer gold mining resulted in streambeds being excavated and sluiced. The spoils (materials other than the gold) were washed downstream in such large quantities that stream channels became completely filled with sediment. In the early 1900s, hard rock quarries were developed to supply granite for building projects; the spoils (materials other than the granite) were washed through the streambeds, which increased the sediment load. Early agricultural development led to a diversion of streamflow for irrigation and cattle grazing, which resulted in a loss of the riparian vegetation along channel banks, loss of stream channel shade and cover, and an increase in suspended sediments and nutrients. Some smaller water courses were converted into ponds, which disrupted the water flow and sediment transport. Since the 1950s, urban development has resulted in channelization of streams to fit floodplain developments and removal of riparian vegetation, which leads to streambank instability and erosion. (Placer and Sacramento Counties 2003.)

In the Planning Area, the stream channels in Secret Ravine, Miners Ravine, and the mainstem of Dry Creek (in the Dry Creek watershed) are particularly important to sustaining populations of fish species in the salmon family (salmonids). The main stem of Dry Creek does not contain suitable fish habitat, but it does provide migratory passage for Chinook and Steelhead salmon. Secret Ravine and Miners Ravine contain habitat that is suitable for salmonids (Placer and Sacramento Counties 2003). The *Dry Creek Watershed Coordinated Resource Management Plan* (Placer and Sacramento Counties 2003) was created to identify opportunities for prevention of further Dry Creek watershed degradation, strategies to improve existing negative conditions, and monitoring to document current and future conditions.

Similar stream channel and associated habitat degradation have also occurred in the Pleasant Grove Creek watershed, for the same reasons discussed above. The *Pleasant Grove and Curry Creek Ecosystem Restoration Plan* (Placer County 2006) was developed to determine the potential impacts of urban development on the habitat, hydrology, and water quality in this watershed, and to make recommendations for strategies and projects to help reduce adverse effects.

4.13.2.2 FLOODING

Flooding is defined as the temporary rising or overflowing of water resulting in partial or complete inundation of normally dry land areas. The City of Roseville regulates its floodplain areas through land use, zoning, and other development restrictions. This includes policies requiring the dedication of, and a prohibition of development within, the City's Regulatory Floodplain. The City's Regulatory Floodplain is a composite floodplain consisting of three data sources, described below.

The Federal Emergency Management Agency (FEMA) oversees the delineation of flood hazard zones as it relates to the National Flood Insurance Program (NFIP) and the provision of federal disaster assistance. FEMA manages the NFIP and publishes the Flood Insurance Rate Maps (FIRMs), which show the expected frequency and severity

¹ Aquatic macroinvertebrates are small organisms that have no internal skeleton and live all or part of their lives in water; most are aquatic insects.

of flooding by area, typically for the existing land use and the type of drainage/flood control facilities that are present. Flood zones are determined by the probability of flooding within a certain time period, such as a 100-year (1 percent annual exceedance probability) flood event. Floodplains are divided into flood hazard zones, designated by the potential for flooding of an area during a flood event.

California communities have the authority to identify and regulate development within local flood hazard areas. The City of Roseville has developed or oversees the development of local 100-year flood hazard areas based on future fully developed unmitigated watershed assumptions. These design criteria differ from and are generally more conservative than the design assumptions in FEMA's 100-year floodplain delineation, because FEMA mapping is based on existing conditions and the City's local flood mapping is based on buildout conditions.

Senate Bill (SB) 5 (2007) enacted the Central Valley Flood Protection Act of 2008 to provide additional protection for urban areas within the 200-year floodplain (0.5 percent annual exceedance probability) which meet five specific locational criteria: within the Sacramento-San Joaquin Valley, within an urban area of more than 10,000 people, within a FEMA flood hazard zone, within an area of potential flood depth exceeding 3 feet, and in a watershed of more than 10 square miles. Therefore, the SB 5 urban level of flood protection requirements do not apply to all waterbodies within all Central Valley communities. In Roseville, the SB 5 requirements apply to Pleasant Grove Creek (the mainstem and the North Branch), Dry Creek, Linda Creek, Antelope Creek, Secret Ravine, and Miner's Ravine, and only within the areas where the flood depth is three feet or more. These areas are referred to as the Urban Level of Flood Protection (ULOP) floodplain or 200-year floodplain.

The City's term "Regulatory Floodplain" includes the FEMA 100-year floodplain (Zone A and Zone AE), the City's 100-year floodplain (local flood hazard areas), and the City's 200-year floodplain. The City's Regulatory Floodplain is shown in Exhibit 4.13-2.

Placer County and the Cities of Roseville, Rocklin, Lincoln, and Auburn participated in the *Auburn Ravine, Coon, and Pleasant Grove Creeks Flood Mitigation* (Placer County Flood Control and Water Conservation District [PCFCWCD] 1993) to address concerns related to flooding as a result of regional development. The study found that the unmitigated peak flow increases would have the potential to increase flows in the Natomas Cross Canal by less than 3.6 inches along tributary streams, and increased runoff volumes would have the potential to increase flooding by approximately 1.2 inches in the ponding area upstream of the Natomas Cross Canal (PCFCWCD 1993). While shallow, these increases would inundate several hundred additional acres in Sutter County (downstream and west of the Planning Area) during a major flood. The study recommended a combination of regional and local detention and retention basins, adoption of a regional floodplain management plan, and adoption of grading ordinances and policies to remediate ongoing and prevent future flood hazard. Subsequently, the City of Roseville established a flood mitigation fee program for the construction of a regional retention basin at the Al Johnson Wildlife Area (formerly Reason Farms), in the northwestern portion of the Planning Area, to address the effects from increased volume of downstream runoff. In early 2003, the City certified a program level Final Environmental Impact Report (EIR) for the City of Roseville Retention Basin Project (SCH #2002072084, hereby incorporated by reference), which is available in the City of Roseville Permit Center, 311 Vernon Street, Roseville, CA 95678, during normal business hours. The City purchased the Al Johnson Wildlife Area property, and approved the site and conceptual plans for a retention basin flood control project. The Al Johnson Wildlife Area Retention Basin Project provides the opportunity to construct two retention basins: a south basin with 1,850 acre-feet (AF) of storage and a north basin with 680 AF of storage. The south basin would provide mitigation of volumetric increases resulting from development within the City of Roseville to date. It is anticipated that the

north basin, or a reprogramming of the south basin, would accommodate the cumulative development in the City. The City is collecting drainage impact fees to fund construction of the retention basin project. (City of Roseville 2016a.)

4.13.2.3 GROUNDWATER RESOURCES

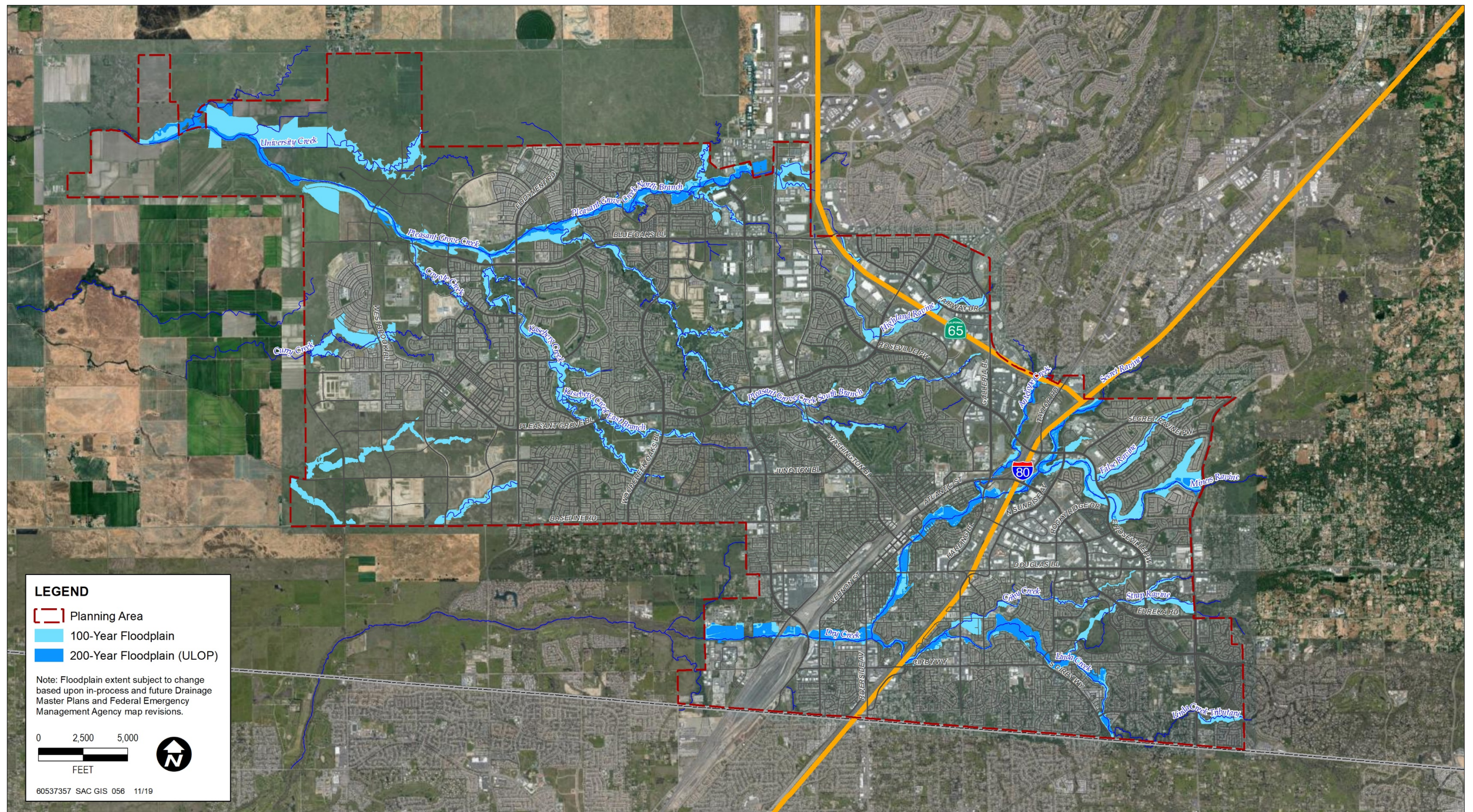
Groundwater Basin

The Sacramento Valley Groundwater Basin is the major groundwater basin in the Sacramento River hydrologic region. There are 18 groundwater subbasins. The Planning Area is located in the North American subbasin (Basin Code 5-021.64), which underlies northern Sacramento, southern Sutter, and western Placer counties. The subbasin is bounded by the Bear River on the north, the Feather River and Sacramento Rivers on the west, the American River on the south, and a north/south line extending from the Bear River south to Folsom Lake that passes about 2 miles east of the City of Lincoln. The subbasin encompasses approximately 351,000 acres. DWR estimated that the storage capacity of the North American subbasin is approximately 4.9 million AF. The formations that comprise the water-bearing deposits are categorized into a system of two aquifers: an unconfined upper aquifer (200–300 feet below the ground surface [bgs]) and a semi-confined lower aquifer (more than 300 feet bgs). The upper aquifer consists of recent flood basin and stream channel deposits (in the upper 100 feet) underlain by the Modesto, Riverbank, and Turlock Lake Formations (100–300 feet bgs). The lower aquifer consists of the Mehrten Formation. (DWR 2006).

Subsidence

Groundwater elevations within and around the project site have been monitored by DWR for several decades. There are three groundwater wells in the DWR monitoring network. One well (11N/6E/18P005M) is located adjacent to Pleasant Grove Creek just west of Fiddymont Road in the West Roseville Specific Plan (WRSP) Area. A second well (11N/6E/30F002M) is east of the WRSP Area along Kaseberg Creek southeast of the intersection of Fiddymont and Phillip Roads. The third well (11N/5E/23B001M) is located on City-owned land in the central portion of the Planning Area. (City of Roseville 2016a.)

The upper portion of the groundwater basin has historically been pumped for agricultural use, and the lower, semi-confined portion of the aquifer has been used by urban water purveyors. The *Western Placer County Groundwater Management Plan* (Montgomery Watson Harza 2007) indicated a potential safe yield of approximately 95,000 acre-feet per year (AFY) for the Placer County portion of the North American subbasin (which includes the Planning Area). The safe yield is defined as the amount of groundwater that can be continuously withdrawn from a basin without adverse impact. This figure changes over time, because agricultural groundwater extractions are estimated based on land use and crop type approximately every five years commensurate with the DWR Land Use Survey. Thus, over time, each new year of data is added to the next and then averaged over the entire period of record. The Placer County Water Agency's (PCWA) Integrated Water Resources Plan (IWRP) (PCWA 2006) estimated that the average annual agricultural and urban demands in Western Placer County have been approximately 97,000 AFY. Under these pumping conditions, the groundwater levels at the southern end of the basin have been stable since about 1982 and the levels have risen slightly at the northern end of the basin, indicating that 97,000 AFY is also within the safe yield of the basin. These stable groundwater levels indicate that groundwater pumping is currently in balance with the natural groundwater recharge rate. This is attributed to the conversion of agricultural lands to urban uses over the past several decades.



Source: FEMA 2018, DWR 2019a

Exhibit 4.13-2

Flood Zones

This page intentionally left blank

With the land conversions, pumping demands have decreased, especially when heavy pumping uses such as rice farming have been taken out of production. It is expected that agricultural basin pumping demands will continue to decrease over time. According to the IWRP, urban development within the Placer Vineyards, Curry Creek, and West of Lincoln study areas alone are estimated to reduce agricultural groundwater pumping demands by 20,000 AFY over time. If these pumping demands are not replaced by other equivalent pumping demands, it is expected to result in improvements to the condition of the basin. (City of Roseville 2016a.)

Groundwater Recharge

Under natural conditions, groundwater recharge results from infiltration of precipitation (rain and snow). The rate and quantity of water reaching the aquifer depends on factors that include the amount and duration of precipitation, soil type, vertical permeability, clay content, slope, land cover, and the presence of a cemented hardpan or bedrock.

Most soils can be categorized into hydrologic soil groups (which apply only to surface soil layers) based on runoff-producing characteristics. Hydrologic Group D soils have a very slow water infiltration rate due to their high clay content and/or the presence of a cemented hardpan. Soils containing hardpan occupy over half the valley on the east side of the Sacramento River (which includes the western portion of the Planning Area) and these hardpans severely restrict downward movement of water (U.S. Natural Resources Conservation Service 2018). The abundance of Group D soils limits percolation and groundwater recharge in the Planning Area. Most groundwater recharge in the Planning Area occurs along stream channels.

In 2017, Placer County retained GEI Consultants to prepare an *Evaluation of Potential Groundwater Recharge Areas in West Placer County, California* (Placer County 2017). The study found that direct recharge by applying water onto land surface is possible in western Placer County, but typically only along the eastern portion of the groundwater subbasin (i.e., the eastern portion of the Planning Area) where coarse-grained soils are underlain by coarse-grained sediments that are directly connected to the groundwater aquifers. Water applied in this area would migrate through the groundwater aquifer towards the southwestern corner of western Placer County (including the western portion of the Planning Area). Potential groundwater recharge sites in the eastern area include stormwater detention basins, lakes, golf course ponds, in-stream ponds and canals, preserves and open space areas, and other water features. Another option for recharge would be to inject water directly into the aquifers using new or existing wells; however, the water must first be treated to drinking water standards. A total of 44 potential groundwater recharge sites were evaluated, 17 of which are in the Planning Area. Out of the 21 total sites recommended for further consideration and investigation, 12 sites are in the Planning Area. It should be noted that GEI found that the proposed retention basins in the Al Johnson Wildlife Area was not one of the sites recommended for further consideration as a groundwater recharge site, because the soils have a high clay content that inhibits surface water permeability, there is a cemented hardpan that inhibits downward movement when the soil is wet, and the site is not within an area where direct recharge to the aquifer is likely to occur. Please see the Regulatory Framework under the heading, “Roseville Aquifer Storage and Recovery Program” for additional discussion.

4.13.3 REGULATORY FRAMEWORK

4.13.3.1 FEDERAL

Clean Water Act

The Clean Water Act of 1972 (CWA) (33 U.S.C. Section 1251 et seq.) is the primary federal law that governs and authorizes water quality control activities by the U.S. Environmental Protection Agency (EPA), the lead federal agency responsible for water quality management. By employing a variety of regulatory and non-regulatory tools, including establishing water quality standards, issuing permits, monitoring discharges, and managing polluted runoff, the CWA seeks to restore and maintain the chemical, physical, and biological integrity of surface waters to support the protection and propagation of fish, shellfish, and wildlife, and recreation in and on the water.

EPA is the federal agency with primary authority for implementing regulations adopted pursuant to the CWA, and has delegated the State of California as the authority to implement and oversee most of the programs authorized or adopted for CWA compliance through the Porter-Cologne Water Quality Control Act of 1969 described below.

Water Quality Criteria and Standards

Pursuant to federal law, EPA published water quality regulations under Volume 40 of the Code of Federal Regulations (CFR). Section 303 of the CWA requires states to adopt water quality standards for all surface waters of the United States. As defined by the CWA, water quality standards consist of two elements: (1) designated beneficial uses of the water body in question, and (2) criteria that protect the designated uses. Section 304(a) requires EPA to publish advisory water quality criteria that accurately reflect the latest scientific knowledge on the kind and extent of all effects on health and welfare that may be expected from the presence of pollutants in water. Where multiple uses exist, water quality standards must protect the most sensitive use. Section 303(d) requires states to develop lists of the water bodies and associated pollutants that exceed water quality criteria.

National Pollutant Discharge Elimination System Permit Program, Section 402

The National Pollutant Discharge Elimination System (NPDES) permit program was established as part of the CWA to regulate municipal and industrial discharges to surface waters of the U.S. 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 limits on the concentrations and/or mass emissions of pollutants in effluent discharged into receiving waters; 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.

More specifically, the discharge prohibitions and limitations in an NPDES permit for wastewater treatment plants are designed to ensure the maintenance of public health and safety, protection of receiving water resources, and safeguarding of the water's designated beneficial uses. Discharge limitations typically define allowable effluent quantities for flow, biochemical oxygen demand, total suspended matter, residual chlorine, settleable matter, total coliform, oil and grease, pH, and toxic pollutants. Limitations also typically encompass narrative requirements regarding mineralization and toxicity to aquatic life.

In November 1990, EPA published regulations establishing NPDES permit requirements for municipal and industrial stormwater discharges. Phase I of the permitting program applied to municipal discharges of stormwater

in urban areas where the population exceeded 100,000 persons.² Phase II of the NPDES stormwater permit regulations became effective in March 2003 and required NPDES permits be issued for construction activity for projects that disturb between one and five acres. Phase II of the municipal permit system (i.e., known as the NPDES General Permit for Small Municipal Separate Storm Sewer Systems [Small MS4s], Order NO. 2003-0005-DWQ as amended by 2013-0001-DWQ) required small municipality areas of less than 100,000 persons (hereinafter called Phase II communities) to develop stormwater management programs (SWRCB 2013). The *City of Roseville Stormwater Management Program* (City of Roseville 2004) describes the City's activities to comply with the NPDES General Permit for Small MS4s.

California's Regional Water Quality Control Boards (RWQCBs) are responsible for implementing the NPDES permit system (refer to additional details in the section, "State Regulations," below).

Section 401 Water Quality Certification or Waiver

Under Section 401 of the CWA, an applicant for a Section 404 permit (to discharge dredged or fill material into waters of the U.S.) must first obtain a certificate from the appropriate agency stating that the fill is consistent with the State's water quality standards and criteria. In California, the authority to either grant water quality certification or waive the requirements is delegated by the State Water Resources Control Board (SWRCB) to the nine regional boards. The Central Valley RWQCB is responsible for the Planning Area.

Section 303(d) Impaired Waters List

Under Section 303(d) of the CWA, states are required to develop lists of water bodies that would not attain water quality objectives after implementation of required levels of treatment by point source dischargers (municipalities and industries). Section 303(d) requires that the state develop a TMDL for each of the listed pollutants. The TMDL is the amount of loading that the water body can receive and still be in compliance with water quality objectives. The TMDL is also a plan to reduce loading of a specific pollutant from various sources to achieve compliance with water quality objectives. EPA must either approve a TMDL prepared by the state or disapprove the State's TMDL and issue its own. NPDES permit limits for listed pollutants must be consistent with the waste load allocation prescribed in the TMDL. The goal of the TMDL program is that, after implementation of a TMDL for a given pollutant on the 303(d) list, the causes that led to the pollutant's placement on the list would be remediated.

Federal Antidegradation Policy

The federal antidegradation policy (40 CFR 131.12) is designed to protect existing water uses, water quality, and national water resources. The federal policy directs states to adopt a statewide policy that includes the following primary provisions:

- ▶ existing instream uses and the water quality necessary to protect those uses shall be maintained and protected;

² Phase I also applies to storm water discharges from a large variety of industrial activities, including general construction activity if the project would disturb more than 5 acres.

- ▶ where existing water quality is better than necessary to support fishing and swimming conditions, that quality shall be maintained and protected unless the state finds that allowing lower water quality is necessary for important local economic or social development; and
- ▶ where high-quality waters constitute an outstanding national resource, such as waters of national and state parks, wildlife refuges, and waters of exceptional recreational or ecological significance, that water quality shall be maintained and protected.

Federal Emergency Management Agency National Flood Insurance Program

The Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program (NFIP, 42 U.S.C. 4016[a]) to provide flood insurance to individuals within communities that adopt and enforce NFIP regulations that limit development in floodplains; federally-backed flood insurance is only available within NFIP communities. FEMA also develops and issues Flood Insurance Rate Maps (FIRMs) that identify which land areas are subject to flooding. Flood hazard zones in the community are identified within the FIRMs, at the minimum, for the 1-in-100 annual exceedance probability flood event and sometimes other flood events. The design standard for flood protection covered by the FIRMs is established by FEMA with the minimum level of flood protection for new development determined to be the 1-in-100 annual exceedance probability (AEP) (i.e., the 100-year flood event). As developments are proposed and constructed, FEMA is also responsible for issuing revisions to FIRMs, such as Conditional Letters of Map Revision (CLOMR) and Letters of Map Revision (LOMR) through the local agencies that work with the National Flood Insurance Program.

4.13.3.2 STATE

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act) of 1969 is California's statutory authority for the protection of water quality. Under the Act, the State must adopt water quality policies, plans, and objectives that protect the State's waters for the use and enjoyment of the people. Regional authority for planning, permitting, and enforcement is delegated to the nine RWQCBs. The RWQCBs are required to formulate and adopt water quality control plans for all areas in the region and establish water quality objectives in the plans. The Porter-Cologne Act sets forth the obligations of the SWRCB and RWQCBs to adopt and periodically update water quality control plans (basin plans). The Central Valley RWQCB regulates water quality in the Planning Area.

Basin plans are the regional water quality control plans required by both the CWA and Porter-Cologne Act in which beneficial uses, water quality objectives, and implementation programs are established for each of the nine regions in California. The act also requires waste dischargers to notify the RWQCBs of such activities through the filing of Reports of Waste Discharge (RWD) and authorizes the SWRCB and RWQCBs to issue and enforce waste discharge requirements (WDRs), NPDES permits, CWA Section 401 water quality certifications, or other approvals. The RWQCBs also have authority to issue waivers to RWD requirements and WDRs for broad categories of "low threat" discharge activities that have minimal potential for adverse water quality effects when implemented according to prescribed terms and conditions.

State Water Resources Control Board

SWRCB and its nine RWQCBs administer water rights and enforce pollution control standards throughout the state. SWRCB is responsible for granting of water right permits and licenses through an appropriation process following public hearings and appropriate environmental review by applicants and responsible agencies. In granting water right permits and licenses, SWRCB must consider all beneficial uses, including water for downstream human and environmental needs. In addition to granting the water right permits needed to operate new water supply projects, SWRCB also issues water quality-related certifications to developers of water projects under Section 401 of the CWA.

Water Quality Control Plan for the Sacramento–San Joaquin River Basins (Basin Plan)

The *Water Quality Control Plan for the Sacramento–San Joaquin River Basins* (Basin Plan) (Central Valley RWQCB 2018) identifies the beneficial uses of water bodies and provides water quality objectives and standards for waters of the Sacramento River and San Joaquin River hydrologic regions. State and federal laws mandate protecting designated “beneficial uses” of water bodies. State law defines beneficial uses as “domestic; municipal; agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves” (Water Code Section 13050[f]).

The beneficial uses of any specifically identified water body generally apply to all tributary streams to that water body. Those water bodies not specifically designated for beneficial uses in the Basin Plan are assigned the Municipal and Domestic Supply (MUN) use, in accordance with the State Water Board Resolution No. 88-63. Although specific surface waters have not been identified for groundwater recharge or freshwater replenishment in the Basin Plan, these additional protected beneficial uses are designated in the Basin Plan. Unless otherwise designated by the Central Valley RWQCB, all groundwater is considered suitable or potentially suitable for municipal use, agricultural supply, and industrial process supply.

The Basin Plan describes a set of designated beneficial uses for each water body. Beneficial uses help to define the resources, services, and qualities of the aquatic systems. Beneficial uses also serve as a basis for establishing water quality objectives and discharge prohibitions. The Basin Plan contains specific numeric water quality objectives that are applicable to each water body or portions of water bodies. Objectives have been established for bacteria, dissolved oxygen, pH, pesticides, electrical conductivity, total dissolved solids, temperature, turbidity, and trace elements. Numerous narrative water quality objectives have also been established. Finally, the Basin Plan contains a set of implementation plans, which represent the Central Valley RWQCB’s programs and specific plans of action for meeting water quality objectives and protecting beneficial uses.

National Pollutant Discharge Elimination System Permit System and Waste Discharge Requirements for Construction

The SWRCB’s statewide stormwater general permit for construction activity (Order 2009-009-DWQ as amended by Order Nos. 2010-0014-DWQ and 2012-0006-DWQ) is applicable to all construction activities that would disturb 1 acre of land or more (SWRCB 2012). Construction activities subject to the general construction activity permit include clearing, grading, stockpiling, and excavation. Dischargers are required to eliminate or reduce non-stormwater discharges to storm sewer systems and other waters.

Through the NPDES and WDR process, SWRCB seeks to ensure that the construction and post-construction conditions at a project site do not cause or contribute to direct or indirect impacts on water quality (i.e., pollution

and/or hydromodification) upstream and downstream. To comply with the requirements of the Construction General Permit, project applicants must file a notice of intent with the SWRCB to obtain coverage under the permit; prepare a Storm Water Pollution Prevention Plan (SWPPP); and implement inspection, monitoring, and reporting requirements appropriate to the project's risk level as specified in the SWPPP. The SWPPP includes a site map, describes construction activities and potential pollutants, and identifies Best Management Practices (BMPs) that would be employed to prevent soil erosion and discharge of other construction-related pollutants that could contaminate nearby water resources, such as petroleum products, solvents, paints, and cement. Construction activities subject to the general construction activity permit include clearing, grading, stockpiling, and excavation. Dischargers are required to eliminate or reduce non-stormwater discharges to storm sewer systems and other waters. The permit also requires dischargers to consider the use of post-construction permanent BMPs that will remain in service to protect water quality throughout the life of the project. All NPDES permits also have inspection, monitoring, and reporting requirements.

The Statewide General Permit for Storm Water Discharges Associated with Industrial Activities, Order 2014-0057-DWQ (Industrial General Permit or IGP), effective July 1, 2015, implements the federally required storm water regulations in California for storm water associated with industrial activities that discharge to waters of the United States (SWRCB 2015). The SWRCB and the nine RWQCBs implement and enforce the Industrial General Permit. The Industrial General Permit is called a general permit because many industrial facilities are covered by the same permit, but comply with its requirements at their individual industrial facilities. The Industrial General Permit regulates discharges associated with 10 broad categories of industrial activities, such as wastewater treatment plants, and recycling facilities.

Senate Bill 5

SB 5 enacted the Central Valley Flood Protection Act of 2008. SB 5 required DWR and the Central Valley Flood Protection Board (CVFPB; previously known as the State Reclamation Board) to prepare and adopt a Central Valley Flood Protection Plan (CVFPP) by 2012. The Plan was adopted in 2012 and updated in 2017 (DWR 2017). SB 5 also established a 200-year flood (0.5 percent annual exceedance probability) as the minimum urban level of flood protection. It also set deadlines for cities and counties in the Central Valley to amend their general plans and their zoning ordinances to conform to the Plan. SB 5 restricts approval of development agreements and subdivision maps in flood hazard zones, once the general plan and zoning ordinance amendments have been enacted, unless certain findings are made. Finally, SB 5 mandates that Central Valley counties develop flood emergency plans within 24 months of adoption of the Plan. The City of Roseville updated its General Plan in June 2015 to meet the requirements of SB 5.

Sustainable Groundwater Management Act

In 2014, the California Legislature enacted a three-bill law (Assembly Bill-1739, Senate Bill [SB]-1168, and SB-1319), known as the Sustainable Groundwater Management Act (SGMA). The SGMA was created to provide a framework for the sustainable management of groundwater supplies, and to strengthen local control and management of groundwater basins throughout the state with little state intervention. The SGMA is intended to empower local agencies to adopt groundwater sustainability plans that are tailored to the resources and needs of their communities, such that sustainable management would provide a buffer against drought and climate change, and ensure reliable water supplies regardless of weather patterns. The SGMA and corresponding regulations require that each high and medium priority groundwater basin is operated to a sustainable yield, balancing natural and artificial groundwater recharge with groundwater use to ensure undesirable results such as chronic lowering

of groundwater levels, loss of storage, water quality impacts, land subsidence, and impacts to hydraulically connected streams do not occur. The SGMA is considered part of the statewide, comprehensive California Water Action Plan that includes water conservation, water recycling, expanded water storage, safe drinking water, and wetlands and watershed restoration. The SGMA protects existing surface water and groundwater rights and does not affect current drought response measures.

California's 515 groundwater basins are classified into one of four categories; high-, medium-, low-, or very low-priority based on components identified in the California Water Code Section 10933(b). Basin priority determines which provisions of California Statewide Groundwater Elevation Monitoring (CASGEM) and the SGMA apply in a basin. In 2019, DWR completed the first phase of responses to comments and final re-prioritization of groundwater basins in Phase I, along with draft prioritizations of groundwater basins included in Phase II (DWR 2019b).

The SGMA requires that local agencies form one or more groundwater sustainability agencies (GSAs) within 2 years (i.e., by June 30, 2017). Agencies located within high- or medium-priority basins must adopt groundwater sustainability plans (GSP) by January 31, 2020 or January 31, 2022.³ The time frame for basins determined by DWR to be in a condition of "critical overdraft" is by January 31, 2020, all other high and medium priority basin have until January 31, 2022. Local agencies will have 20 years to fully implement GSPs after the plans have been adopted. Intervention by the SWRCB would occur if a GSA is not formed by the local agencies, and/or if a GSP is not adopted or implemented.

The SGMA requires local agencies to develop and implement groundwater sustainability plans in high and medium priority groundwater basins throughout the State of California. In 2019, DWR designated the North American groundwater subbasin as high priority; however, the North American subbasin is not a critically overdrafted basin (DWR 2019c).

Central Valley Flood Protection Plan

The Central Valley Flood Protection Plan (CVFPP) (Water Code Section 9614) guides the State's participation in managing flood risk and making infrastructure investments along the Sacramento and San Joaquin River systems, and it influences federal and local participation in managing flood risk. Originally adopted in 2012, the CVFPP must be updated every five years and include the following elements:

- ▶ A description of the Flood Management System, its performance, and the challenges to modifying it;
- ▶ A description of the facilities included in the State Plan of Flood Control;
- ▶ A description of probable impacts of projected climate change, land-use patterns, and other potential challenges;
- ▶ An evaluation of needed structural improvements and a list of facilities recommended for removal; and

³ Unless the local agency has submitted an Alternative as defined in the SGMA which has been approved by DWR.

- ▶ A description of both structural and nonstructural methods for providing an urban level of flood protection to currently urbanized areas in the Central Valley.

The CVFPP is prepared by DWR, which develops strategic goals, and near- and long-term actions to conserve, manage, develop, and sustain California's watersheds and water resources, and works to prevent and respond to floods, droughts, and catastrophic events that would threaten public safety, water resources and management systems, the environment, and property. The Central Valley Flood Management Planning (CVFMP) Program provided the structure for the successful development and adoption of the CVFPP. CVFMP is now assisting in the planning and coordination of major implementation actions of the CVFPP, including state-led Basinwide Feasibility Studies, locally-led regional flood management planning, and the Central Valley Flood System Conservation Strategy. These planning efforts have been incorporated into the 2017 CVFPP Update, which was adopted in August 2017 (DWR 2017).

Urban Levee Design Criteria

California Government Code Sections 65865.5, 65962, and 66474.5 require that levees and floodwalls in the Sacramento-San Joaquin Valley provide protection against a 200-year flood event (0.5 percent annual exceedance probability). The Urban Levee Design Criteria (ULDC) prepared by DWR (DWR 2012) provides engineering criteria and guidance for civil engineers in meeting the government code requirements for 200-year flood protection, and offers this same guidance for levee design to civil engineers working on levees and floodwalls anywhere in California regardless of the type of flood hazard zone. The ULDC also provides engineering criteria and guidance for DWR's urban levee evaluations and participation in urban levee projects.

4.13.3.3 REGIONAL AND LOCAL

Existing City of Roseville General Plan

The existing Roseville General Plan (City of Roseville 2016b) includes the following goals and policies related to surface water, groundwater, drainage, and flooding.

Flood Protection Goal 1: Minimize the potential for loss of life and property due to flooding.

Flood Protection Goal 2: Pursue flood control solutions that are cost-effective and minimize environmental impacts.

- ▶ **Flood Protection Policy 1:** Continue to regulate, through land use, zoning and other restrictions, all uses and development in areas subject to potential flooding and require new development to comply with the State Plan of Flood Control.
- ▶ **Flood Protection Policy 2:** Monitor and regularly update City flood studies, modeling and associated land use, zoning, and other development regulations.
- ▶ **Flood Protection Policy 3:** Continue to pursue a regional approach to flood issues.
- ▶ **Flood Protection Policy 4:** Provide flood warning and forecasting information to community residents to reduce impacts to personal property.

- ▶ **Flood Protection Policy 5:** Minimize the potential for flood damage to public and emergency facilities, utilities, roadways, and other infrastructure.
- ▶ **Flood Protection Policy 6:** Require new developments to provide mitigation to insure that the cumulative rate of peak run-off is maintained at pre-development levels.
- ▶ **Flood Protection Policy 7:** Continue to implement the Storm Maintenance Program to keep creeks and storm drain systems free of debris.
- ▶ **Flood Protection Policy 8:** Establish flood control assessment districts or consider other funding mechanisms to mitigate flooding impacts.
- ▶ **Flood Protection Policy 9:** Where feasible, maintain natural stream courses and adjacent habitat and combine flood control, recreation, water quality, and open space functions.

Water System Goal 4: Actively pursue water conservation measures.

- ▶ **Water System Policy 10:** Develop and implement water conservation standards and measures as necessary elements of the water system.
- ▶ **Water System Policy 11:** Implement and manage the aquifer storage and recovery program.

Water and Energy Conservation Goal 1: Preserve scarce resources by recognizing the importance of conservation in water and energy management.

Water and Energy Conservation Goal 2: Balance conservation efforts with water and energy supplies for the maximum benefit of Roseville's residents.

- ▶ **Water and Energy Conservation Policy 1:** Develop and implement water conservation standards.
- ▶ **Water and Energy Conservation Policy 2:** Implement various water conservation plans developed by the Environmental Utilities Department.
- ▶ **Water and Energy Conservation Policy 4:** Protect the quality and quantity of the City's groundwater and consider designating areas as open space where recharge potential is high.
- ▶ **Water and Energy Conservation Policy 5:** Develop and adopt a landscape ordinance that provides standards for the use of drought tolerant, and water-conserving landscape practices for both public and private projects.
- ▶ **Water and Energy Conservation Policy 6:** Develop and implement public education programs designed to increase public participation in energy, water conservation and recycled water use.

Open Space System Goal 1: Establish a comprehensive system of public and private open space, including interconnected open space corridors that should include oak woodlands, riparian areas, grasslands, wetlands, and other open space resources.

- ▶ **Open Space System Policy 10:** Consider the use of open space for the location of flood control facilities where such facilities allow compatible passive recreational use and resource preservation.

Vegetation and Wildlife Goal 1: Preserve, protect, and enhance a significant system of interconnected natural habitat areas, including creek and riparian corridors, oak woodlands, wetlands, and adjacent grassland areas.

- ▶ **Vegetation and Wildlife Policy 2:** Preserve and rehabilitate continuous riparian corridors and adjacent habitat along the City's creeks and waterways.
- ▶ **Vegetation and Wildlife Policy 3:** Require dedication of the City's Regulatory Floodplain, as defined in the Safety Element, or comparable mechanism to protect habitat and wildlife values in perpetuity.
- ▶ **Vegetation and Wildlife Policy 4:** Require preservation of contiguous areas in excess of the City's Regulatory Floodplain, as defined in the Safety Element, as merited by special resources or circumstances. Special circumstances may include, but are not limited to, sensitive wildlife or vegetation, wetland habitat, oak woodland areas, grassland connections in association with other habitat areas, slope or topographical considerations, recreation opportunities, and maintenance access requirements.

Groundwater Recharge and Water Quality Goal 2: Enhance the quantity and quality of groundwater resources.

- ▶ **Groundwater Recharge and Water Quality Policy 1:** Utilize cost-effective urban run-off controls, including Best Management Practices, to limit urban pollutants from entering the watercourses.
- ▶ **Groundwater Recharge and Water Quality Policy 2:** Implement erosion control and topsoil conservation measures to limit sediments within watercourses.
- ▶ **Groundwater Recharge and Water Quality Policy 3:** Ensure a buffer area between waterways and urban development to protect water quality and riparian areas.
- ▶ **Groundwater Recharge and Water Quality Policy 4:** Continue to monitor and participate in, as appropriate, regional activities affecting water resources, groundwater, and water quality.
- ▶ **Groundwater Recharge and Water Quality Policy 5:** Continue to monitor groundwater resources and investigate strategies for enhanced sustainable use. Areas where recharge potential is determined to be high shall be considered for designation as open space.
- ▶ **Groundwater Recharge and Water Quality Policy 6:** Where feasible, locate stormwater retention ponds in areas where subsoil is suitable for groundwater recharge.

Wastewater and Recycled Water Systems Goal 3: Actively pursue the use of recycled water, where appropriate, and expand recycled water distribution system to deliver and meet estimated City demands for landscape irrigation.

- ▶ **Wastewater and Recycled Water Systems Policy 1:** Expand recycled water distribution system to deliver and meet estimated irrigation demands.

- ▶ **Seismic and Geologic Hazards Policy 3:** Minimize soil erosion and sedimentation by maintaining compatible land uses, suitable building designs, and appropriate construction techniques.
- ▶ **Seismic and Geologic Hazards Policy 6:** Require contour grading, where feasible, and re-vegetation to mitigate the appearance of engineered slopes and to control erosion.

Floodplain Development Regulations

Development within the City's Regulatory Floodplain shall be regulated as follows:

1. **Infill Areas.** No development is permitted within the regulatory floodway. Development may be permitted by the City within the regulatory floodway fringe. Such development shall be limited to that falling within the assumed cumulative one-foot rise in the water surface elevation.
2. **Remainder of the City (Specific Plans, and the North Industrial Area).** No development is permitted within the City's Regulatory Floodplain (floodway and floodway fringe). Exceptions may be considered by the City for unusual conditions on a case-by-case basis if the encroachment is limited to only the floodway fringe and would not result in any off-site increase in the water surface elevation.

Western Placer County Groundwater Sustainability Agency

The City of Roseville is a member of the West Placer County Groundwater Sustainability Agency, which is one of five Groundwater Sustainability Agencies (GSAs) in the North American groundwater subbasin. The five GSAs (West Placer, Sacramento, South Sutter, Sutter County, and Recreation District 1001) have agreed to work together and prepare one GSP for the entire North American subbasin.

A Groundwater Sustainability Plan (GSP) is the plan developed by a groundwater sustainability agency that provides for sustainably managed groundwater that meets the requirements of the SGMA (discussed above). GSAs in high- and medium-priority groundwater basins are required to submit a GSP to DWR. The plan must define the sustainable yield of the basin, identify what would constitute undesirable results in the basin, and what projects and actions including monitoring will be implemented to ensure the basin is managed to avoid undesirable results. DWR will evaluate the GSP and provide the GSA with an assessment of the plan and any necessary recommendations every five years following its establishment. Annual reports that included monitoring data and information are due annually to DWR. Subbasins that are not in critical overdraft, such as the North American subbasin, must complete the GSP and begin implementation by January 31, 2022. Preparation of the GSP for the area that includes Roseville is in process (West Placer County Groundwater Sustainability Agency 2019).

Western Placer County Groundwater Management Plan

In August 2007, the Cities of Roseville and Lincoln along with PCWA and the California American Water Company completed the *Western Placer County Groundwater Management Plan* (WPGMP). The WPGMP was prepared in an effort to maintain a safe, sustainable, and high-quality groundwater resource to meet backup, emergency, and peak demands within a zone of the North American Groundwater subbasin (Montgomery Watson Harza 2007).

Roseville Aquifer Storage and Recovery Program

The City's Aquifer Storage and Recovery (ASR) program allows the City to maximize sustained use of the groundwater basin in conjunction with surface water supplies, while providing a strong backup water supply during critically dry years consistent with the City's commitments contained in the Water Forum Agreement. The program is designed to inject and store surplus drinking water in the underlying aquifer during periods of normal and above normal precipitation. This stored drinking water would be extracted and used to meet increasing water demands due to challenges that may limit surface water supplies such as periods of below normal precipitation, emerging regulations for environmental needs, potential changes to Central Valley Project (CVP) operations, and potential future Water Forum commitments. The City currently operates four ASR production groundwater wells and has plans to add 2–6 new ASR production wells in the next 2–5 years. At full buildout of the program, the City would include a network of up to 12 groundwater injection wells that could store up to 10,000 AFY of water (City of Roseville 2019a).

Placer County Flood Control and Water Conservation District

The Placer County Flood Control and Water Conservation District (PCFCWCD) was created by SB 1312, effective August 23, 1984. The PCFCWCD coordinates with the County and with incorporated cities to implement regional flood control projects; develop and implement master plans for selected watersheds in the county; provide technical support and information on flood control for the cities, the county, and the development community; operate and maintain an Alert flood warning system; review proposed developments projects to ensure they meet PCFCWCD standards; develop hydrologic and hydraulic models for county watersheds; provide technical support for Office of Emergency Services activities; and manage the annual stream channel maintenance program with the Dry Creek Watershed outside of the City limits.

City of Roseville MS4 Permit

All Phase II communities are subject to the permit requirements of the State-issued Municipal Separate Storm Sewer System (MS4) Permit which supersedes the previous state order. This order took effect on July 1, 2013 and prescribes the requirements of all Phase II communities in meeting water quality objectives. The City has continued to modify its practices to conform to the priorities, activities, and strategies of the MS4 permit and to enact the minimum control measures and BMPs intended to address Phase II discharges, as required by the permit. The goal is to reduce pollutants in stormwater to the maximum extent practicable. The MS4 Permit identifies activities to implement minimum control measures required under the General Permit: public outreach, public involvement, illicit discharge detection and elimination, construction site runoff, new development and redevelopment, municipal operations, water quality monitoring, and program effectiveness.

The MS4 Permit includes minimum required control measures for new development, such as structural and non-structural control strategies, and long-term operation and maintenance of controls. It includes specific guidance for volume and flow control design parameters for structural controls such as detention ponds, vegetative areas, runoff pretreatment in the form of source control and LID strategies, and hydromodification.

The City's *Stormwater Quality BMP Guidance Manual for Construction* (City of Roseville 2011a) was developed to fulfill part of the requirements of the MS4 permit. The City of Roseville has adopted storm water quality design standards to reduce water pollution generated by urban runoff. These design standards are detailed in the *West*

Placer Stormwater Quality Design Manual (cbec eco engineering, inc. and CDM Smith 2018), which also fulfills part of the MS4 permit requirements.

City of Roseville Stormwater Quality BMP Guidance Manual for Construction

The *Stormwater Quality BMP Guidance Manual for Construction* (City of Roseville 2011a) was developed as part of the City's program to implement the goals contained in the *City of Roseville Stormwater Management Program* (City of Roseville 2004), as required by the NPDES municipal stormwater permit from the SWRCB. The BMP Guidance Manual provides the requirements for preparation and submittal of SWPPPs for construction activities, including the City's and the State's procedural requirements for SWPPP submittals and site inspections related to stormwater quality. The BMP Guidance Manual also identifies the various construction-related BMPs that can be used within the City to control construction site runoff. The manual addresses issues such as erosion control, sediment control, and good housekeeping practices.

Roseville Urban Stormwater Quality Management and Discharge Control Ordinance

The City adopted its Urban Stormwater Quality Management and Discharge Control Ordinance (Stormwater Ordinance) (Municipal Code, Title 14, Chapter 14.20) to establish a regulatory framework to implement construction and post-construction stormwater controls. The ordinance is intended to enhance the water quality of watercourses and water bodies in a manner pursuant to and consistent with the Federal Clean Water Act and the city's NPDES permit by reducing pollutants in stormwater discharges to the maximum extent practicable and by effectively prohibiting non-stormwater discharges to the City's stormwater conveyance system.

Site development construction plans must be accompanied by a stormwater management plan as required by the Stormwater Quality Design Manual. Prior to the issuance of a permit to construct and prior to installation and implementation of the specified BMPs, the construction plan and stormwater management plan must have been reviewed and accepted by the city engineer. The stormwater management plan must detail how stormwater generated from a site would be controlled, managed, and treated, including, but not limited to, incorporation of LID and hydromodification management concepts. The stormwater management plan must also evaluate the environmental characteristics of the project site and the potential impacts of all proposed development plans for the site on the water resources, and must demonstrate the effectiveness of the type of stormwater control measures proposed for managing stormwater generated from the site. In addition, a stormwater BMP maintenance plan must be developed for all post-construction stormwater control measures and include a schedule for when and how often maintenance of the stormwater control measures would occur, a list of any special equipment or skills required for proper maintenance, the estimated cost of maintenance, and a schedule for periodic inspections to ensure proper performance between maintenance events.

Roseville Flood Damage Prevention Ordinance

The City's Flood Damage Prevention Ordinance (Title 9, Chapter 9.8) sets standards to minimize public and private losses due to flood conditions. The ordinance includes provisions to:

- A. Restrict or prohibit uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or flood heights or velocities;
- B. Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;

- C. Control the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel flood waters;
- D. Control fill, grading, dredging, and other development which may increase flood damage; and
- E. Prevent or regulate the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards in other areas.

Roseville Water Efficient Landscape Ordinance

The City's Water Efficient Landscape Ordinance (Title 14, Chapter 14.18 of the Municipal Code), defines the standards and procedures for the design, installation, and management of landscaping, to comply with the Water Conservation in Landscaping Act of 2006 (Government Code Sections 65591 et. Seq.) The Water Efficient Landscape Ordinance is intended to improve conditions in the City's urban area by:

1. Creating the conditions to support life in the soil by reducing compaction, incorporating organic matter that increases water retention, and promoting productive plant growth that leads to more carbon storage, oxygen production, shade, habitat and esthetic benefits.
2. Minimizing energy use by reducing irrigation water requirements, reducing reliance on petroleum based fertilizers and pesticides, and planting climate appropriate shade trees in urban areas.
3. Conserving water by capturing and reusing rainwater and graywater wherever possible and selecting climate appropriate plants that need minimal supplemental water after establishment.
4. Protecting air and water quality by reducing power equipment use and landfill disposal trips, selecting recycled and locally sourced materials, and using compost, mulch and efficient irrigation equipment to prevent erosion.
5. Protecting existing habitat and creating new habitat by choosing local native plants, climate adapted non-natives and avoiding invasive plants. Utilizing integrated pest management with least toxic methods as the first course of action.

Prior to issuance of a building permit or improvement plans, a project applicant must submit a landscape package to the city for review and approval. The landscape package must include a landscape plan that identifies the plants to be used and their evapotranspiration rate, along with a soil management report.

The Water Efficient Landscape Ordinance helps the City conserve surface and groundwater at public plazas, commercial areas, shopping centers, pedestrian/bicycle trails, City "gateway" entrances, and private residences.

City of Roseville 2019 Design and Construction Standards

The City's Design and Construction Standards (City of Roseville 2019b), Section 10 Drainage, contains the drainage analysis requirements and design criteria for development in the City. The standards address development in or adjacent to the City's Regulatory Floodplain, drainage diversion, drainage capacity and design, peak design calculations and methods, hydraulic standards for drainage systems, inlet and outlet structures,

pumps, design of channels and outfalls, culverts and bridges, detention and retention basins, and maintenance access requirements.

Open Space Preserve Overarching Management Plan

The City's General Plan focuses on the preservation and enhancement of a network of open space that not only provides habitat linkages, but also provides connections between neighborhoods. These connections are provided primarily via an integrated network of joint pedestrian/bicycle trails located within the open space corridors adjacent to streams throughout the Planning Area. The General Plan recognizes that there is a balance between habitat protection and public use. Therefore, sensitive native communities such as those that support endangered species have limited or supervised access, whereas other areas have regular access points such as pedestrian/bicycle trails. Both habitat protection and public use must be considered for successful open space management. The City's Open Space Preserve Overarching Management Plan (Preserve Management Plan) provides a City-wide approach and specific goals, which serve as the implementing framework for open space management, maintenance, and monitoring for all open space within the City limits (City of Roseville 2011b).

The Preserve Management Plan includes specific requirements and adopted mitigation measures related to open space management, maintenance, and monitoring that are related to drainage, flooding, and water quality. New development must provide a 50-foot transition zone that includes drainage outfalls and constructed swales/ditches, water quality BMPs including water quality basins and maintenance access ramps to the basins, and any necessary flood control facilities.

City of Roseville Grading Ordinance, Roseville Municipal Code Chapter 16.20

The City's Grading Ordinance (Roseville Municipal Code Chapter 16.20) establishes a process to regulate grading that is not otherwise permitted as part of a separate discretionary action. A grading permit is required for construction projects throughout the city. The permit application process includes submittal of grading plans, copies of any necessary state or federal permits, description and quantity of work (including mitigation measures to protect watercourses and wetlands), and dates when the work will be performed. The Grading Ordinance requires prompt re-vegetation of disturbed areas, avoidance of grading activities during wet weather, avoidance of disturbance within drainageways, and other erosion control measures.

Adopted Specific Plans and Mitigation Measures

Currently, the City has adopted 14 Specific Plans. A Specific Plan is a comprehensive planning and zoning document that implements the General Plan by providing development and conservation standards for a defined geographic location within the Planning Area. Each Specific Plan contains guidelines for site, architectural, landscaping, lighting, roadway networks, pedestrian/bicycle paths, open space corridors, parks, and other aspects of design. Each adopted Specific Plan involved preparation of an EIR, which evaluated potential impacts related to hydrology and water quality, including flooding. Where appropriate, mitigation measures were adopted and incorporated into the specific plan to reduce the level of risk from hazards and hazardous materials, and these measures are required to be implemented in the respective Specific Plan Areas. Adopted mitigation measures for include implementation of construction and operational stormwater standards, preparation of an erosion monitoring plan, and fair-share payments towards the future regional stormwater detention facility at the Al Johnson Wildlife Area. Copies of the adopted Specific Plans and their associated EIRs are available upon request from the City of Roseville Development Services Department, Planning Division.

4.13.4 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

4.13.4.1 METHODOLOGY

This proposed General Plan Update does not include any changes to land use designations, expansion of the City's Planning Area, or other major physical changes to areas planned for development compared to the existing General Plan, but does include changes to goals, policies, and implementation measures, which are analyzed as a part of this EIR. This EIR analyzes buildout of the Planning Area consistent with the existing General Plan land use designations and compares this to the existing physical conditions, which constitute the baseline for determining whether potential impacts are significant.

4.13.4.2 THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines, a hydrology and water quality impact is considered significant if the proposed project would:

- ▶ Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality.
- ▶ Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin.
- ▶ Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:
 - i) result in substantial erosion or siltation on- or off-site;
 - ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; or
 - iii) 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.
- ▶ In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation.
- ▶ Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan. Note that the first part of this checklist question is combined with the first checklist question (Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality) as a part of Impact 4.13-1. The second part of this checklist question is addressed as a part of Impact 4.13-2 (substantial interference with groundwater recharge or substantial depletion of ground water supplies that would impede implementation of a sustainable groundwater management plan).

4.13.4.3 IMPACT ANALYSIS

| | |
|------------------|--|
| IMPACT 4.13-1 | Violation of Water Quality Standards or Waste Discharge Requirements or Conflict with a Water Quality Control Plan. <i>Buildout of the General Plan would convert large areas of undeveloped land to residential, commercial, industrial, and mix-uses, as well as intensify land uses through infill development in existing downtown and major corridor areas, resulting in additional discharges of pollutants to receiving water bodies. Such pollutants would result in adverse changes to the water quality of local water bodies and could conflict with the Basin Plan. However, with adoption and implementation proposed General Plan Update policies, along with current land use, stormwater, grading, and erosion control laws, regulations, and permit conditions, this impact is less than significant.</i> |
|------------------|--|

Several streams within and downstream of the Planning Area are included on the State Water Resources Control Board's (SWRCB) 303(d) list of impaired water bodies for a variety of pollutants such as pesticides, toxicity, dissolved oxygen, and indicator bacteria. These streams include Dry Creek, Pleasant Grove Creek, South Branch Pleasant Grove Creek and unnamed tributaries, Kaseburg Creek, Curry Creek, NEMDC/Steelhead Creek, Natomas Cross Canal, and the Sacramento River from Knight's Landing to the Delta (SWRCB 2017).

Buildout of the General Plan would affect long-term water quality by adding impervious surfaces and increasing urban stormwater runoff. Buildout of the General Plan Land Use Map will involve a variety of activities, including intensification of development on existing sites, demolition of existing structures with replacement land uses, and changes from undeveloped agricultural and open spaces lands to developed uses. Each type of development activity has the potential to alter the types, quantities, and timing of contaminant discharges in stormwater runoff. Changes to a more developed state, if not properly managed, can adversely affect water quality.

Sediment, trash, organic contaminants, nutrients, trace metals, pathogens (e.g., bacteria and viruses), and oil and grease compounds are common urban runoff pollutants that can affect receiving water quality. Sources of these pollutants may be erosion from disturbed areas, deposition of atmospheric particles derived from automobiles or industrial sources, corrosion or decay of building materials, rainfall contact with toxic substances, and accidental spills of toxic materials on surfaces that receive rainfall and generate runoff. Specifically, sources of sediment include roads and parking lots, as well as destabilized landscape areas, streambanks, unprotected slopes, and disturbed areas where vegetation has been removed during the grading process. Sediments, in addition to being contaminants in their own right, transport other contaminants, such as trace metals, nutrients, and hydrocarbons that adsorb to suspended sediment particles. New urban industrial and commercial development can generate urban runoff from parking areas, as well as any areas of hazardous materials storage exposed to rainfall.

Urban contaminants typically accumulate during the dry season and may be washed off when adequate rainfall returns in the fall to produce a "first flush" of runoff. The amount of contaminants discharged in stormwater drainage from developed areas varies based on a variety of factors, including the intensity of urban uses such as vehicle traffic, types of activities occurring (e.g., office, commercial, industrial), types of contaminants used at a given location (e.g., pesticides, herbicides, cleaning agents, petroleum byproducts), contaminants deposited on paved surfaces, and the amount of rainfall.

Long-term operational discharges of urban contaminants into the stormwater drainage system and ultimate receiving waters would increase with the buildout of the General Plan, compared to existing conditions. The

major factor in this increase is the added amount of impervious surfaces, primarily taking the form of parking lots, driveways, streets, rooftops, and sidewalks. In addition, the presence of additional industrial, commercial, and other urban land uses that use potential pollutants (e.g., cleaning agents, pesticides, oil) could result in discharges if there is improper storage, application, and/or disposal.

New growth residential and non-residential development would primarily occur on existing vacant and agricultural lands in the western and northwestern portions of the Planning Area. Most of this area is composed of Hydrologic Group D soils, which have a very low permeability due to the presence of a cemented hardpan and a high soil clay content. Because of their very low permeability, Group D soils have a high stormwater runoff potential. New impervious surfaces associated with new development would result in an associated increase in urban stormwater runoff, which can be a source of surface water pollution. Infill development, as opposed to new growth, would result in less potential for increased stormwater runoff and associated water quality impacts than new growth on currently pervious, undeveloped land. However, the scale of both new growth and infill development would nonetheless have the potential to cause or contribute to an increase in long-term discharges of urban contaminants into the stormwater drainage system and ultimate receiving waters compared to existing conditions.

Several existing regulations would apply to development within the Planning Area that would reduce or avoid impacts related to long-term erosion, sedimentation, and water quality degradation. To receive a building permit from the City, a grading and drainage plan must be submitted to the Department of Public Works that must incorporate stormwater pollution control as well as storm drainage design features to control increased runoff from the project site. As described in Section 3.10.3, the City's Urban Stormwater Quality Management and Discharge Control Ordinance requires implementation of BMPs where a discharge has the potential to cause or contribute to pollution or contamination of stormwater, the City's storm drainage system, or receiving waters. Receiving waters include both groundwater and surface water. Groundwater quality can be affected either by direct contact during construction-related earthmoving activities, or by indirect contact as a result of percolation of stormwater. Earthmoving activities that could encounter groundwater are issued WDRs by the Central Valley RWQCB through the project-specific permitting process; the WDRs contain provisions that are specifically intended to protect groundwater quality. Protection of groundwater quality from stormwater percolation is accomplished through implementation of the City's MS4 permit (discussed below).

Under the NPDES MS4 Phase II General Permit for stormwater discharge, the City is required to develop, administer, implement, and enforce a SWMP to protect and improve stormwater quality. Implementation of the City's SWMP requires post-construction stormwater management for new development and redevelopment to protect stormwater quality and the quantity of water delivered to waterbodies. To obtain coverage under the City's NPDES Phase II MS4 permit, applicable projects within the Planning Area are required to comply with the *West Placer Stormwater Quality Design Manual* (cbec eco engineering, inc. and CDM Smith 2018), *Stormwater Quality BMP Guidance Manual for Construction* (City of Roseville 2011a), the *City of Roseville Stormwater Management Program* (2004) to reduce post-construction runoff in through the incorporation of BMPs, LID, and hydromodification management techniques. These measures to protect water quality are intended to support the City's compliance with the *Water Quality Control Plan (Basin Plan) for the Sacramento and San Joaquin River Basins* (Central Valley RWQCB 2018).

Industrial or commercial facilities require appropriate NPDES permits/WDRs, and implementation of BMPs consistent with the *CASQA Industrial/Commercial BMP Handbook* or its equivalent, including annual reporting of any structural control measures and treatment systems.

Projects that disturb more than 1 acre of land must comply with the requirements in the SWRCB General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order 2009-009-DWQ as amended by Order Nos. 2010-0014-DWQ and 2012-0006-DWQ) [Construction General Permit]. Through the NPDES and WDR process, SWRCB seeks to ensure that the construction and post-construction conditions at a project site do not cause or contribute to direct or indirect impacts on water quality. The Construction General Permit contains a numeric, two-part, risk-based analysis process. It also identifies the need to address changes in the hydrograph, defined as hydrograph modification or hydromodification, which could result from urbanization of a watershed, and requires LID controls to more closely mimic the pre-developed hydrologic condition.

The following policies related to water quality would be revised as a part of the proposed General Plan Update, with additions shown in **bold, underlined** text and deletions in ~~striketrough~~ text:

- ▶ **Policy OS2.2:** Preserve and ~~rehabilitate~~ **restore** continuous riparian corridors and adjacent habitat along the City's creeks and waterways.
- ▶ **Policy OS3.1:** Utilize cost-effective urban run-off controls, including Best Management Practices, **such as low impact development and naturalized stormwater management features,** to **reduce the rate of stormwater runoff and** limit urban pollutants from entering the watercourses.

The proposed General Plan Update policy changes listed above would result in better clarity and accuracy in terminology, and include specific actions, such as low impact development and stormwater management features to protect water quality. The proposed policy changes would result in an environmental benefit, and would not result in any adverse environmental impacts.

Conclusion

Implementation of existing General Plan Flood Protection Goal 2 and Policy 7, Seismic and Geologic Hazards Policies 3 and 6, Groundwater Recharge and Water Quality Goals 1 and 2 and Policies 2, 3, and 4, and Vegetation and Wildlife Goal 1 (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Policies OS2.2, OS 2.6, and OS3.1 listed above, and compliance with existing stormwater, grading, and erosion control laws and regulations would reduce this potential impact. Policies contained in the proposed General Plan Update would serve to minimize long-term water quality impacts associated with increased urbanization. The goal of these policies as they relate to stormwater runoff, and surface and groundwater quality, is to ensure that adequate water quality protection is provided during site-specific project construction and operation. The goal of the proposed General Plan Update policies as they relate to stormwater management is to provide flood protection, enhance water quality, prevent infrastructure deterioration, and facilitate compliance with State and federal laws. Successful implementation of the proposed General Plan Update policies would avoid, minimize, or compensate for potential water quality impacts by requiring projects to reduce pollution and runoff through implementation of LID technologies, BMPs, pretreatment, and upgrades to stormwater and wastewater treatment capacity, as needed. In addition, all new and infill development envisioned under the proposed General Plan Update would be required to

comply with the provisions of the City's Municipal Code requiring proper drainage and erosion control, as well as the *Stormwater Quality Design Manual*, *Stormwater Quality BMP Guidance Manual for Construction*, and the *City of Roseville Stormwater Management Program* (2004) to reduce post-construction runoff in through the incorporation of BMPs, LID, and hydromodification management techniques. These measures would protect water quality as required by the Basin Plan. Therefore, this impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

IMPACT 4.13-2 **Substantial Interference with Groundwater Recharge or a Substantial Decrease in Groundwater Supplies that would Impede Implementation of a Sustainable Groundwater Management Plan.**
Buildout of the General Plan would result in additional impervious surfaces, which could reduce the amount of groundwater recharge and in turn, affect the yield of hydrologically connected wells. However, a substantial reduction in groundwater recharge is not anticipated because most of the Planning Area soils provide only a low level of groundwater recharge. Future development would also result in a need for increased potable water. However, the City's UWMP and the Western Placer County GMP provide for sustainable management of groundwater supplies, and a GSP is in process. With compliance with existing regulations and implementation of proposed General Plan Update policies, this impact is considered less than significant.

New urban infrastructure with impervious surfaces (e.g., buildings, roads, parking areas) can result in a reduction in the amount of rainfall that would otherwise percolate through the soil and result in groundwater recharge. Buildout of the proposed General Plan Update would result in a net increase in impervious area and an associated potential reduction in groundwater recharge potential. However, soils in the central and western portions of the Planning Area where new and infill development are anticipated have a high clay content and a cemented hardpan, which substantially impedes groundwater recharge. Because only a minor amount of groundwater recharge occurs from rainfall infiltrating through the soil to the aquifer in the western and northwestern portions of the Planning Area, development of these areas would not be expected to substantially impede groundwater recharge.

Direct recharge by applying water onto land surface is possible in the eastern portion of the Planning Area along the eastern portion of the North American groundwater subbasin, where coarse-grained soils are underlain by coarse-grained sediments that are directly connected to the groundwater aquifers (Placer County 2017). Water applied in this area would migrate through the groundwater aquifer towards the southwestern corner of the Planning Area. Excepting a small number of vacant infill sites, the eastern areas of the City are already developed and near buildout conditions. Therefore, development on the eastern side of the City would not be expected to substantially impede groundwater recharge. Furthermore, the implementation of LID techniques, as required by the *West Placer Stormwater Quality Design Manual* (cbec eco engineering, inc. and CDM Smith 2018), *Stormwater Quality BMP Guidance Manual for Construction* (City of Roseville 2011a), the *City of Roseville Stormwater Management Program* (2004) would preserve some of the ability of stormwater to percolate to the groundwater aquifer in developed areas (to the extent that such recharge occurs). Implementation of the City's Water Efficient Landscape Ordinance would reduce the amount of water that is necessary for landscape irrigation, thereby helping to conserve groundwater supplies on a regional level.

In addition to the potential impacts from the development of vacant property with impervious surfaces, groundwater impacts can be the result of groundwater wells used for water supply. With regard to groundwater supply, drinking water for the Planning Area is primarily supplied from surface water obtained from Folsom Reservoir. However, the City currently operates six groundwater wells, and has plans to construct 10 more. The existing wells are capable of delivering a total of 17,500 AFY. When all 10 wells are constructed, that would increase the City's groundwater pumping capacity to 43,800 AFY. The City's groundwater wells are primarily used for backup water supply and to improve water supply reliability during drought and emergency conditions. It is the City's policy that groundwater is only used for water supply in times of shortage (City of Roseville 2016c). (Please see Section 4.12 of this EIR, "Utilities and Service Systems," for a detailed discussion and evaluation related to water supply, including groundwater.)

With regard to groundwater recharge in relation to water supply, the City's existing ASR program allows it to maximize sustained use of the groundwater basin in conjunction with surface water supplies, while providing a strong backup water supply during critically dry years consistent with the City's commitments contained in the Water Forum Agreement. The City's program is designed to inject and store surplus drinking water in the underlying aquifer during periods of normal and above normal precipitation. This stored drinking water would be extracted and used to meet peak demands during dry years. The City currently operates one groundwater injection well. At full buildout of the program, the City envisions a network of up to 12 groundwater injection wells that could store up to 10,000 AFY of water (City of Roseville 2019a). The ASR program ensures that the City's use of groundwater supplies does not substantially deplete groundwater supplies.

In addition, the *Western Placer County Groundwater Management Plan* (Montgomery Watson Harza 2007) was developed to provide planned and coordinated monitoring, operation, and administration of groundwater basins with the goal of long-term groundwater resource sustainability, and to comply with the passage of the 1992 Groundwater Management Act (AB 3030; Water Code Section 10750 et seq. Part 2.75). The City's groundwater and water supply master planning is in alignment with this plan, and will not impede plan implementation. In addition, compliance with the SGMA, as described in Section 3.10.3, "Regulatory Framework," requires adoption of a GSP by 2022, which will provide for sustainable management of groundwater supplies. Development of the GSP for the North American subbasin is a coordinated effort among five GSAs (West Placer, Sacramento, South Sutter, Sutter County, and Recreation District 1001); the City of Roseville is a participant in the development of this plan, and will continue to ensure the City's water supply and groundwater management policies remain consistent with regional planning efforts. Preparation of the GSP is in process (West Placer Groundwater Sustainability Agency 2019).

The following goals and policies related to groundwater would be revised as a part of the proposed General Plan Update, with additions shown in **bold, underlined** text and deletions in ~~striketrough~~ text:

- ▶ **Policy OS2.2:** Preserve and ~~rehabilitate~~ **restore** continuous riparian corridors and adjacent habitat along the City's creeks and waterways.
- ▶ **Policy OS3.1:** Utilize cost-effective urban run-off controls, including Best Management Practices, **such as low impact development and naturalized stormwater management features,** to **reduce the rate of stormwater runoff and** limit urban pollutants from entering the watercourses.

Goal PF9.1: Preserve scarce resources by recognizing the importance of efficiency ~~conservation~~ in water and energy management.

- ▶ **Policy PF9.1:** Develop and implement water ~~conservation~~ efficiency standards.
- ▶ **Policy PF9.3:** Protect the quality and quantity of the City's groundwater by actively seeking, throughout the City, areas suitable for groundwater recharge with land areas with suitable soils and geology for groundwater recharge. ~~and consider designating areas as open space where recharge potential is high.~~
- ▶ **Policy PF9.4:** Develop and ~~adopt a landscape ordinance that provides~~ implement standards for the use of drought tolerant, and water-conserving efficient landscape practices for both public and private projects.
- ▶ **Policy PF 9.5:** Develop and implement public education programs designed to increase public participation in energy, water ~~conservation~~efficiency, and recycled water use.

Goal PF6.4: Actively pursue water ~~conservation~~ efficiency measures to ensure compliance with all State of California mandates.

- ▶ **Policy PF6.10:** Develop and implement water ~~conservation~~-efficiency standards and measures as necessary elements of the water system.
- ▶ **Policy PF6.11:** Continue ~~Implement and~~ the management and expansion of the groundwater and aquifer storage and recovery program to increase resiliency and reliability of water supply during all supply conditions. ~~Any additions to, or expansions of the City's system shall include like facilities, infrastructure, and technologies for aquifer storage and recovery.~~

The proposed General Plan Update policy changes listed above would result in improved clarity and accuracy of terminology, and have been updated to reflect current actions within the City to protect groundwater supply and recharge (such as the City's ASR program), and include future specific actions, such as state and local water efficiency standards and LID techniques that would help conserve water supplies. The proposed policy changes would result in an environmental benefit, and would not result in any adverse environmental impacts.

Conclusion

Implementation of existing General Plan Water Quality and Groundwater Recharge Goal 2 and Policies 2–6, Wastewater and Recycled Water Systems Goal 3 and Policy 1, and Vegetation and Wildlife Goal 1 (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update); as well as revised proposed General Plan Update Policies OS2.2 and 3.1, Goal PF9.1 and Policies PF9.1, 9.3, 9.4, and 9.5, and Goal PF6.4 and Policies PF6.10 and 6.11 listed above, combined with current laws, regulations, and policies, and implementation of the City's ASR program, would reduce the impacts on groundwater recharge, depletion of groundwater supplies, and interference with a groundwater sustainability plan. The policies of the existing General Plan and the proposed General Plan Update would help preserve the minimal groundwater recharge potential of the Planning Area through the implementation of LID features, and encourage water conservation/demand management. The City's Water Efficient Landscape Ordinance would help conserve surface and groundwater. The UMWP and GMP currently provide for sustainable management of groundwater supplies, and preparation of a GSP is in process. This impact would be **less than significant**.

Mitigation Measures

No mitigation is required.

IMPACT 4.13-3 **Substantial Alteration of Drainage Patterns Resulting in Substantial Erosion or Siltation.** *Construction and grading activities associated with buildout of the General Plan could result in excess runoff, soil erosion, and stormwater discharges of suspended solids and increased turbidity. Such activities could mobilize other pollutants from project construction sites as contaminated runoff to on-site and ultimately off-site drainage channels. Many construction-related wastes have the potential to degrade existing water quality. Construction activities that are implemented without mitigation could violate water quality standards or cause direct harm to aquatic organisms. However, with implementation of existing regulations and water quality policies contained in the proposed General Plan Update, this impact is considered **less than significant**.*

Ground disturbance associated with construction activities from buildout of the General Plan could increase erosion and sedimentation that could result in degradation of waterways and conflict with beneficial uses, water quality objectives, and standards established in the Basin Plan. In addition, accidental spills of construction-related contaminants (e.g., fuels, oils, paints, solvents, cleaners, concrete) could also occur during construction, thereby degrading water quality. Construction dewatering also has the potential to impact water quality if proper dewatering procedures are not followed and water is improperly stored and disposed of.

Many construction-related wastes have the potential to degrade existing water quality and beneficial uses by altering the dissolved oxygen content, temperature, pH, suspended-sediment and turbidity levels, or nutrient content, or by causing toxic effects in the aquatic environment. Development within the Planning Area would include substantial earth-disturbing activities (i.e., cut and fill, vegetation removal, grading, trenching, movement of soil) that could expose disturbed areas and stockpiled soils to winter rainfall and stormwater runoff. Most of the Planning Area is composed of Hydrologic Group D soils, which have a very slow infiltration rate and a high stormwater runoff rate. Furthermore, areas of exposed or stockpiled soils could be subject to wind or water erosion, allowing temporary discharges of sediment into the storm drain system, and ultimately to the Natomas Cross Canal, NEMDC/Steelhead Creek, and the Sacramento River.

If not managed properly, water used for dust suppression during construction could also enter the storm drain system. Accidental spills of construction-related contaminants (e.g., fuels, oils, paints, solvents, cleaners, and concrete) or non-stormwater discharges from activities such as construction dewatering could also occur during construction, resulting in releases to nearby surface water, and thereby degrading water quality. Additional discussion of soil erosion is provided in Section 4.7 of this EIR, “Geology, Soils, and Paleontological Resources.”

Several existing regulations would apply to projects that could be implemented pursuant to the proposed General Plan Update and that would reduce or avoid impacts related to erosion, sedimentation, and water quality degradation during construction. Chapter 16.20 of the City of Roseville Municipal Code addresses erosion and sediment control under the City’s Grading Ordinance. Project applicants must obtain a grading permit that includes evidence of environmental documentation under CEQA, along with a soils engineering report and an engineering geology report as required by Appendix Chapter 33 of the CBC, Section 3309.

The City addresses stormwater requirements for development projects through the *City of Roseville Stormwater Management Program* (City of Roseville 2004), which includes goals related to reduction of stormwater runoff from construction sites.

Projects that disturb more than 1 acre of land must comply with the requirements in the SWRCB *General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities* (Order 2009-0009-DWQ, as amended). The SWRCB general permit contains a numeric, two-part, risk-based analysis process. It also identifies the need to address hydromodification (stream channel modification and alterations in the natural hydrology of a watershed that result from changes in land cover/land use), and requires low impact development (LID) controls to more closely mimic the pre-developed hydrologic condition. The SWPPP must include a site map and a description of construction activities, and must identify the BMPs that will be employed to prevent soil erosion and discharge of other construction-related pollutants. In the City of Roseville, project applicants are required to comply with the *Stormwater Quality BMP Guidance Manual for Construction* (City of Roseville 2011a), which includes the City's BMPs for erosion and sediment control relating to construction activities and stormwater runoff (such as mulch, re-seeding, straw wattles, check dams, sediment traps, silt fencing, sediment basins, placement of rip rap under drain outfalls, and stabilizing construction entrances and exits). A SWPPP must identify the BMPs that will be employed to prevent soil erosion and discharge of other construction-related pollutants, such as petroleum products, solvents, paints, and cement, that could contaminate nearby water resources. All NPDES permits also have inspection, monitoring, and reporting requirements to ensure that BMPs are implemented according to the SWPPP and are effective at controlling discharges of stormwater-related pollutants. Source controls, treatment controls, and site planning measures are typical types of BMPs. The general permit also requires dischargers to consider the use of post-construction permanent BMPs that would remain in service to protect water quality throughout the life of the project.

Implementation of the Central Valley RWQCB's NPDES General Dewatering Permit (Order No. R5-2013-0074, NPDES No. CAG995001) for short-term discharges of small volumes of wastewater from eligible construction-related activities requires testing, monitoring, and reporting standards. Dewatering activities that exceed four months in duration or that would occur in areas of contaminated groundwater would require a project-specific permit from the Central Valley RWQCB and consultation to determine the specific permit terms, disposal methods, and/or the types of treatment in the case of contaminated soil or groundwater. Adherence to permit terms would reduce potential water quality degradation resulting from construction dewatering activities.

The following policy related to construction-related soil erosion and degradation of water quality would be revised as a part of the proposed General Plan Update, with additions shown in **bold, underlined** text and deletions in ~~striketrough~~ text:

- **Policy SAFE1.3:** Minimize soil erosion and sedimentation **through** ~~by maintaining compatible land uses,~~ suitable building **placement, maximum lot coverage standards, context-sensitive** designs, and appropriate construction techniques.

The proposed General Plan Update policy changes listed above are intended to clarify that compatibility of adjacent land uses are not related to soil erosion, and to include additional specific actions that are related to soil erosion, such as lot coverage and design of buildings based on slope. The proposed policy changes would not result in any adverse environmental impacts.

Conclusion

Development within the Planning Area has the potential to cause an increase in construction-related soil erosion due to increased grading, excavation, movement of construction vehicles, and other construction activities. Eroded soil can be transported into local waterways, resulting in a degradation of water quality. However, implementation of existing General Plan Vegetation and Wildlife Policy 4, Water Quality and Groundwater Recharge Goal 1 and Policy 2, and Seismic and Geologic Hazards Policies 5 and 6 (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Policy SAFE1.3 listed above, and compliance with existing land use, stormwater, grading, and erosion control regulations would reduce the impact by requiring applicants to implement BMPs based on the City’s *Stormwater Quality BMP Guidance Manual for Construction*, develop and implement a SWPPP, obtain a grading permit, comply with the City’s Community Design Standards, and comply with the avoidance and minimization measures contained in the Preserve Management Plan, all of which are specifically designed to minimize construction-related soil erosion and degradation of water quality to the maximum extent feasible. This impact is **less than significant**.

Mitigation Measure

No mitigation is required.

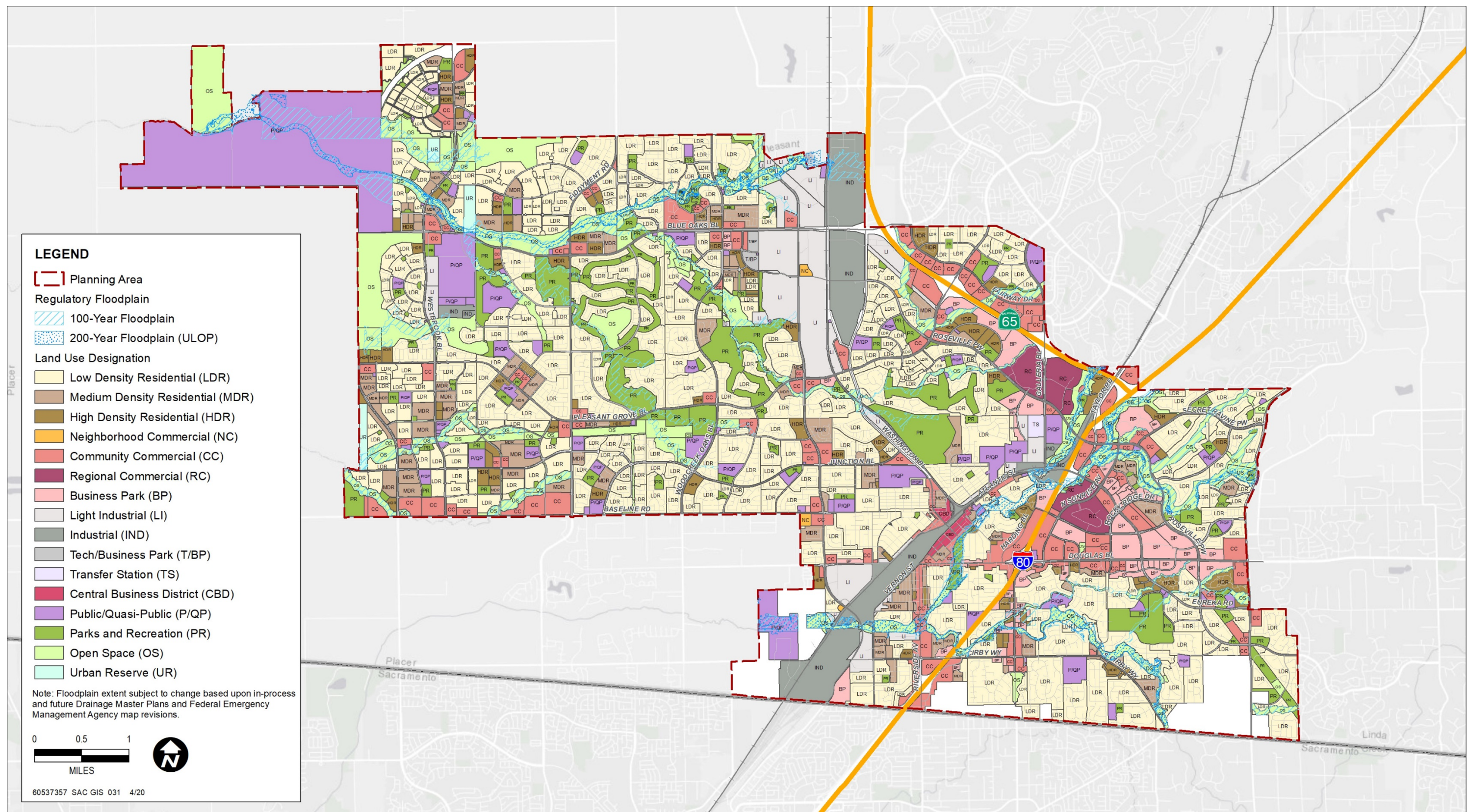
| | |
|--------------------------|---|
| IMPACT 4.13-4 | Substantial Alteration of Drainage Patterns Resulting in Runoff that Would Exceed the Capacity of Stormwater Drainage Systems and/or Cause an Increase in Flooding or Provide Additional Sources of Polluted Runoff. <i>Buildout of the General Plan would increase the amount of impervious surfaces, thereby increasing surface runoff. This increase in surface runoff would result in an increase in both the total volume and the peak discharge rate of stormwater runoff, and therefore could result in greater potential for erosion, sedimentation, hydromodification, and on- and off-site flooding. However, with adoption and implementation of the policies in the proposed General Plan Update, combined with current drainage and flood control regulations, this impact is considered less than significant.</i> |
|--------------------------|---|

Buildout of the General Plan would include new development on undeveloped properties, additional structures developed on already-developed properties, demolition of existing structures with replacement uses, and infill development on currently vacant properties, along with required infrastructure and services. Different types of development would contribute different amounts of stormwater runoff corresponding to the percentage of impervious surface added. The relative amounts of impervious surface associated with development would range, based on land use, from low (e.g., open space) to high (e.g., large commercial projects with large parking areas, major roads, etc.). Most of the new growth residential units as well as much of the industrial development in the western and northwestern portions of the Planning Area would occur on existing agricultural land. Expansion of impervious surfaces in the Planning Area would increase the peak discharge rate of stormwater runoff and could result in erosion, sedimentation, and on-site or downstream flooding. Increased peak flow rates have the potential to exceed drainage system capacities, exacerbate erosion in overland flow and drainage swales and creeks, and result in downstream sedimentation. Sedimentation, in turn, could increase the rate of deposition in natural receiving waters and reduce conveyance capacities, resulting in an increased risk of flooding. Erosion of upstream areas and related downstream sedimentation typically leads to adverse changes to water quality and hydrology.

The City has been developed with a pattern of open space preservation, particularly around the creeks that flow westward through the Planning Area from the Sierra Nevada foothills. As shown in Exhibit 4.13-2, all of the creeks are part of the City's Regulatory Floodplain, which includes both 100- and 200-year flood hazard zones. The addition of impervious surfaces and drainage infrastructure from urbanization results in increased runoff volumes and dry weather flows, increased frequency and number of runoff events, increased long-term cumulative duration of flows, as well as increased peak flows. Exhibit 4.13-3 shows the proposed land uses in the proposed General Plan Update in relationship to the City's Regulatory Floodplain boundaries.

Under the NPDES MS4 Phase II General Permit for stormwater discharge, the City is required to develop, administer, implement, and enforce a SWMP to protect and improve stormwater quality. The City of Roseville's SWMP requires that measures for long-term BMPs that protect water quality and control runoff flow be incorporated into development and substantial redevelopment projects. All projects in the Planning Area are required to comply with the *West Placer Stormwater Quality Design Manual* (cbec and CDM Smith 2018) to reduce post-construction runoff and control urban runoff pollution in compliance with of the City's Phase II MS4 permit through the incorporation of BMPs, LID, and hydromodification management techniques. This includes the requirement to treat stormwater runoff through evapotranspiration, infiltration, stormwater harvesting and reuse, or biotreatment. Hydromodification management requires regulated projects to slow and minimize the amount of runoff so that there is no net-increase in post-construction runoff flow rate compared to the pre-construction value. In addition, a SWPPP would be required in compliance with the NPDES Construction General Permit and would include BMPs to avoid construction-related erosion and sedimentation on- or off-site.

The City's Urban Stormwater Quality Management and Discharge Control Ordinance (Stormwater Ordinance) (Municipal Code, Title 14, Chapter 14.20) enhances the water quality of watercourses and water bodies in a manner pursuant to and consistent with the Federal Clean Water Act and the city's NPDES permit by reducing pollutants in stormwater discharges to the maximum extent practicable and by effectively prohibiting non-stormwater discharges to the City's stormwater conveyance system. Site development construction plans must be accompanied by a stormwater management plan as required by the Stormwater Quality Design Manual. Prior to the issuance of a permit to construct and prior to installation and implementation of the specified BMPs, the construction plan and stormwater management plan must have been reviewed and accepted by the city engineer. The stormwater management plan must detail how stormwater generated from a site would be controlled, managed, and treated, including, but not limited to, incorporation of LID and hydromodification management concepts. The stormwater management plan must also evaluate the environmental characteristics of the project site and the potential impacts of all proposed development plans for the site on the water resources, and must demonstrate the effectiveness of the type of stormwater control measures proposed for managing stormwater generated from the site. In addition, a stormwater BMP maintenance plan must be developed for all post-construction stormwater control measures and include a schedule for when and how often maintenance of the stormwater control measures would occur, a list of any special equipment or skills required for proper maintenance, the estimated cost of maintenance, and a schedule for periodic inspections to ensure proper performance between maintenance events.



Source: City of Roseville 2017

Exhibit 4.13-3.

Regulatory Floodplain and Proposed Land Uses

This page intentionally left blank

The City's Design and Construction Standards (City of Roseville 2019b), Section 10 Drainage, contain the drainage analysis requirements and design criteria for development in the City. The standards address development in or adjacent to the City's Regulatory Floodplain, drainage diversion, drainage capacity and design, peak design calculations and methods, hydraulic standards for drainage systems, inlet and outlet structures, pumps, design of channels and outfalls, culverts and bridges, detention and retention basins, and maintenance access requirements. These standards restrict or prohibit activities which could cause stormwater runoff which causes flooding or erosion, by regulating increases in flood heights or velocities, restricting the alteration of natural floodplains and water courses, establishing controls on any type of development which may increase flood damage, and preventing or regulating the construction of flood barriers.

In addition to the above standards and guidelines regarding flooding and erosion control, the City's Preserve Management Plan includes specific requirements and adopted mitigation measures related to open space management, maintenance, and monitoring that are related to drainage, flooding, and water quality. New development must provide a 50-foot transition zone. Within this transition zone, the City locates drainage outfalls leading to constructed swales/ditches, water quality BMPs including water quality basins and maintenance access ramps to the basins, and any necessary flood control facilities. This ensures there is adequate space for facilities to treat stormwater runoff before it enters the City's open space.

The proposed General Plan Update regulates development in the City's Regulatory Floodplain. New development in infill areas is not allowed with the regulatory floodway. New development in currently undeveloped areas is also not allowed with the regulatory floodway, although exceptions may be considered by the City for unusual conditions on a case-by-case basis if the encroachment is limited to only the floodway fringe and would not result in any off-site increase in the water surface elevation.

The City's Flood Damage Prevention Ordinance (Title 9, Chapter 9.8) includes standards to minimize public and private losses due to flood conditions. The ordinance includes provisions to:

- ▶ Restrict or prohibit uses which are dangerous to health, safety, and property due to water or erosion hazards, or which result in damaging increases in erosion or flood heights or velocities;
- ▶ Require that uses vulnerable to floods, including facilities which serve such uses, be protected against flood damage at the time of initial construction;
- ▶ Control the alteration of natural floodplains, stream channels, and natural protective barriers, which help accommodate or channel flood waters;
- ▶ Control fill, grading, dredging, and other development which may increase flood damage; and
- ▶ Prevent or regulate the construction of flood barriers which will unnaturally divert flood waters or which may increase flood hazards in other areas.

All new development in the Planning Area is reviewed by the Placer County Flood Control and Water Conservation District, which coordinates with the County and with incorporated Cities to implement regional flood control projects. The PCFCWCD reviews proposed developments projects to ensure that they meet District standards. The PCFCWCD also manages the annual stream channel maintenance program with the Dry Creek Watershed.

City of Roseville established a flood mitigation fee program for the construction of a regional retention basin flood control project at the Al Johnson Wildlife Area (formerly Reason Farms), in the northwestern portion of the Planning Area. The Al Johnson Wildlife Area Retention Basin Project provides opportunity to construct two retention basins: a south basin with 1,850 AF of storage and a north basin with 680 AF of storage. The south basin would provide mitigation of volumetric increases resulting from development within the City of Roseville to date. It is anticipated that the north basin, or a reprogramming of the south basin, would accommodate the cumulative development in the City. The City is collecting drainage impact fees to fund construction of the retention basin project.

The following policies related to alteration of drainage patterns, increased stormwater drainage and pollutant transport, and flooding would be revised as a part of the proposed General Plan Update, with additions shown in **bold, underlined** text and deletions shown in ~~strikethrough~~ text:

- ▶ **Policy SAFE1.3:** Minimize soil erosion and sedimentation ~~through by maintaining compatible land uses,~~ suitable building **placement, maximum lot coverage standards, context-sensitive** designs, and appropriate construction techniques.
- ▶ **Policy SAFE2.1:** Continue to regulate, through land use, zoning, and other restrictions, all uses and development in areas subject to potential flooding and require new development to comply with the State Plan of Flood Control **requirements**.
- ▶ **Policy SAFE2.2:** Monitor and regularly update City flood studies, modeling, ~~and~~ associated land use, zoning, **drainage fees and flood management projects,** and other development regulations.
- ▶ **Policy SAFE2.3:** Continue to pursue a regional approach to flood issues. **Participate in efforts to secure adequate flood management funding.**
- ▶ **Policy SAFE2.6:** Require new developments to **evaluate potential flood hazards, and** provide mitigation to ~~insure~~ **ensure** that the cumulative rate of peak run-off is maintained at pre-development levels.
- ▶ **Policy SAFE2.8:** Establish **and maintain** flood control assessment districts or consider other funding mechanisms to mitigate flooding impacts.
- ▶ **Policy OS2.2:** Preserve and ~~rehabilitate~~ **restore** continuous riparian corridors and adjacent habitat along the City's creeks and waterways.
- ▶ **Policy OS3.1:** Utilize cost-effective urban run-off controls, including Best Management Practices, **such as low impact development and naturalized stormwater management features,** to **reduce the rate of stormwater runoff and** limit urban pollutants from entering the watercourses.

The proposed General Plan Update policy changes listed above would improve clarity and accuracy of terminology, would result in improved protection from flood hazards and water quality protection related to stormwater drainage, and would not result in any adverse environmental impacts.

Conclusion

Implementation of existing General Plan Flood Protection Goals 1 and 2 and Policies 4, 5, 7, and 9, Open Space System Goal 1 and Policy 10, Vegetation and Wildlife Goal 1 and Policies 3 and 4, Water Quality and Groundwater Recharge Goal 1 and Policies 2–4, and Seismic and Geologic Hazards Policy 6 (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Policies SAFE1.3, 2.1, 2.2, 2.3, 2.6, 2.8; and OS2.2 and 3.1 listed above, combined with enforcement of the existing drainage and flood control regulations would reduce the level of this impact. General Plan policies require implementation of LID technologies, BMPs, and hydromodification management techniques to protect receiving water quality, mitigate excessive runoff, and mimic the runoff of a natural environment. Additional policies and requirements for compliance with stormwater drainage design plans and standards, regulations contained in the City Municipal Code, and the plans to implement the regional drainage and detention basins at the Al Johnson Wildlife Area, would serve to maintain and improve the City's storm drainage system and prevent an increase in flood hazards. Finally, policies addressing open space and sensitive habitat conservation would restrict incompatible land uses and development from areas, including riparian corridors, drainages, and floodplains. This impact is **less than significant**.

IMPACT *Release of Pollutants in Flood Hazard, Tsunami, or Seiche Zones. Buildout of the General Plan could*
4.13-5 *result in short-term, temporary, storage of materials in flood hazard zones only if a flood encroachment*
 permit is issued. The Roseville Municipal Code contains requirements that are specifically intended to
 prevent downstream transport of pollutants in a flood zone. With implementation of policies contained in the
 proposed General Plan Update and adherence to the Municipal Code, the impact is less than significant.

Development within the Planning Area could result in short-term, temporary storage of materials in flood hazard zones. Because of the Planning Area's distance from the Pacific Ocean, tsunamis would not represent a hazard. There are no waterbodies in the Planning Area that are large enough to result in seiche hazards; furthermore, active seismic sources are more than 30 miles away. The City of Roseville Municipal Code, Title 19, Section 19.18.040 prohibits the stockpiling or storage of any materials in a designated flood zone unless a flood encroachment permit is issued. Any fill proposed to be deposited in the City's Regulatory Floodway must be shown to have some beneficial purpose, and the amount of fill must not be greater than is necessary to achieve that purpose, as demonstrated by a plan submitted by the owner showing the uses to which the filled land will be put and the final dimensions of the proposed fill or other materials or excavations. In addition, such fill or other materials or area of excavation must be protected against erosion by rip-rap, vegetative cover, or bulkheading. All uses involving the storage of materials or equipment must comply with the following standards:

- a. The storage or processing of materials that are buoyant, flammable, toxic, explosive, or could be injurious to human, animal, or plant life, in time of flooding, is prohibited.
- b. Storage of other material or equipment may be allowed if it is not subject to major damage by floods and is readily removable from the area within the time available after flood warning.
- c. All materials or equipment shall be kept anchored or otherwise restrained to prevent them from being carried downstream by floodwaters.

There are no goals or policies related to pollutant transport and flood hazard zones that would be revised as a part of the proposed General Plan Update.

Conclusion

Development within the Planning Area that could involve the temporary placement of stockpiled materials in the City's Regulatory Floodplain would be subject to City of Roseville Municipal Code regulations that are specifically designed to protect water quality by preventing downstream pollutant transport. With implementation of existing General Plan Flood Protection Goal 2 and Policy 9, and Water Quality and Groundwater Recharge Goal 1 and Policy 2 that are designed to protect water quality in floodplains, and adherence to the Municipal Code requirements, this impact is **less than significant**.

Mitigation Measures

No mitigation is required.

4.14 AESTHETICS

4.14.1 INTRODUCTION

This section describes potential impacts related to visual resources and aesthetic character in the Planning Area associated with the proposed General Plan Update. To provide context for the impact analysis, this section begins with an environmental setting describing the existing conditions in the Planning Area related to visual character. Next, the regulatory framework is described, which informs the selection of the significance thresholds used in the impact analysis. The regulatory framework also includes existing General Plan policies related to the impact analysis of this section. The section concludes with the applicable significance thresholds, the impacts of the proposed changes to adopted General Plan policies, recommended mitigation measures, and the significance conclusions.

As part of the impact analysis, Notice of Preparation (NOP) comments were reviewed to help guide the analysis, and any comments were integrated into the analysis. However, no NOP comments related to aesthetics were received.

4.14.2 ENVIRONMENTAL SETTING

The Planning Area is located along the eastern edge of the Sacramento Valley and the western Sierra Nevada foothills. Most of the Planning Area is urbanized. Industrial and commercial uses are concentrated along the I-80 and State Route (SR) 65 corridors and other major roadway corridors. Residential neighborhoods with open space corridors, parks, and schools occupy the remainder of the Planning Area to the west, east, and south. The western and northwestern portions of the Planning Area consist of undeveloped agricultural land.

The primary visual feature and visual amenity in the City is its interconnected network of open space, which is based around the streams that flow westward through the City out of the Sierra Nevada foothills. Most sections of the open space corridors include a system of multi-use pedestrian and bicycle trails.

Land use decisions in the City affect the visual character and quality from both public and private vantagepoints, including public plazas, commercial areas, shopping centers, pedestrian/bicycle trails, City “gateway” entrances, and private residences. The existing visual character in the City is partially based, among other qualifying factors, on General Plan goals and policies that are intended to (1) promote a land use pattern that provides access to open space and recreational amenities, (2) promote the City’s desire to distinguish Roseville from adjacent communities through high-quality development and design, and (3) establish visually distinctive gateways into the community.



Grazing Land in the Sierra Vista Specific Plan Area, North of Baseline Road (Google Earth 2019)

4.14.2.1 EXISTING VISUAL CHARACTER

Agricultural Land

Agricultural land is located north of Baseline Road, in the western and northwestern portions of the Planning Area. This area consists of row crops, grain crops, orchards, and grassland that supports livestock grazing. The land is generally flat and contains no significant land forms, offering a wide view of the surrounding area. The viewshed consists of agricultural crops, or grassland with cattle, along with scattered trees. These areas are green in spring and summer, and brown in the winter (except where winter cover crops are grown). From the northwestern portion of the Planning Area, on a clear day, the Sierra Nevada is visible background views to the east.



Vernal Pool Grassland (City of Roseville 2011)



Oak Woodland/Savannah (City of Roseville 2011)

of the oak trees scattered among the low-growing grasslands (which are green in spring but brown during the remainder of the year).

Open Space

The Planning Area contains an interconnected network of open space. Vegetation communities within the open space consist of vernal pool grassland, oak woodland/savannah, and riparian woodland/wetlands.

Vernal pools are seasonal pools of water that provide habitat for rare plants and animals; in the Planning Area, the vernal pools are surrounded by non-native, naturalized, Mediterranean grasses. Vernal pools have a colorful and distinctive appearance in the landscape in the springtime, when their unique plant species are flowering.

A savannah is a mixed woodland-grassland ecosystem where the trees are widely spaced so that the canopy does not close. The open canopy allows sufficient light to reach the ground to support an unbroken herbaceous layer consisting primarily of grasses.

In the Planning Area, oak woodland/savannahs are composed of a variety of native oak tree species, including blue oak, Valley oak, and interior live oak. The savannahs also include a variety of non-native grasses. Oak woodlands and savannahs have a distinctive appearance in the landscape that is characterized by a coarse texture, green color, and upright spreading canopy



Riparian Woodland (City of Roseville 2011)

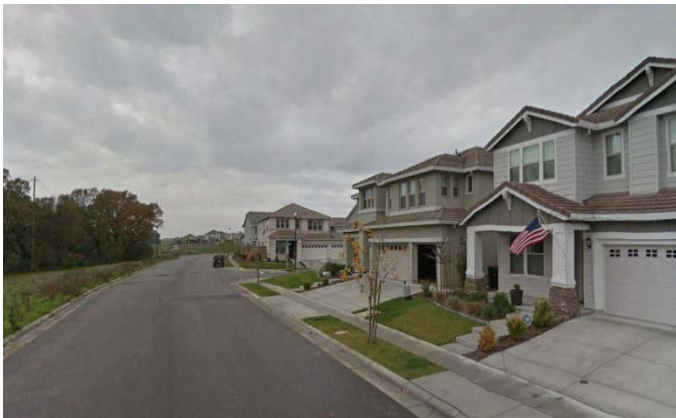
Riparian woodland is a forested or wooded area of land adjacent to a body of water. In the Planning Area, this habitat is typically comprised of a canopy of mature trees, an intermediate shrub layer, and herbaceous ground-cover. These areas are located immediately adjacent to most of the active stream channels in the Planning Area. Wetlands such as marshes are present in some areas, adjacent to the riparian corridor. This stratified plant community appears as a mix of tall, intermediate, and short plants with a variety of forms and textures, which present a visually pleasing appearance throughout the year. The trees and shrubs, and the low-growing

plants in and around the wetlands, are green in the spring and summer. Some tree and shrub species are a source of colorful fall foliage.

Developed Land

Residential

Most of the Planning Area is urbanized. Residential development in the Planning Area consists primarily of single-family homes, with some multi-family development, with homes set along wide meandering streets lined with sidewalks. Development is oriented around the creeks that traverse the area, including the North and South Branches of Pleasant Grove Creek, Coyote Creek, and Kaseberg Creek. Several golf courses, a variety of parks, and a network of bicycle and pedestrian paths are present throughout residential portions of Roseville, linked together by the open space corridors along the stream channels and drainages. These neighborhoods are



Angus Road along Pleasant Grove Creek (Google Earth 2019)

characterized by curvilinear streets, varying block sizes, and cul-de-sacs. East of I-80, in the Secret Ravine area, the Planning Area consists primarily of large single-family homes on hilly terrain, as much as 400 feet above mean sea level. The viewshed in this area consists primarily of lush landscaping trees and turf grass in the residential neighborhoods and along the wide, meandering streets. A variety of parks, open space, and pedestrian/bicycle trails are present throughout this area. Development is again oriented around the creeks that traverse this area, including Miners Ravine, Secret Ravine, False Ravine.

Residential development in the vicinity of I-80, near the southern Planning Area boundary, consists of older single-family homes on small- to medium-sized lots, interspersed with commercial development and schools. Open space corridors, pedestrian paths, and parks in this area are located along Linda Creek and Dry Creek.

Commercial/Office/Industrial/Public

Development in the vicinity of I-80 and SR 65 consists primarily of relatively large-scale commercial, office, and industrial uses, including the Union Pacific Railyards and adjoining commercial and industrial areas, the Westfield Galleria Mall and Fountains at Roseville shopping centers, the North Industrial area, the Downtown and Riverside Gateway Specific Plan Areas, and the Vernon Street commercial corridor.

The North Industrial Area consists of 2,046 acres of land area west of Washington Boulevard and south of Blue Oaks Boulevard. This area is devoted primarily to industrial uses, light industrial uses, and similar uses.

The Downtown Specific Plan Area encompasses 176 acres of land area and includes the Historic Old Town, Vernon Street District, and Royer and Saugstad Parks. The Specific Plan Area is bisected by the Union Pacific Rail Yard, and includes the Roseville Civic Center (City Hall), single-family residences, train depot, and commercial service and retail businesses. The City recently completed a \$20 million investment in Downtown Roseville, including an extensive streetscape project for Vernon Street. Professional service companies and other new businesses have been relocating to Vernon Street; new private investment is being put into buildings in this area; property sales have been brisk, and property values are increasing; and the area is seeing increased activity, including an attractive nightlife district, with the success of live theater venues.



Vernon Street and Riverside Avenue (Google Earth 2019)

The Riverside Gateway Specific Plan Area is south of Douglas Boulevard and the Union Pacific Railyards. This area extends along Riverside Avenue from Vernon Street and Douglas Boulevard in the north to Darling Way in the south. It also extends one block east of Riverside Avenue to Clinton Avenue in the Cherry Glen neighborhood, and one block west to B Street in the Thieles Manor neighborhood. Existing businesses along Riverside Avenue include used car lots, auto mechanics, auto parts, paint and cellular phone stores, offices, thrift

shops, restaurants, bars, and liquor stores. The Specific Plan Area also includes two community facilities: Home Start and St. Vincent de Paul Community Ministries. Existing land uses along Clinton Avenue and B Street in the Specific Plan Area are primarily single-family and multi-family residential. Most of the buildings along Riverside Avenue are much the same as when they were built in the 1940s, 1950s and 1960s, with very few improvements or renovations, and there is either minimal or no landscaping in front of the businesses in the corridor.

The Infill Area constitutes what historically has been the central core of Roseville, as well as the areas that were the focus of growth in the City until the early 1980s. The Infill Area includes a broad mix of land uses, including multi-family and single-family residences, commercial services and retail, public facilities, light industrial and assembly uses, non-profits and places of worship, parks and open space, and other uses. The residential areas are tree-lined, typically with landscaped setbacks from sidewalks and roadways. Many of the commercial areas have relatively wide roadways with surface parking lots and signage between the street and sidewalk and the typically one-story buildings that are set back significant distances from the public rights-of-way.



Haman House (Google Earth 2019)

Historic Areas

Roseville's original commercial core is generally located east of Washington Boulevard and north and west of the Union Pacific Railroad tracks. There are several historic sites in this area, such as the Haman House, which are concentrated around the Union Pacific Railyards in the vicinity of Church Street and Vernon Street. Two large, permanent Nisenan (i.e., Southern Maidu Indian) sites have been identified within the City; these sites are located within Maidu Regional Park. An inventory of significant historic sites has been prepared by the Roseville Historical Society. Two local sites, the Haman

House and the Maidu Indian sites, are listed on the National Register of Historic Places. (See Section 4.9, "Cultural and Tribal Resources," for additional details related to historic and archaeological sites in the Planning Area.)

4.14.2.2 LIGHT AND GLARE

The western portion of the Planning Area is currently sparsely developed and primarily used for agriculture. Unless agricultural equipment is used at night, rural land uses typically do not generate substantial amounts of glare, lighting, or illumination, and the ambient nighttime lighting and illumination levels are typically very low. The remainder of the Planning Area is urbanized and includes a variety of existing sources of daytime glare and nighttime lighting and illumination. Sources of daytime glare include direct beam sunlight and reflections from windows, architectural coatings, glass, and other shiny reflective surfaces. Nighttime light illumination and associated glare can be divided into stationary and mobile sources. Stationary sources of nighttime light include structure illumination, decorative landscape lighting, lighted signs, overhead sports field lighting, overhead parking lot lighting, and streetlights. The source of mobile nighttime light is primarily headlights of motor vehicles.

4.14.3 REGULATORY FRAMEWORK

4.14.3.1 FEDERAL

There are no relevant federal laws, policies, plans, or programs that apply to the proposed General Plan Update.

4.14.3.2 STATE

California Scenic Highways Program, Streets and Highway Code Section 260

Recognizing the value of scenic areas and the value of views from roads in such areas, the California State Legislature established the California Scenic Highway Program (Streets and Highway Code Section 260) in 1963. Under this program, a number of state highways have been officially designated as scenic highways. When a city or county officially designates a scenic highway, it must adopt ordinances to preserve the scenic quality of the corridor or document such regulations that already exist. However, there are no designated scenic highways in the Planning Area (California Department of Transportation 2017).

4.14.3.3 REGIONAL AND LOCAL

Existing City of Roseville General Plan

The existing Roseville General Plan (City of Roseville 2016) includes the following goals and policies related to aesthetics.

Community Form Goal 1: Define Roseville’s overall identity and character by the following attributes:

- a. Distinction from other communities through quality of development and the high level of services provided its citizens.
 - b. A commitment to preserving its small town attributes and cultural heritage, and a dedication to promoting a strong sense of community, while preserving individual neighborhoods and promoting a prosperous business community.
 - c. Continuing to be a family oriented community, which offers opportunities to pursue various lifestyles.
 - d. Residential development that includes clusters of high to low densities balanced with large expanses of open space.
 - e. Ensuring high standards of public safety.
- ▶ **Community Form Policy 1:** Ensure high quality development in new and existing development areas as defined through specific plans, the development review process, and community design guidelines.
 - ▶ **Community Form Policy 2:** Through both public and private efforts, develop clearly defined entries at major entrances into the City through the use of open space, landscaping, signage and other distinctive elements as a way of defining the City’s boundaries and identity.
 - ▶ **Community Form Downtown Neighborhoods Policy 5:** Encourage infill development and rehabilitation that:
 - upgrades the quality and enhances the character of existing areas;
 - enhances public transit use and pedestrian access;
 - efficiently utilizes and does not overburden existing services and infrastructure; and
 - results in land use patterns and densities that provide the opportunity for the construction of household types affordable to all income groups.

Community Design Goal 1: Achieve a consistent level of high quality aesthetic and functional design through the development of, and adherence to, superior design concepts and principles as defined in the Community Design Guidelines.

Community Design Goal 2: Encourage, promote and support the maintenance and expansion of a wide range of programs that serve to increase public understanding, appreciation and enjoyment of cultural and artistic forms,

and the display of artistic expression in public spaces to contribute to the cultural experience and the sense of place and community.

Community Design Goal 3: Encourage the planning and building of a city which sensitively integrates open space and natural resources, and promotes compatibility within and between the natural and the urban environments.

Community Design Goal 4: Emphasize the preservation and enhancement of historically and culturally significant buildings, native oak trees, woodlands and other significant features, as a primary element in defining Roseville's community character

- ▶ **Policy 1:** Through the design review process, apply design standards that promote the use of high quality building materials, architectural and site designs, landscaping signage, and amenities.
- ▶ **Policy 2:** Continue to develop and apply design standards that result in efficient site and building designs, pedestrian friendly projects that stimulate the use of alternative modes of transportation, and the establishment of a functional relationship between adjacent developments.
- ▶ **Policy 3:** Encourage designs that strike a balance between the incorporation of aesthetic and development requirements, and the economic considerations associated with development.
- ▶ **Policy 4:** Promote flexibility in the design review process to achieve design objectives, and encourage projects with innovative, unique and creative architectural style and design.
- ▶ **Policy 5:** Encourage, promote and support art in public spaces and programs to enhance the design of the City.
- ▶ **Policy 6:** Through the design review process, encourage site and building designs that are in scale and compatible with adjacent development with respect to height, bulk, form mass, and community character.
- ▶ **Policy 7:** Encourage project designs that place a high priority and value on open space, and the preservation, enhancement and incorporation of natural resources and other features including consideration of topography, vegetation, wetlands, and water courses.
- ▶ **Policy 8:** Encourage and promote the preservation of historic and/or unique, culturally and architecturally significant buildings, features and visual environments.
- ▶ **Policy 9:** The location and preservation of native oak trees and oak woodlands shall be a primary factor in determining site design, building location, grading, construction and landscaping, and in establishing the character of projects through their use as a unifying element in both new and existing development.

Growth Management Goal 13: New development shall be consistent with the City's desire to establish an edge along the western boundary of the City that fosters: a physical separation from County lands through a system of connected open space; a well-defined sense of entry to City from west; opportunities for habitat preservation and recreation; and view preservation corridors that provide an aesthetic and recreational resource for residents.

- ▶ **Policy 7:** The City shall oppose urban density residential, commercial or industrial development in unincorporated areas unless adequate public facilities and services can be provided and mechanisms to ensure their availability and provision are secured during the land use entitlement process. It is the City's preference that urban development occur within incorporated area.
- ▶ **Policy 8:** Manage growth in such a way to ensure that significant open space areas will be preserved.
- ▶ **Policy 9:** Retain and enhance Roseville's identity and character to ensure that Roseville, even as it grows, remains consistent with the Growth Management Visioning Committee's Vision Statement.
- ▶ **Growth Management-Growth Areas Policy 5:** Apply the City's adopted Guiding Principles to any new development proposed in and out of City's corporate boundaries, which is not already part of an adopted Specific Plan or within the infill area:
 4. Any development proposal shall maintain the integrity of existing neighborhoods and create a sense of place in new neighborhoods.
- ▶ **Growth Management-Growth Areas Policy 6:** As new development is proposed in or outside the City's Sphere of Influence, project proponents shall provide a transitional area between City and County lands, through a system of interconnecting Open Space land areas or other buffers, such as separation by arterial roadways.
- ▶ **Growth Management-Growth Areas Policy 9:** Development proposed on the western edge of the City shall provide a distinctive open space transition to create a physical and visual buffer between the City and County to assure that the identity and uniqueness of the City and County will be maintained.
- ▶ **Growth Management-Public Amenities Goal 2:** In addition to being consistent with the other goals and policies of the General Plan, specific plans shall comply with the following:
 - a. Provide a public focal point, community, and/or theme feature. These features shall be specific to each area and be designed to contribute to the promotion and enhancement of community character. A special feature may include, but is not limited to, a community plaza, central park, or some other type of gathering area; outdoor amphitheater; community garden; regional park with special facilities; sports complex; or cultural facilities.
 - b. Provide entryways at entrances to the City in accordance with the Community-wide Design Guidelines. Where possible, the entryways shall take advantage of and incorporate existing natural resources into the entry treatment. The specific plans shall identify the location and treatment of the entryways, and shall consider the use of open space, oak regeneration areas, signage and/or special landscaping to create a visual edge or buffer that provides a strong definition to entryways into the City.
 - c. The specific plan areas shall be planned and oriented to be an integral part of the City consistent with the policies of the Community Form Component of this Element.
 - d. Develop design guidelines, specifying screening and a transition between public utilities (e.g. substations, pump stations) and other uses, in conjunction with the public utility departments and agencies. In addition, development along power line and pipeline easements shall incorporate design treatment to

insure compatibility and safety. Design guidelines and treatment may include minimum setbacks, building and landscape design standards and possible limitations on certain types of uses and activities.

- e. Preserve natural resource areas where they exist, and where feasible, along new roadways. Such roadways may create a public boundary between the resource area and other uses. The specific plans shall identify locations and standards for the preservation of natural resources along roadways, and shall identify sources of financing for such road segments.

Open Space Goal 1: Establish a comprehensive system of public and private open space, including interconnected open space corridors that should include oak woodlands, riparian areas, grasslands, wetlands, and other open space resources.

Open Space Goal 2: Utilize the open space system to connect neighborhoods and separate development areas within the City.

Open Space Goal 3: Provide access to public open space areas through the establishment of a series of public linkages that will be adequately managed and protected.

- ▶ **Policy 1:** Provide an interconnecting system of open space corridors that, where feasible, incorporate bikeways and pedestrian paths.
- ▶ **Policy 2:** Provide interconnected open space corridors between open space and habitat resources, recreation areas, schools, employment, commercial service and residential areas.
- ▶ **Policy 4:** Require all new development to provide linkages to existing and planned open space systems. Where such access cannot be provided through the creation of open space connections, identify alternative linkages.
- ▶ **Policy 9:** Where feasible, entryways into Roseville shall incorporate the preservation of natural resource areas, such as oak woodland, riparian and grassland areas as a way of defining the City's boundaries and identity.

Vegetation and Wildlife Goal 1: Preserve, protect, and enhance a significant system of interconnected natural habitat areas, including creek and riparian corridors, oak woodlands, wetlands, and adjacent grassland areas.

- ▶ **Policy 1:** Incorporate existing trees into development projects, and where preservation is not feasible, continue to require mitigation for the loss of removed trees. Particular emphasis shall be placed on avoiding the removal of groupings or groves of trees.
- ▶ **Policy 2:** Preserve and rehabilitate continuous riparian corridors and adjacent habitat along the City's creeks and waterways.
- ▶ **Policy 4:** Require preservation of contiguous areas in excess of the City's Regulatory Floodplain, as defined in the Safety Element, as merited by special resources or circumstances. Special circumstances may include, but are not limited to, sensitive wildlife or vegetation, wetland habitat, oak woodland areas, grassland connections in association with other habitat areas, slope or topographical considerations, recreation opportunities, and maintenance access requirements.

Archaeological, Historic and Cultural Resources Goal 1: Strengthen Roseville's unique identity through the protection of its archaeological, historic and cultural resources.

- ▶ **Policy 4:** Preserve and enhance Roseville's historic qualities through the implementation of the Downtown and Riverside Gateway Specific Plans.
- ▶ **Policy 5:** Establish standards for the designation, improvement and protection of buildings, landmarks, and sites of cultural and historic character.

Parks and Recreation Goal 2: Provide residents with both active and passive recreation opportunities by maximizing the use of dedicated park lands and open space areas.

- ▶ **Policy 9:** Continue to maintain and upgrade as necessary City parks and open space areas through the Parks, Recreation & Libraries Department, to assure safe, clean and orderly facilities.
- ▶ **Schools Policy 5:** The City and the school districts will work together to develop criteria for the designation of school sites and consider the opportunities for reducing the cost of land for school facilities. The City shall encourage the school districts to comply with City standards in the design and landscaping of school facilities.
- ▶ **Privately-Owned Utilities Policy 2:** Require the installation of communication and electric lines underground except when infeasible or impractical.
- ▶ **Water and Energy Conservation Policy 5:** Develop and adopt a landscape ordinance that provides standards for the use of drought tolerant, and water-conserving landscape practices for both public and private projects.
- ▶ **Seismic and Geologic Hazards Policy 6:** Require contour grading, where feasible, and re-vegetation to mitigate the appearance of engineered slopes and to control erosion.
- ▶ **Flood Protection Policy 9:** Where feasible, maintain natural stream courses and adjacent habitat and combine flood control, recreation, water quality, and open space functions.

City of Roseville Community Design Guidelines

The City of Roseville's Community Design Guidelines were adopted in 1995 and updated in 2008. While the City promotes diversity and variety, there is a desire for consistency in the quality of development. The City's General Plan and various specific plans include a focus on promoting high-quality development and design. It is the intent of the Community Design Guidelines to provide a framework that identifies the general elements that Roseville considers important in its definition of high-quality design. Through its Community Design Guidelines, the City promotes design principles that encourage diversity, balance aesthetic and functional considerations, and attempt to integrate the natural and built environments.

The Community Design Guidelines are used by the Design Committee, Planning Commission, and City Council in the design review process for projects requiring discretionary approval, and by City staff for discretionary projects that are approved by the Planning Manager. The Community Design Guidelines address the following topics:

- ▶ Site planning and architectural design standards for new residential, commercial, and industrial development and modifications to existing buildings.
- ▶ Landscaping and screening techniques to preserve and enhance the visual quality.
- ▶ Signs for new development.
- ▶ Landscaping and signage at entryways.
- ▶ Streetscape improvements such as street trees, landscaped medians, and street furnishings.
- ▶ Lighting design and provisions to promote public safety and reduce glare and light spillover onto adjacent properties.

The Community Design Guidelines provide a list of specific recommendations and requirements for inclusion in site-specific project design, and which are evaluated on a graded scale for level of compliance during the review process. The technical guidelines identify specific design attributes or measures that are more prescriptive in nature and should or must be incorporated into a project design. The technical guidelines are typically evaluated on a “yes/no” or “not applicable” scale (City of Roseville 2008a). Excerpts from the Community Design Guidelines are provided below.

Goal: Creating projects of superior architectural and visual interest, while recognizing the need for balance between form, function, and economic limitations.

- ▶ **Site Design Guideline CC-5:** Projects on the corners of prominent intersections should be treated as community gateways and should be of the highest design quality.
- ▶ **Site Design Guideline CC-9:** Landscaping, public spaces, art and/or other “gateway” features should be used to define the entryways into the project.
- ▶ **Site Design Guideline CC-39:** Overall character of the development should be defined through the use of a consistent design concept.
 - Building design should be consistent with the defined architectural style and should incorporate the architectural embellishments commonly associated with that style.
 - Façades should be designed to include authentic architectural elements.
- ▶ **Site Design Guideline CC-40:** Projects that consider and compliment the context of adjacent and surrounding projects, but are original in design and avoid duplication (“copy cat” effect) are highly encouraged.
- ▶ **Site Design Guideline CC-41:** Variation of wall planes, roof lines, and building form should be considered to create visually engaging designs.

- Architectural elements such as varied roof forms, articulation of the façade, breaks in the roof, walls with texture materials and ornamental details, and landscaping should be incorporated to add visual interest.
 - Architectural elements such as fenestrations and recessed planes should be incorporated into façade design. Large areas of flat, blank wall and lack of treatment are strongly discouraged.
 - Roof height, pitch, ridgelines, and roof materials should be varied to create visual interest and avoid repetition. Architectural style should be considered when designing the roof plan.
- **Site Design Guideline CC-42:** Proportional relationship between adjacent buildings and between the building and the street should be maintained.
- Unit/building layout should ensure the gradual transition of building height and mass.
 - Pedestrian scaled entry should be a prominent feature of the front elevation.
- **Site Design Guideline CC-43:** Landscaping and architectural detail at the street level should be used to soften the edge of the building and enhance the pedestrian scale and streetscape.
- **Site Design Guideline CC-46:** Variation in color and materials should be considered to create visually engaging designs.
- High quality and durable materials, such as stone, brick, and cementitious siding are encouraged.
 - Creative use of plaster and stucco finishes that add visual depth and texture is highly encouraged.
 - Creative and appropriate use of color is encouraged.
 - Use of color should be consistent with the overall architectural style or theme of the project.
 - Variation in exterior treatment of adjacent buildings is encouraged.
- **Site Design Guideline CC-47:** Architectural treatment shall be applied to all elevations of a building facing public areas. Options include elements such as color, materials, or form drawn from the design of the primary frontage... Consideration should be given to the level of visual access in determining the level of detail required on a particular elevation.
- Elevations of buildings facing a street should be given particular emphasis.
 - Elevations of buildings on corners should include treatment on walls facing the street, and should incorporate design features such as variation in wall plane, variation in building mass, and window placement.
- **Site Design Guideline CC-48:** Architectural features that enhance the façade or building form are encouraged.

- Architectural features such as decorative moldings, windows, awnings and landscaped elements such as lattices that add detail to a façade are encouraged.
- **Site Design Guideline CC-49:** Columns, wall plane projections, and other visual relief should provide visual depth and shade and shadow interest.

Street Tree Ordinance, Chapter 8.04 of the Municipal Code

The City's Street Tree Ordinance (Title 8, Chapter 8.04 of the Municipal Code) establishes a comprehensive plan for the planting, care, and maintenance of street trees, shrubs, and plants in, or which may overhang, public streets within the city. Under this chapter, the Director of Parks and Recreation is required to issue a tree permit for any activity that will interfere with, endanger, or result in the destruction of a street tree. Chapter 8.04 requires that new subdivisions include a tree plan with specific species based on the City's master tree list.

Sign Ordinance, Chapter 17.02 of the Municipal Code

The City's Sign Ordinance (Title 17, Chapter 17.02 of the Municipal Code) is intended to create a comprehensive and balanced system of sign regulation which will facilitate communication and simultaneously serve various public interests, including but not limited to safety and community aesthetics. The ordinance is intended to accomplish the following goals:

- A Encourage a desirable urban character consistent with the general plan.
- B Preserve and improve the appearance of the city as a place to live, work and visit.
- C Eliminate confusing, distracting, or dangerous sign displays which interfere with vehicular traffic and the safety of drivers, passengers and pedestrians.
- D Promote commerce.
- E Provide for fair and equal treatment of sign users.
- F Promote ease of sign ordinance administration.

Water Efficient Landscape Ordinance, Chapter 14.18 of the Municipal Code

The City's Water Efficient Landscape Ordinance (Title 14, Chapter 14.18 of the Municipal Code), defines the standards and procedures for the design, installation, and management of landscaping. The purpose is to comply with the Water Conservation in Landscaping Act of 2006 (Government Code Sections 65591 et. seq.) enabling the citizens of Roseville to enjoy a well-landscaped community, while at the same time conserving water resources. Skillful planting and irrigation design, appropriate use of plants, and intelligent landscape management, can ensure that excessive water demands are reduced and allow the community to be less vulnerable during periods of severe drought. The Water Efficient Landscape Ordinance is intended to improve conditions in the City's urban area by:

1. Creating the conditions to support life in the soil by reducing compaction, incorporating organic matter that increases water retention, and promoting productive plant growth that leads to more carbon storage, oxygen production, shade, habitat and esthetic benefits.

2. Minimizing energy use by reducing irrigation water requirements, reducing reliance on petroleum based fertilizers and pesticides, and planting climate appropriate shade trees in urban areas.
3. Conserving water by capturing and reusing rainwater and graywater wherever possible and selecting climate appropriate plants that need minimal supplemental water after establishment.
4. Protecting air and water quality by reducing power equipment use and landfill disposal trips, selecting recycled and locally sourced materials, and using compost, mulch and efficient irrigation equipment to prevent erosion.
5. Protecting existing habitat and creating new habitat by choosing local native plants, climate adapted non-natives and avoiding invasive plants. Utilizing integrated pest management with least toxic methods as the first course of action.

Prior to issuance of a building permit or improvement plans, a project applicant must submit a landscape package to the city for review and approval. The landscape package must include a landscape plan that identifies the plants to be used and their evapotranspiration rate, along with a soil management report. Plant selection must consider the following factors:

- (i) protection and preservation of native species and natural vegetation;
- (ii) selection of water-conserving plant, tree and turf species, especially local native plants;
- (iii) selection of plants based on local climate suitability, disease and pest resistance;
- (iv) selection of trees based on applicable local tree ordinances or tree shading guidelines, and size at maturity as appropriate for the planting area;
- (v) selection of plants from local and regional landscape program plant lists; and
- (vi) selection of plants from local Fuel Modification Plan Guidelines.

The Water Efficient Landscape Ordinance influences the visual quality of landscaping at public plazas, commercial areas, shopping centers, pedestrian/bicycle trails, City “gateway” entrances, and private residences.

Findings for Design Review Permits, Chapter 19.78 of the Municipal Code

In addition to development patterns, the location of development, and landscaping, light and glare can also affect aesthetics and visual character. The City’s Municipal Code does not have a specific section dedicated to prevention of nuisance light and glare. However, Title 19, Chapter 19.78.060 of the Roseville Municipal Code sets forth required findings that are necessary in order to approve a Design Review Permit, including the following:

2. The project site design as approved provides open space, access, vehicle parking, vehicle, pedestrian and bicycle circulation, pedestrian walks and links to alternative modes of transportation, loading areas, landscaping and irrigation, and lighting which results in a safe, efficient, and harmonious development and which is consistent with the applicable goals,

policies and objectives set forth in the General Plan, the Community Design Guidelines, and the applicable specific plan and/or applicable design guidelines.

A Design Review Permit or a Design Review Permit for a Residential Subdivision is required for non-residential construction, multi-family construction, and small-lot residential construction.

Roseville Creek and Riparian Management Restoration Plan

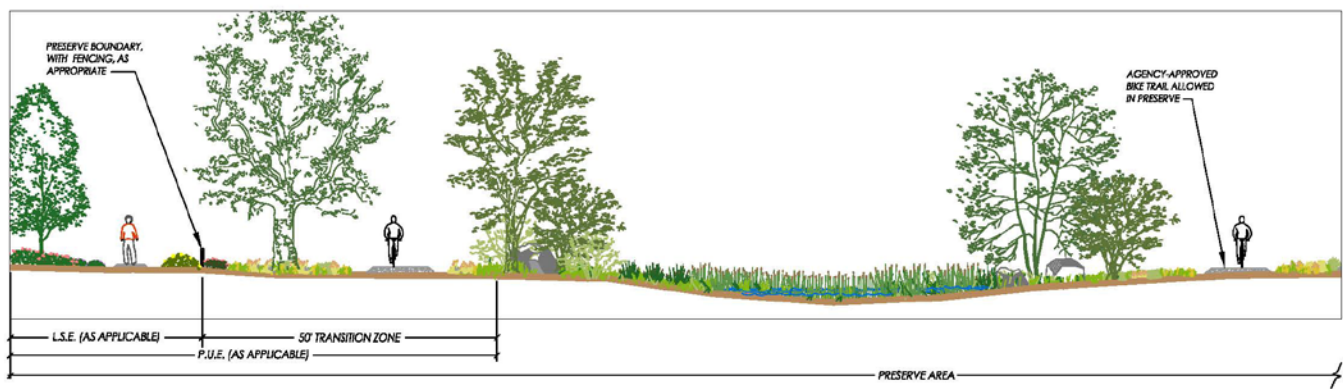
The Roseville Creek and Riparian Management and Restoration Plan (RCRMRP) provides direction for stewardship of more than 60 miles of creeks located in the City of Roseville. These creeks, comprising portions of the Dry Creek and Pleasant Grove/Curry Creek watersheds, are an integral part of the City's character and serve many important functions. The creek system is the primary means by which flood waters are conveyed away from developed areas ensuring protection of property and lives. The creeks also provide valuable habitat for a variety of aquatic and wildlife species, and are a central, defining feature of the City's system of public trails, open space for passive recreation, and preserve areas. The City developed the RCRMRP as a means of enhancing the creeks and preserving these values for future residents (City of Roseville 2005).

The RCRMRP is intended to provide guidance for future restoration and maintenance activities, the plan includes a comprehensive list of restoration methods and techniques to improve wildlife habitat, fish habitat, channel stability, and water quality. These improvements contribute to the visual quality of the creeks, as viewed from both public and private viewpoints throughout the City.

Open Space Preserve Overarching Management Plan

The City's General Plan focuses on the preservation and enhancement of a network of open space that not only provides habitat linkages, but also provides connections between neighborhoods. These connections are provided primarily via an integrated network of joint pedestrian/bicycle trails located within the open space corridors adjacent to streams throughout the Planning Area. The General Plan recognizes that there is a balance between habitat protection and public use. Therefore, sensitive native communities, such as those that support endangered species have limited or supervised access, whereas other areas have regular access points such as pedestrian/bicycle trails. Both habitat protection and public use must be considered for successful open space management. The City's Open Space Preserve Overarching Management Plan (Preserve Management Plan) provides a City-wide approach and specific goals, which serve as the implementing framework for open space management, maintenance, and monitoring for all open space within the City limits (City of Roseville 2011).

The Preserve Management Plan includes specific requirements and adopted mitigation measures related to open space management, maintenance, and monitoring that directly influence the aesthetic qualities of the open space areas from adjacent public and private land uses. For example, streambeds require preservation as part of a dedicated Open Space Preserve. A 50-foot-wide transition zone, on both sides of the stream between the preserve boundary and the new development, is required as part the Open Space Preserve (see Exhibit 4.14-1). The transition zone provides a buffer between the stream and its associated riparian vegetation, which ensures maintenance of the high visual quality along existing creek corridors. The transition zone also allows for the installation of pedestrian/bicycle trails, which provide improved opportunities for public enjoyment of these visual features (i.e., riparian corridors). Landscape easement areas around the outside of developments are placed outside of, but adjacent to, the transition zone, which provides for an additional layer of visual quality from both public (trails and commercial uses) and private (housing) viewpoints.



Source: City of Roseville 2011

Exhibit 4.14-1

Typical 50-Foot Transition Zone

Bicycle Master Plan

The Bicycle Master Plan is intended to guide and influence bikeway policies, programs and development standards to make bicycling in Roseville more safe, comfortable, convenient, and enjoyable for all bicyclists (City of Roseville 2008b). The Bicycle Master Plan includes plans for a Class I bike trail system. Class I bike trails are intended for use by bicyclists, pedestrians, and other non-motorized users. Class I trails are typically 14 feet wide, with 10 feet of paved asphalt and 2 feet of shoulders comprised of decomposed granite or aggregate base. Class I trail appurtenances may include signs, striping, informational kiosks, fencing, bollards, bridges, roadway over or under-crossings with lighting, benches, water fountains, bike racks, and trailheads with paved parking, restrooms, lighting, and landscaping. Bicycle trails throughout the City's open space also double as maintenance roads to reduce open space impacts.

Adopted Specific Plans and Mitigation Measures

Currently, the City has adopted 14 Specific Plans. A Specific Plan is a comprehensive planning and zoning document that implements the General Plan by providing development and conservation standards for a defined geographic location within the Planning Area. Each Specific Plan contains guidelines for site, architectural, landscaping, lighting, roadway networks, pedestrian/bicycle paths, open space corridors, parks, and other aspects of design. Site-specific project design within Specific Plan Areas is controlled by the design standards within each Specific Plan, which are more restrictive and more detailed than the Community Design Guidelines discussed above. Each adopted Specific Plan involved preparation of an EIR, where appropriate, mitigation measures were incorporated and adopted to reduce daytime glare and nighttime skyglow effects, and these measures are required to be implemented in the respective Specific Plan Areas. Adopted mitigation includes a requirement to use of low-glare architectural materials for new development, and the requirement that new lighting be shielded and directed downward to reduce nighttime light spillover onto adjacent properties. Copies of the adopted Specific Plans and their associated EIRs are available upon request from the City of Roseville Development Services Department, Planning Division.

4.14.4 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

4.14.4.1 METHODOLOGY

Aesthetics and visual resources are subjective by nature, and therefore the extent of visual impact associated with adoption and implementation of development and public projects associated with buildout of the General Plan is difficult to quantify. With implementation of proper architectural and landscape design principles, individual development projects can enhance the aesthetic quality of an area. This analysis was conducted qualitatively, assessing the potential implications of full buildout of the General Plan and the proposed General Plan Update goals, policies, and implementation measures.

This proposed General Plan Update does not include any changes to land use designations, expansion of the City's Planning Area, or other major physical changes to areas planned for development compared to the existing General Plan, but does include changes to goals, policies, and implementation measures, which are analyzed as a part of this EIR. This EIR analyzes buildout of the Planning Area consistent with the existing General Plan land use designations and compares this to the existing physical conditions, which constitute the baseline for determining whether potential impacts are significant.

4.14.4.2 THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines, implementation of the proposed project would have a potentially significant adverse impact if it would:

- ▶ Have a substantial adverse effect on a scenic vista;
- ▶ Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- ▶ In a non-urbanized area, substantially degrade the existing visual character or quality of public views of the site and its surroundings (public views are those that are experienced from a publicly accessible vantage point);
- ▶ In an urbanized area, conflict with applicable zoning and other regulations governing scenic quality; or,
- ▶ Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

Public Resources Code Section 21099 (enacted by Senate Bill 743), subsection (d)(1) states that aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment. An "infill site" must be located within an urban area that has been previously developed, or on a vacant site where at least 75 percent of the perimeter of the site adjoins or is separated only by an improved public right-of-way from, parcels that are developed with qualified urban uses. "Transit priority area" means an area within one-half mile of a major existing or planned transit stop. The area within one-half mile of the Roseville Intermodal Station at 201 Pacific Street currently qualifies under this provision.

4.14.4.3 ISSUES NOT DISCUSSED FURTHER

Damage to Scenic Resources within a State Scenic Highway—There is no designated or eligible state scenic highway within or in close proximity to the Planning Area, and the Planning Area is not visible from any officially designated or eligible state or locally designated scenic highway. The City of Roseville does not have any locally designated scenic highways. Thus, there would be no impact, and this issue is not addressed further in this EIR.

Impact Analysis

IMPACT 4.14-1 **Substantial Adverse Effect on a Scenic Vista.** *Buildout of the General Plan would change views of farmland from individual parcels at the western and northwestern edges of the Planning Area, but it would not have a substantial adverse effect on a scenic vista. There are no scenic vistas in the Planning Area. The impact is considered less than significant.*

There are no designated scenic vistas in the Planning Areas. Views consist mainly of developed, urban land with associated open space and parks. At the western and northwestern edges of the Planning Area, views of flat, open farmland to the west and north can be seen from some adjacent properties in the built environment at the urban edge.

Buildout of the General Plan has the potential to obstruct views of farmland from developed areas currently at the edge of urban development. These views would be potentially or fully blocked in some public areas by new construction beyond the current edge of development. However, these views do not provide “scenic vistas.”

The following policies related to scenic quality would be revised as a part of the proposed General Plan Update, with additions shown in **bold, underlined** text and deletions shown in ~~striketrough~~ text:

- ▶ **Policy LU8.7:** ~~The City will manage~~ **The City will manage** growth in such a way to ensure that significant open space areas will be preserved.
- ▶ **Policy LU9.9:** Development proposed on the western edge of the City shall provide a distinctive open space transition to create a physical and visual buffer between the City and County ~~to that assure~~ **ensures** that the identity and uniqueness of the City and County will be maintained.
- ▶ **Policy OS2.1:** Incorporate existing trees into development projects, **with an Particular emphasis** ~~shall be placed on avoiding the removal of groupings or groves of trees.~~ ~~and w~~ **Where** preservation is not feasible, continue to require mitigation for the loss of removed trees. ~~Particular emphasis shall be placed on avoiding the removal of groupings or groves of trees.~~
- ▶ **Policy OS2.2:** Preserve and ~~rehabilitate~~ **restore** continuous riparian corridors and adjacent habitat along the City’s creeks and waterways.

The proposed General Plan Update policy changes listed above would result in improved clarity, and would not result in any adverse environmental impacts.

Conclusion

Implementation of existing General Plan Community Design Policies 6 and 8, Growth Management Goal 13 and Policy 8, Growth Management-Growth Areas Policy 6, Open Space Goal 1 and Policy 1, Vegetation and Wildlife Goal 1 (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Goal LU7.3 and Policies LU8.7, LU9.9, OS2.1, and OS2.2 listed above, would help to preserve views of open space and natural habitat throughout the planning area. There are no scenic vistas within the Planning Area, nor is the Planning Area visible from any scenic vista. Therefore, new development within the Planning Area would have a **less-than-significant** impact on scenic vistas.

Mitigation Measure

No mitigation is required.

IMPACT 4.14-2 *In a Non-Urbanized Area, Substantially Degrade the Existing Visual Character or Quality of the Site and its Surroundings and in an Urbanized Area, Conflict with Applicable Zoning and Other Regulations Governing Scenic Quality. Buildout of the General Plan would include development and public infrastructure and facilities that would change the existing visual character of the Planning Area. Implementation of proposed General Plan Update policies, along with adherence to the City's Community Design Standards, as well as the requirements of the City's Municipal Code, and other adopted plans would ensure the continuation of high-quality design and preservation of open space such that the proposed General Plan Update would not conflict with applicable zoning or other regulations governing scenic quality. However, the change in existing visual character from undeveloped open space and agricultural land to developed urban land is considered a **significant impact**.*

For many neighborhoods within the existing urbanized area of Roseville, buildout of the General Plan would not result in substantive changes to the visual character because the area is already fully developed. In many residential areas, the City does not anticipate that there would be substantial infill development or construction of public infrastructure or facilities that would change the visual character. Much of the Infill Area and many of the City's 14 Specific Plans are built out or nearly built out, and the City does not expect that there would be infill development that would substantially change the overall visual quality of these areas as perceived from public vantagepoints within these areas or when viewed from adjacent areas.

Proposed development in new growth areas would affect visual character, as well as views from development at the existing perimeter of the urban environment, as discussed in Impact 3.14-1 above. Most of the new development would occur primarily, but not exclusively, in the western and northwestern portion of the Planning Area, and most of this development would consist of residential, open space, and parks, with commercial centers. This area of the City has been in the process of developing over the last 10 years, and therefore already contains newer residences, commercial developments, and public infrastructure and facilities oriented around a curvilinear street network and an interconnected system of open space adjoining the creeks that flow through the area. The new development that could occur through buildout of the General Plan would be of a similar type and mass and consistent with City design guidelines and standards, and would be similarly oriented around an interconnected system of open space.

The existing General Plan also encourages higher-density, mixed-use, infill development (see, for example, the Land Use Element policies under the heading, “Community Form - Downtown, Neighborhoods”). New development in infill settings may result in some buildings that are taller or of a greater scale than the current development in the local neighborhood. However, with the exception of standard single-family homes, all new development in these infill areas would be subject to the City’s Community Design Guidelines (City of Roseville 2008) as part of the required design review process for projects. Compliance with the Community Design Guidelines will ensure projects are designed in a manner that is compatible and complementary to the existing character of development.

In addition, allowing for more density and intensity is intended to improve the character of neighborhood centers and corridors with greater activity in the public realm, an increase in commercial activity, an expansion of housing opportunity, and other benefits, while implementing the City’s design standards. Taller or larger buildings do not necessarily constitute a visual impact, and policies in the General Plan, as well implementing documents, establish standards for design and compatibility with a project’s surroundings. In addition to adding uses and density, new investment in urban infill areas typically improves visual quality by developing vacant or underutilized properties and improving maintenance of existing structures and yards. New development of high-quality design can enhance the built environment with new architecture that is in character with or complements existing structures, and which removes the conditions of blight which sometimes accompanies vacant or underused infill properties.

The City’s Specific Plans include design guidelines for site, architectural, landscaping, lighting, roadway networks, pedestrian/bicycle paths, open space corridors, parks, and other aspects of design, which are more restrictive and more detailed than the Community Design Guidelines. New development in infill areas has the potential to affect historic resources. However, the adopted Specific Plans throughout the Planning Area, including the City’s Downtown Specific Plan (where most of the historic resources are located), all include regulations for the use, architectural design, and signage criteria for existing and infill development, and requirements to ensure the preservation of historic properties in this area. See Section 4.9, “Cultural Resources,” for additional details related to historic and archaeological sites in the Planning Area.

As described in the Regulatory Framework, the City’s Community Design Guidelines provide a framework that identifies the general elements that Roseville considers important in its definition of high-quality design. Through its Community Design Guidelines, the City promotes design principles that encourage diversity, balance aesthetic and functional considerations, and attempt to integrate the natural and built environments.

The City’s Zoning Ordinance (Roseville Municipal Code Title 19) is the key regulatory tool meant to implement the General Plan. It consists of a zoning map defining the location of districts and code sections detailing requirements for each district. The Zoning Ordinance establishes specific, enforceable standards with which development must comply such as minimum lot size, maximum building height, minimum building setback, and a list of allowable uses. Zoning applies lot-by-lot, whereas the General Plan has a community-wide perspective. The City’s Zoning Ordinance includes zones for residential, commercial, industrial, open space, and agricultural uses, as well as several overlay zones that apply to specific conditions (e.g. floodplain overlay). Provisions pertaining to visual resources such as site-specific design standards, preservation of open space, landscaping, street trees, grading on steep slopes, and signs, are covered in separate sections. State law requires the City’s Zoning Code to be consistent with the General Plan.

The following goals and policies related to visual character would be revised as a part of the proposed General Plan Update, with additions shown in **bold, underlined** text and deletions shown in ~~strike through~~ text:

- ▶ **Policy LU3.4:** Encourage infill development and ~~rehabilitation~~ **reinvestment** that:
 - Upgrades the quality and enhances the character of existing areas;
 - **Enhances the mix of land uses in proximity to one another so that more households can access services, recreation, and jobs without the use of a car;**
 - ~~enhances~~ **Facilitates pedestrian activity and** public transit use, ~~and pedestrian access;~~
 - Efficiently utilizes and does not overburden existing services and infrastructure; and
 - Results in land use patterns and densities that provide the opportunity for the construction of **a variety of** ~~household housing~~ types **that are** affordable to all income groups.
- ▶ **Policy LU7.2:** Continue to develop and apply design standards that result in efficient site and building designs, pedestrian-friendly projects that stimulate the use of alternative modes of transportation, and ~~the establishment of~~ functional relationships between adjacent developments.
- ▶ **Policy LU7.7:** Encourage and promote the preservation of historic and/or unique, culturally and architecturally significant buildings, features, and **important** visual ~~environments~~ **resources**.
- ▶ **Policy LU8.7:** **The City will** ~~manage~~ growth in such a way to ensure that significant open space areas will be preserved.
- ▶ **Policy LU8.10:** In addition to being consistent with the other goals and policies of the General Plan, ~~S~~pecific ~~P~~plans shall comply with the following:
 - a. Provide a public focal point, community, and/or theme feature. These features shall be specific to each area and be designed to promote and enhance community character. A special feature may include, but is not limited to, a community plaza, central park, or some other type of gathering area; outdoor amphitheater; community garden; regional park with special facilities; sports complex; or cultural facilities.
 - b. Provide entryways at entrances to the City in accordance with the Community Design Guidelines. Where possible, the entryways shall take advantage of and incorporate existing natural resources into the entry treatment. The Sspecific Pplans shall identify the location and treatment of the entryways, and shall consider the use of open space, oak regeneration areas, signage, and/or special landscaping to create a visual edge or buffer that provides a strong definition to entryways into the City.
 - c. The Sspecific Pplan areas shall be planned and oriented to be an integral part of the City consistent with the policies of the Community Form component of this Element.
 - d. Develop design guidelines, specifying screening and a transition between public utilities (e.g. substations, pump stations) and other uses, in conjunction with the public utility departments and

agencies. In addition, development along power line and pipeline easements shall incorporate design treatment to ensure compatibility and safety. Design guidelines and treatment may include minimum setbacks, building and landscape design standards, and possible limitations on certain types of uses and activities.

- e. Preserve natural resource areas where they exist, and where feasible, along new roadways. Such roadways may create a public boundary between the resource area and other uses. The ~~Specific~~ **Plans** shall identify locations and standards for the preservation of natural resources along roadways, and shall identify sources of financing for such road segments.

- **Policy LU9.5:** Apply the City's adopted Guiding Principles **for Growth** to any new development proposed in and out of City's corporate boundaries, ~~which~~ **that** is not already part of an adopted Specific Plan or within the Infill Area:

- 4. Any **new** development proposal shall maintain the integrity of existing neighborhoods and create a sense of place in new neighborhoods.

- **Policy LU9.6:** As new development is proposed in or outside the City's Sphere of Influence, project proponents shall provide a transitional area between City and County lands, through a system of **managed** interconnecting ~~Open Space land areas~~ **open space** or other buffers, such as separation by arterial roadways.
- **Policy LU9.9:** Development proposed on the western edge of the City shall provide a distinctive open space transition to create a physical and visual buffer between the City and County ~~to that assure~~ **ensures** that the identity and uniqueness of the City and County will be maintained.

Goal OS1.2: Utilize the open space system to connect neighborhoods ~~and separate development areas~~ within the City.

Goal OS1.3: Provide access to public open space areas through ~~the establishment of a series~~ **network** of public linkages **pedestrian and bicycle trails** that will be adequately managed and protected.

- **Policy OS1.4:** Require all new development to provide **pedestrian and bicycle** linkages to existing and planned open space systems. Where such access cannot be provided through the creation of open space connections, identify alternative linkages.
- **Policy OS1.12: In new development, properties adjoining open space should be oriented toward this open space in order to reduce maintenance, security, and aesthetic concerns. Not more than 50 percent of residential and non-residential properties, as measured by the length of adjoining parcel boundaries, should back up to adjacent open space.**
- **Policy OS2.1:** Incorporate existing trees into development projects, ~~with an Particular emphasis shall be placed~~ **on avoiding the removal of groupings or groves of trees.** ~~and w~~ Where preservation is not feasible, continue to require mitigation for the loss of removed trees. ~~Particular emphasis shall be placed on avoiding the removal of groupings or groves of trees.~~
- **Policy OS2.2:** Preserve and ~~rehabilitate~~ **restore** continuous riparian corridors and adjacent habitat along the City's creeks and waterways.

- **Policy OS4.6: Buildings and other resources that have historical or architectural value should be preserved, wherever feasible, and the City will encourage private property owners to preserve and maintain or renovate significant historic resources, consistent with applicable Department of the Interior historic preservation standards.** Establish standards for the designation, improvement and protection of buildings, landmarks, and sites of cultural and historic character.

Goal PR1.2: Maximize the use of dedicated park lands and open space areas to provide residents with both active/**formal/programmable** and **passive/informal/non-programmed** recreation opportunities ~~by maximizing the use of dedicated park lands and open space areas.~~

The proposed General Plan Update policy changes listed above emphasize that dedicated open space should be used to connect neighborhoods together, improve the accuracy of terminology used, make important improvements in the clarity of the intent of goals and policies, and establish that open space should be managed in order to provide the intended benefits. The revisions would result in improved protection of the existing visual character and quality in the Planning Area, and would not result in any adverse environmental impacts.

Conclusion

The existing visual character will change as a result of new development and construction of public infrastructure and facilities. However, implementing existing General Plan Community Form Goal 1 and Policies 1 and 2; Community Design Goals 1, 2, and 4 and Policies 1, 3, 4, 5, 6, 7 and 8; Growth Management Goal 13 and Policies 8 and 9; Growth Management-Growth Areas Policy 6; Open Space Goal 1 and Policy 1; Vegetation and Wildlife Goal 1 and Policy 4; Open Space Goal 1 and Policies 1, 2, and 9; Privately-Owned Utilities Policy 2; Seismic and Geologic Hazards Policy 6; and Flood Protection Policy 9 (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Policies LU3.4, Goal LU7.3, and Policies LU7.2 and 7.7, LU8.7, LU8.11, LU9.5, LU9.6, LU9.9, Goal OS1.2, OS1.3, Policies OS1.4, OS 1.12, OS2.1, OS2.2, OS4.16, and Goal PR1.2, and compliance with the City's existing ordinances, regulations, and policies (such as the Community Design Guidelines) would ensure that new development is sensitive to Roseville's existing character, scale, and visual quality, and would avoid a significant adverse change to the existing visual character.

All of the undeveloped grassland and other areas on the western edge of the City are within adopted Specific Plans, and the aesthetic impacts of development in these areas was analyzed within each Specific Plan EIR. Conversion of large areas of grassland and other undeveloped land was found to be significant in each of these EIRs. The City does not necessarily consider changes to the existing visual character through urban development to be an adverse change. In fact, the City's built environment, such as its gateway entries and preservation of and orientation of development around open space and native vegetation along stream corridors, makes a very important and positive contribution to the community's visual character. New development can be designed with existing visual character and quality in mind and can enhance the visual character by placing well-designed buildings along public rights-of-way, replacing surface parking lots and commercial signage, for example. Attractive visual character would be ensured by requiring high-quality design for new development, infill development, commercial centers, and industrial properties through the City's Community Design Guidelines (which is required for every part as part of the City's design review process) and through the implementation of the City's Specific Plans and Municipal Code requirement related to aesthetics and design.

New development in many portions of the Planning Area would continue to be oriented around an interconnected network of open space. Adherence to the City's Water Efficient Landscape Ordinance would protect and enhance visual character in the City by protecting existing habitat and creating new habitat by choosing local native plants, climate adapted non-natives, and avoiding invasive plants. Finally, implementation of the Preserve Management Plan includes specific requirements and adopted mitigation measures related to open space management, maintenance, and monitoring that ensure preservation of the aesthetic qualities of the open space areas from adjacent public and private land uses.

All site-specific development in the City is required to (1) comply with existing General Plan and proposed General Plan Update policies specifically designed to provide for high-quality design, (2) implement design standards contained in the City's Community Design Guidelines (required during the City's design review process prior to the issuance of a building permit), (3) continue to preserve significant amounts of open space and native vegetation, particularly along stream corridors, and (4) implement site-specific adopted Specific Plans and Municipal Code requirements related to aesthetics and design—all of which are specifically designed to ensure the continuation of high-quality design and the preservation of visual character and quality. Therefore, the proposed General Plan Update would not conflict with applicable zoning and other regulations governing scenic quality.

The northwest and western portions of the Planning Area are not yet urbanized. The visual character in these portions of the Planning Area would change from existing undeveloped open space and agricultural land to urban development as a result of the site-specific project developments envisioned under the proposed General Plan Update. This impact is considered **significant**.

Mitigation Measure

No feasible mitigation measures are available.

Significance after Mitigation

No feasible mitigation measures are available that would reduce the significant impact from changes in visual character when existing open space and agricultural land are converted to urban development, as contemplated under buildout of the General Plan. Even with implementation of existing and proposed General Plan Update goals and policies that are designed to ensure the continuation of high-quality design in urban development, and the preservation of existing visual character and quality where open space and stream corridors would be preserved, the existing visual character will change from undeveloped to developed land. Therefore, this impact is considered **significant and unavoidable**.

| | |
|--------------------------------|--|
| IMPACT 4.14-3 | Create a New Source of Substantial Light or Glare that Would Adversely Affect Day or Nighttime Views in the Area. <i>Buildout of the General Plan would create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. The impact is considered significant.</i> |
|--------------------------------|--|

Most of the Planning Area is urbanized and already generates substantial sources of light and glare. Infill development in Downtown and along major corridors, such as Harding Boulevard and Douglas Boulevard, throughout the Downtown and Riverside Gateway Specific Plans, and other areas, encourages greater density and intensity of development and would in some cases increase the amount of light currently generated. In addition,

development in new growth areas in the western and northwestern portions of the Planning Area would produce light and glare in areas that currently have relatively little or no light and glare.

Certain land uses, such as parking lots, commercial buildings, and signs, emit light 24 hours per day. In contrast, most residential buildings produce limited light during the night. In addition, new buildings with reflective surfaces, such as office buildings with glazed windows or metal roofs, could add new sources of daytime glare.

The following new policy is proposed to reduce light and glare:

Policy LU7.9: Control artificial lighting to avoid spill-over lighting onto adjacent properties. Use anti-reflective architectural materials and coatings to prevent glare.

The proposed new policy would limit the adverse impacts of new artificial lighting sources, and therefore would reduce potential environmental impacts.

Conclusion

The City's Community Design Guidelines include lighting standards for all types of land uses, such as the requirements that pole-mounted lights be no taller than 25 feet, a preference for "pedestrian style" lighting (less than 10 feet tall), and the requirement that lighting sources must have cut off lenses and should be located to avoid light spillage and glare on adjacent properties and in private spaces. Title 19, Chapter 19.78.060 of the Roseville Municipal Code sets forth required findings that are necessary in order to approve a Design Review Permit, including requirements for lighting which results in a safe, efficient, and harmonious development and which is consistent with the applicable goals, policies, and objectives set forth in the General Plan, the Community Design Guidelines, and applicable Specific Plans and/or applicable design guidelines. In addition, the proposed General Plan Update includes a new policy requiring the control of spill-over lighting and the use of anti-reflective materials. However, despite this policy, new sources of light will be developed in portions of the City with low existing ambient nighttime lighting. Therefore, this impact is considered **significant**.

Mitigation Measure

No feasible mitigation measures are available.

Significance after Mitigation

It is not feasible to mitigate light and glare impacts completely without prohibiting the use of light in new development. No other feasible mitigation measures are available. Therefore, this impact is considered **significant and unavoidable**.

This page intentionally left blank

4.15 ENERGY

4.15.1 INTRODUCTION

This section describes potential impacts related to energy demand of projects in the Planning Area associated with the proposed General Plan Update. To provide context for the impact analysis, this section begins with an environmental setting describing the existing conditions in the Planning Area focused on the three sources of energy that are most relevant to the project—namely, electricity and natural gas uses, and transportation fuel for vehicle trips. Next, the regulatory framework is described, which informs the selection of the significance thresholds used in the impact analysis. The regulatory framework also includes existing General Plan policies related to the impact analysis of this section. The section concludes with the applicable significance thresholds, the impacts of the proposed changes to adopted General Plan policies, recommended mitigation measures, and the significance conclusions. The analysis considers the primary uses of energy; the benefit of existing regulations that require energy-efficient construction and operation; the location, design, and allowable mix of uses that could be developed as a part of buildout of the General Plan relative to energy use; and the potential for the General Plan Update to result in the wasteful, inefficient, and unnecessary consumption of energy. Section 4.12, “Utilities and Service Systems,” addresses the degree to which the proposed General Plan Update would create physical environmental effects related to the construction or expansion of transmission facilities.

As part of the impact analysis, Notice of Preparation (NOP) comments were reviewed to help guide the analysis. However, there were no NOP comments on energy.

4.15.2 ENVIRONMENTAL SETTING

4.15.2.1 ENERGY SERVICES AND DEMANDS

Electrical Resources

California's total energy consumption is the second highest in the nation, but, in 2018, the state's per-capita energy consumption was the fourth-lowest, due in part to its mild climate and its energy efficiency programs (EIA 2020a). Electricity supply in California involves a complex grid of power plants and transmission lines location in the Western United States, Canada, and Mexico. In 2018, the total system power for California was 285,488 gigawatt-hours (GWh) of electricity, down 2 percent from 2017 (CEC 2019a). The overall decline observed in California's total system electric generation for 2018 is consistent with the trends observed in energy demand, which has been flat or slightly declining as energy efficiency programs have resulted in end-use energy savings and as customers install behind-the-meter energy systems that directly displace utility-supplied generation.

Within the city of Roseville, electrical service is provided by the City of Roseville Electric Department (Roseville Electric Utility). In 2018, Roseville Electric Utility served approximately 59,600 customers, nearly 97 percent of which were residential. Electricity consumption by Roseville Electric Utility users was approximately 1,155,296,800 kWh (CEC2019b). Demand for any given year is approximately 40 percent residential, 60 percent commercial, and a very small percentage municipal.

California's electricity is generated through a combination of nuclear power plants; natural gas-fired power plants; renewable energy sources, such as wind, solar, geothermal, and small hydroelectric facilities; and additional energy purchased from other energy suppliers. The Roseville Electric Utility power mix is approximately 40

percent eligible renewable resources, 13 percent large hydroelectric, 22 percent natural gas, and 24 percent unspecified sources of power. As a point of comparison, the 2018 California power mix was made up of approximately 31 percent eligible renewable resources, 3 percent coal, 11 percent large hydroelectric, 35 percent natural gas, 9 percent nuclear, and 11 percent unspecified sources of power (CEC 2019c). In 2018, Roseville Electric Utility completed the construction and commissioning of the City's first community solar project, which began providing power to participating customers in 2019 (City of Roseville 2019).

The City of Roseville operates the Utility Exploration Center as a learning center that includes programs to educate visitors on energy and water conservation, waste reduction, and watershed management. Roseville Electric Utility offers residential rebate programs for a wide range of measures to help residential customers reduce overall energy usage; rebate programs promote energy efficiency from HVAC systems, electric vehicles, window replacement, fans, shade trees, sunscreens, and pool pumps. In addition, Roseville Electric Utility provides home energy reports with neighbor energy usage comparisons and tips on how residents can reduce their personal energy usage. For residential and non-residential customers, Roseville Electric Utility provides environmental education, rebates, coordination with a facility manager to identify inefficiencies and improvement recommendations, and other similar programs to help reduce community-wide energy use associated with water, wastewater, and solid waste.

Natural Gas Resources

Natural gas service is provided by Pacific Gas and Electric Company (PG&E), one the largest combined natural gas and electrical energy companies in the United States. PG&E provides natural gas service to the City of Roseville through portions of its approximately 42,000 miles of natural gas distribution pipelines (PG&E 2019). PG&E's gas transmission and distribution pipelines stretch from Eureka in the north to Bakersfield in the south, and from the Pacific Ocean in the west to the Sierra Nevada in the east. In 2018, natural gas consumption in the PG&E service area totaled approximately 4,794 million therms (CEC 2019d), less than 2 percent (95 million therms) of which was consumed by users in Placer County (CEC 2019e).

Transportation Fuel

Among the various types of energy sources, petroleum (diesel fuel) is the primary fuel consumed, in terms of construction and operational energy demand. The transportation end-use sector consumes the largest share of energy in California. Almost 40 percent of California's energy consumption results from the transport of goods and people (U.S. Energy Information Administration 2020). In 2018, sales of diesel fuel to California end users was approximately 1,187,100 gallons per day (gpd) and sales of gasoline to California end users was approximately 455,900 gpd (CEC 2019f, 2019g).

While gasoline and diesel fuel remain the primary fuels fused for transportation in California, the types of transportation fuel have diversified in California and elsewhere. Historically, gasoline and diesel fuel accounted for nearly all demand; now, however, numerous options are available, including ethanol, natural gas, electricity, and hydrogen. California has provided incentives to increase the use of non-carbon-emitting vehicles, and, by the end of 2018, California drivers owned almost 500,000 electric and plug-in hybrid vehicles. In 2019, nearly one-fourth of the nation's electric vehicle charging stations were in California (U.S. Energy Information Administration 2020b). Roseville Electric offers new electric vehicle and charging incentives to both residential and commercial customers.

4.15.3 REGULATORY FRAMEWORK

4.15.3.1 FEDERAL PLANS, POLICIES, REGULATIONS AND LAWS

Energy Policy Act of 1992

The Energy Policy Act of 1992 consists of 27 titles detailing various measures designed to lessen the nation's dependence on imported energy, provide incentives for clean and renewable energy, and promote energy conservation in buildings. Title III of the Act addresses alternative fuels. It gave the U.S. Department of Energy administrative power to regulate the minimum number of light-duty alternative fuel vehicles required in certain federal fleets beginning in fiscal year 1993. The primary goal of this program is to cut petroleum use in the United States by 2.5 billion gallons per year by 2020.

Energy Policy Act of 2005

The Energy Policy Act of 2005, which was intended to establish a comprehensive, long-term energy policy, is implemented by the U.S. Department of Energy. The Act addresses energy production in the U.S., including oil, gas, coal, and alternative forms of energy, as well as energy efficiency and tax incentives. Energy efficiency and tax incentive programs include credits for the construction of new energy-efficient houses, production or purchase of energy-efficient appliances, and loan guarantees for entities that develop or use innovative technologies that avoid the production of greenhouse gases (GHG). To reduce national energy consumption, the Act also directed the National Highway Traffic Safety Administration (NHTSA) within the U.S. Department of Transportation (USDOT) to establish the Corporate Average Fuel Economy (CAFE) program. Under the CAFE program, NHTSA prescribes and enforces average fuel economy standards for passenger cars and light trucks sold in the United States.

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 (EISA) was intended to increase U.S. energy security, develop renewable fuel production, and improve vehicle fuel economy. The EISA amended the EPCA to introduce more aggressive requirements. The three key provisions strengthened the CAFE Standards, the federal Renewable Fuel Standard, and the federal energy efficiency standards for appliances and lighting.

On August 2, 2018, USDOT and the U.S. Environmental Protection Agency (EPA) proposed the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule. The SAFE Vehicles Rule would amend the existing NHTSA CAFE standards and the existing EPA tailpipe carbon dioxide emissions standards for passenger cars and light trucks and establish new standards covering model years 2021 through 2026. The proposed rule would retain the model year 2020 standards for both programs through model year 2026. In response to the proposed SAFE Vehicles Rule, on July 25, 2019 the California Air Resources Board (CARB), Ford, Volkswagen, Honda, and BMW announced a voluntary framework agreement to set fuel economy and carbon dioxide limits at levels between the existing federal standards and the standards proposed by the SAFE Vehicles Rule. Under the framework, the auto companies' party to the voluntary agreement would only sell cars in the United States that meet these levels.

4.15.3.2 STATE PLANS, POLICIES, REGULATIONS AND LAWS

Senate Bills 1078 and 107, Executive Orders S-14-08 and S-21-09, and Senate Bill 350

State legislation has established increasingly stringent renewable portfolio standard (RPS) requirements for California's utility companies. RPS-eligible energy sources include wind, solar, geothermal, biomass, and small-scale hydro projects.

SB 1078 (Chapter 516, Statutes of 2002) required retail sellers of electricity, including investor-owned utilities and community choice aggregators, to provide at least 20 percent of their supply from renewable sources by 2017. SB 107 (Chapter 464, Statutes of 2006) changed the target date to 2010.

Executive Order S-14-08 expanded the state's Renewable Portfolio Standard to 33 percent renewable power by 2020. Executive Order S-21-09 directs ARB under its AB 32 authority to enact regulations to help the state meet its Renewable Portfolio Standard goal of 33 percent renewable energy by 2020. The 33 percent-by-2020 goal and requirements were codified in April 2011 with SB X1-2. This new Renewable Portfolio Standard applies to all electricity retailers in the state, including publicly owned utilities, investor-owned utilities, electricity service providers, and community choice aggregators. SB 350 (2015) increased the renewable-source requirement to 50 percent by 2030, which was further increased under SB 100 in 2018 to 60 percent by 2030 and requiring all the State's electricity to come from carbon-free resources by 2045.

These requirements reduce the carbon content of electricity generation associated with both existing and new development, including that within the Planning Area.

Advanced Clean Cars Program/Zero Emission Vehicle Program (AB 1493)

AB 1493, also known as the Pavley regulations, required CARB to adopt regulations by January 1, 2005, that would result in the achievement of the "maximum feasible" reduction in GHG emissions from vehicles used in the state primarily for noncommercial, personal transportation. In 2009, the EPA Administrator granted a CAA waiver of preemption to California, allowing the state to implement its own GHG emissions standards for motor vehicles. California agencies worked with federal agencies to conduct joint rulemaking to approve a new emissions-control program for model years 2017–2025.

The program was implemented through a single package of standards called Advanced Clean Cars (California Code of Regulations [CCR] Title 13, Sections 1962.1 and 1962.2), inclusive of the Low-Emission Vehicle III amendments, the Zero-Emission Vehicle program, and the Clean Fuels Outlet regulation.

As described above under Federal Regulations, the SAFE Vehicles Rule Part One: One National Program was effective November 26, 2019. Through this ruling, EPA withdrew California's waiver of preemption and NHTSA finalized regulatory text related to preemption. California and 22 other states have filed suit to challenge the NHTSA preemptive regulations and California filed suit to challenge EPA's waiver rescission. Thus, the future status of these programs is currently speculative.

California Code of Regulations, Title 20 and Title 24

New buildings constructed in California must comply with the standards contained in California Code of Regulations (CCR) Title 20, Building Energy Regulations, and Title 24, Energy Conservation Standards. Title 20

standards range from power plant procedures and siting to energy efficiency standards for appliances, ensuring reliable energy sources are provided and diversified through energy efficiency and renewable energy resources. Title 24 requires the design of building shells and building components to conserve energy. The Energy Conservation Standards for new residential and nonresidential buildings were adopted by the California Energy Resources Conservation and Development Commission in June 1977 and most recently revised in 2016 (24 CCR 6). The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods.

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (Part 11, Title 24), commonly known as CALGreen, was adopted as part of the California Building Standards Code (24 CCR). The code was last updated in 2019, effective January 1, 2020. Part 11 establishes mandatory standards, including planning and designing for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water efficiency and conservation, material conservation and resource efficiency, and environmental quality.

4.15.3.3 LOCAL PLANS, POLICIES, REGULATIONS AND LAWS

City of Roseville Community Design Guidelines

The Community Design Guidelines were originally adopted by the City to implement the goals and policies of the Community Form and Community Design components of the 2010 General Plan, and were intended to provide a clear and common understanding of the City's expectations for the planning, design, and review of development proposals in Roseville. Two of the six design principles of the guidelines specifically address energy-related resources:

- ▶ Promote development that supports a variety of transportation modes and facilitates pedestrian mobility, convenience, and safety.
- ▶ Foster designs which result in the conservation and efficient use of natural resources.

Specifically, design guidelines are included that require green building design, including energy reducing design features, use of recycled materials, energy efficient lighting, and incorporation of renewable energy production such as solar panels, be considered in projects.

Existing City of Roseville General Plan

The following goals and policies are included in the existing General Plan and are relevant to energy use within the Planning Area (City of Roseville 2016).

- ▶ **Land Use - Community Form – Relationship to Transit, Pedestrian, Air Quality (RTPAQ) Policy 1:**
Promote land use patterns that support a variety of transportation modes and accommodate pedestrian mobility.
- ▶ **Land Use - Community Form – Relationship to Transit, Pedestrian, Air Quality (RTPAQ) Policy 2:**
Allow for land use patterns and mixed use development that integrate residential and non-residential land uses, such that residents may easily walk or bike to shopping, services, employment and leisure activities.

- ▶ **Land Use - Community Form – Relationship to Transit, Pedestrian, Air Quality (RTPAQ) Policy 3:**
Concentrate higher intensity uses and appropriate support uses within close proximity of transit and bikeway corridors as identified in the Bicycle Master Plan. In addition, some component of public use such as parks, plazas, public buildings, community centers and/or libraries should be located within the corridors.
- ▶ **Land Use - Community Form – Relationship to Transit, Pedestrian, Air Quality (RTPAQ) Policy 4:**
Promote and encourage the location of employee services such as childcare, restaurants, banking facilities, convenience markets, etc., within major employment centers for the purpose of reducing midday service-related vehicle trips.
- ▶ **Land Use - Community Form – Relationship to Transit, Pedestrian, Air Quality (RTPAQ) Policy 5:**
Where feasible, improve existing development areas to create better pedestrian and transit accessibility.
- ▶ **Land Use - Community Form – Relationship to Transit, Pedestrian, Air Quality (RTPAQ) Policy 6:**
Through City land use planning and development approvals, require that neighborhood serving uses (e.g. neighborhood commercial uses, day care, parks, schools, and other community facilities) be physically linked with adjacent residential neighborhoods.
- ▶ **Land Use - Community Form – Relationship to Transit, Pedestrian, Air Quality (RTPAQ) Policy 7:**
Encourage alternative modes of transportation including pedestrian, bicycle, and transit usage.
- ▶ **Land Use - Community Form – Relationship to Transit, Pedestrian, Air Quality (RTPAQ) Policy 10:**
Conserve energy and reduce air emissions by encouraging energy efficient building designs and transportation systems.
- ▶ **Land Use - Community Form – Downtown, Neighborhoods Policy 5:** Encourage infill development and rehabilitation that: upgrades the quality and enhances the character of existing areas; enhances public transit use and pedestrian access; efficiently utilizes and does not overburden existing services and infrastructure; and results in land use patterns and densities that provide the opportunity for the construction of household types affordable to all income groups.
- ▶ **Land Use - Community Form – Relationship to New Development Policy 1:** Require that new development areas and associated community-wide facilities (open space resources, parks, libraries, etc.) be linked and oriented to existing developed areas of the community through road networks, public transit systems, open space systems, bike way and pedestrian systems, and other physical connections.
- ▶ **Land Use - Community Form – Relationship to New Development Policy 2:** Promote land use patterns that result in the dispersion of secondary or satellite services including libraries, schools, parks, public meeting places and commercial uses throughout the community through the establishment of neighborhood centers.
- ▶ **Land Use - Community Form – Community Design Policy 2:** Continue to develop and apply design standards that result in efficient site and building designs, pedestrian friendly projects that stimulate the use of alternative modes of transportation, and the establishment of a functional relationship between adjacent developments.

- ▶ **Circulation - Level of Service Policy 5:** Enable the City to designate a Pedestrian District over a geographic area for the purpose of implementing measures that promote pedestrian walkability and reduce total vehicle miles travelled and resultant air pollution emissions that contribute to climate change. In these districts, the City recognizes that pedestrian travel takes a higher priority than automobile travel, which could reduce the vehicular level of service.
- ▶ **Circulation - Transportation Systems Management_Policy 1:** Continue to enforce the City's TSM ordinance and monitor its effectiveness.
- ▶ **Circulation - Transportation Systems Management_Policy 2:** Work with appropriate agencies to develop measures to reduce vehicular travel demand and total vehicle miles traveled and meet air quality goals.
- ▶ **Circulation - Bikeway/Trails_Policy 1:** Develop a comprehensive and safe system of recreational and commuter bicycle routes and trails that provides connections between the City's major employment and housing areas and between its existing and planned bikeways.
- ▶ **Public Facilities - Electric Utility Goal 4:** Aggressively pursue cost-effective and environmentally safe alternative sources of energy and energy conservation measures.
- ▶ **Public Facilities - Electric Utility Policy 5:** Explore the feasibility of the development and participation in renewable energy resources.
- ▶ **Public Facilities - Electric Utility Policy 8:** Pursue reasonable and cost-effective energy efficiency, conservation, and load management programs pertinent to the electric utility system.
- ▶ **Public Facilities - Water and Energy Conservation_Policy 1:** Develop and implement water conservation standards.
- ▶ **Public Facilities - Water and Energy Conservation_Policy 2:** Implement various water conservation plans developed by the Environmental Utilities Department.
- ▶ **Public Facilities - Water and Energy Conservation_Policy 3:** Explore potential uses of treated wastewater.
- ▶ **Public Facilities - Water and Energy Conservation_Policy 5:** Develop and adopt a landscape ordinance that provides standards for the use of drought tolerant, xeriscape, and water-conserving landscape practices for both public and private projects.
- ▶ **Public Facilities - Water and Energy Conservation_Policy 8:** Enforce energy requirements and encourage development and construction standards that promote energy efficiency and conservation.
- ▶ **Public Facilities - Water and Energy Conservation Policy 9:** Preserve scarce resources by undertaking major projects in energy conservation and land management, including increasing efficiency in the City's electrical system.
- ▶ **Public Facilities - Water and Energy Conservation_Policy 10:** Continue and expand energy efficiency and conservation programs to serve all utility users.

- ▶ **Air Quality Goal 3:** Encourage the coordination and integration of all forms of public transport while reducing motor vehicle emissions through a decrease in the average daily trips and vehicle miles traveled and by increasing the commute vehicle occupancy rate by 50% to 1.5 or more persons per vehicle.
- ▶ **Air Quality Goal 5:** Provide adequate pedestrian and bikeway facilities for present and future transportation needs.
- ▶ **Air Quality Goal 7:** While recognizing that the automobile is the primary form of transportation, the City of Roseville should make a commitment to shift from the automobile to other modes of transportation.
- ▶ **Air Quality - Transportation and Circulation Policy 7:** Encourage alternative modes of transportation including pedestrian, bicycle, and transit usage.
- ▶ **Air Quality - Energy Conservation Policy 10:** Conserve energy and reduce air emissions by encouraging energy efficient building designs and transportation systems.
- ▶ **Housing - Residential Energy Efficiency and Conservation Goal 1: Continue efforts to encourage energy efficiency in housing construction and maintenance.**
- ▶ **Housing - Residential Energy Efficiency and Conservation Policy 1:** Roseville Electric shall commit to offering Energy Efficiency and Renewable Energy programs.
- ▶ **Housing - Residential Energy Efficiency and Conservation Policy 2:** Roseville Electric shall continue to apply energy-efficient requirements to all residential construction.
- ▶ **Housing - Residential Energy Efficiency and Conservation Policy 6:** Through City land use planning and development approvals, require that neighborhood serving uses (e.g., neighborhood commercial uses, day care, parks, schools, and other community facilities) be physically linked with adjacent residential neighborhoods.
- ▶ **Housing - Residential Energy Efficiency and Conservation Policy 7:** Encourage alternative modes of transportation including pedestrian, bicycle, and transit usage.
- ▶ **Housing - Residential Energy Efficiency and Conservation Policy 10:** Conserve energy and reduce air emissions by encouraging energy efficient building designs and transportation systems.

Adopted Specific Plans and Mitigation Measures

Currently, the City has adopted 14 Specific Plans. A Specific Plan is a comprehensive planning and zoning document that implements the General Plan by providing development and conservation standards for a defined geographic location within the Planning Area. Each Specific Plan contains guidelines for site, architectural, landscaping, lighting, roadway networks, pedestrian/bicycle paths, open space corridors, parks, and other aspects of design. Each adopted Specific Plan involved preparation of an EIR, some of which evaluated potential impacts related to energy. Impacts related to energy resources were found to be less than significant, and no mitigation measures were required. Copies of the adopted Specific Plans and their associated EIRs are available upon request from the City of Roseville Development Services Department, Planning Division.

4.15.4 ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

4.15.4.1 METHODOLOGY

This proposed General Plan Update does not include any changes to land use designations, expansion of the City's Planning Area, or other major physical changes to areas planned for development compared to the existing General Plan, but does include changes to goals, policies, and implementation measures, which are analyzed as a part of this EIR. This EIR analyzes buildout of the Planning Area consistent with the existing General Plan land use designations and compares this to the existing physical conditions, which constitute the baseline for determining whether potential impacts are significant.

Energy impacts were analyzed by assessing energy usage associated with construction and operation of projects developed as a part of buildout of the General Plan. Future energy demand was calculated consistent with the GHG emissions modeling, using the methodology described in Section 4.5 of this EIR, "Greenhouse Gas Emissions." Detailed project inputs, assumptions, and calculations are provided in Appendix B. According to Appendix F of the State CEQA Guidelines, conserving energy may be achieved by decreasing overall per-capita energy consumption; decreasing reliance on fossil fuels such as coal, natural gas, and oil; and increasing reliance on renewable energy sources.

4.15.4.2 THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the CEQA Guidelines, an energy impact is considered significant if the proposed project would:

- ▶ Result in a potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy, during project construction or operation; or
- ▶ Conflict with or obstruct a State or local plan for renewable energy or energy efficiency.

4.15.4.3 ISSUES NOT DISCUSSED FURTHER

All issues related to energy resources are discussed in detail below.

4.15.4.4 IMPACT ANALYSIS

| | |
|------------------|---|
| IMPACT 4.15-1 | Significant Environmental Impacts Due to the Wasteful, Inefficient, or Unnecessary Consumption of Energy Resources. <i>Buildout of the General Plan would require energy in the forms of fossil fuels, natural gas, and electricity. A large body of existing regulations would have the effect of reducing energy demand and would reduce potential adverse environmental effects associated with energy demand. The proposed General Plan Update also includes many policies that promote additional energy conservation and savings and that would reduce peak demand and associated environmental effects. The impact is less than significant.</i> |
|------------------|---|

Construction-Related Energy Consumption

Buildout of the General Plan would involve consumption of construction-related energy in the form of electricity, natural gas, and fossil fuels (e.g., gasoline, diesel fuel). The primary energy demands during construction would

be associated with construction equipment and vehicle fueling. Energy in the form of fuel and electricity would be consumed during this period by construction vehicles and equipment operating on-site, trucks delivering equipment and supplies to the site, and construction workers driving to and from the site.

Table 4.15-1 presents the total fuel consumption anticipated for construction activities, shown both for the overall construction period and amortized over an assumed 30-year lifetime. Over the anticipated 16-year construction period, implementation of new development and public facilities and infrastructure required to serve new development would require approximately 8,678,646 gallons of diesel and 5,508,075 gallons of gasoline.¹ Refer to Appendix B for detailed model inputs, assumptions and calculations.

| Table 4.15-1 Modeled Construction Fuel Consumption, Total and Amortized over 30 Years | | | | | |
|---|--------------------|--|--------------------------------------|---|--------------|
| Phase | Source | MT CO ₂ e/ Year ^a | Fuel Type | Factor (MT CO ₂ /Gallon) ^b | Gallons/Year |
| Demolition | Off-Road Equipment | 4,451 | Diesel | 0.01016 | 438,092 |
| | Hauling | 0.00 | Diesel | 0.01016 | - |
| | Vendors | 0.00 | Diesel | 0.01016 | - |
| | Workers | 132 | Gasoline | 0.008887 | 14,881 |
| Site Preparation | Off-Road Equipment | 4,381 | Diesel | 0.01016 | 431,213 |
| | Hauling | 0.00 | Diesel | 0.01016 | - |
| | Vendors | 0.00 | Diesel | 0.01016 | - |
| | Workers | 159 | Gasoline | 0.008887 | 17,858 |
| Grading | Off-Road Equipment | 7,140 | Diesel | 0.01016 | 702,778 |
| | Hauling | 0.00 | Diesel | 0.01016 | - |
| | Vendors | 0.00 | Diesel | 0.01016 | - |
| | Workers | 176 | Gasoline | 0.008887 | 19,842 |
| Building Construction | Off-Road Equipment | 3,029 | Diesel | 0.01016 | 298,159 |
| | Hauling | 0.00 | Diesel | 0.01016 | - |
| | Vendors | 66,216 | Diesel | 0.01016 | 6,517,333 |
| | Workers | 40,292 | Gasoline | 0.008887 | 4,533,844 |
| Paving | Off-Road Equipment | 2,625 | Diesel | 0.01016 | 258,339 |
| | Hauling | 0.00 | Diesel | 0.01016 | - |
| | Vendors | 0.00 | Diesel | 0.01016 | - |
| | Workers | 132 | Gasoline | 0.008887 | 14,881 |
| Architectural Coating | Off-Road Equipment | 332.57 | Diesel | 0.01016 | 32,733 |
| | Hauling | 0.00 | Diesel | 0.01016 | - |
| | Vendors | 0.00 | Diesel | 0.01016 | - |
| | Workers | 8,058.45 | Gasoline | 0.008887 | 906,769 |
| | | | Total Gallons | Diesel | 8,678,646 |
| | | | | Gasoline | 5,508,075 |
| | | | Amortized Demands (over 30 years) | Diesel | 289,288 |
| | | | | Gasoline | 183,602 |
| Notes: | | | | | |
| CO ₂ = carbon dioxide; CO ₂ e = carbon dioxide equivalent; MT = metric tons | | | | | |
| Sources: | | | | | |
| ^a Modeled by AECOM in 2019 | | | | | |
| ^b U.S. Energy Information Administration 2016 | | | | | |

¹ These calculations are based on the CalEEMod emissions estimates for proposed construction activities and application of U.S. Energy Information Administration CO₂ emissions coefficients (U.S. Energy Information Administration 2016) to estimate fuel consumption for each phase of construction activities.

Energy consumption would vary depending on the type of construction activities. For example, during construction equipment-intensive phases, such as site grading, daily fuel use would be higher than during less intensive phases, such as building construction. A General Plan is a long-term planning document, and exact buildout schedules cannot be determined. Therefore, for the purposes of this EIR, a maximum annual construction level was estimated. The maximum annual housing production experienced within the City since 2001 was 2,019 housing units (SACOG 2019). This is equivalent to eight percent of the remaining unbuilt Planning Area being developed per year. Conservatively, this figure was rounded up and it was assumed that up to 10 percent of the Planning Area could be developed annually. Although it is unlikely that the most intensive days of construction would occur concurrently, to conservatively estimate maximum potential fuel demands, it is assumed that these various construction activities could occur concurrently throughout the Planning Area during a year of maximum-potential development, resulting in higher daily and annual fuel use. Because of these conservative assumptions, actual construction-related energy consumption could be less than those estimated. If construction is delayed or occurs over a longer period, fuel use could be reduced because of a more modern and fuel efficient construction equipment fleet mix and a less intensive and overlapping construction schedule.

Fuel consumed during construction would be temporary in nature and would not represent a significant demand on available fuel, beyond normal construction fuel usage. There are no anticipated unusual characteristics that would necessitate the use of construction equipment that would be less energy-efficient than at comparable construction sites in the region or state.

Building Operational Energy Consumption

Operation of land uses and infrastructure and facilities in the Planning Area would consume energy for multiple purposes including, but not limited to, building heating and cooling, refrigeration, lighting, electronics, office equipment and commercial machinery. As shown in Table 4.15-2, residential development, full buildout of the General Plan would result in approximately 539,230 MWh year year of electricity consumption and 1,605,307 million British thermal units per year of natural gas consumption. Non-residential land use would consume approximately 661,182 MWh year year of electricity consumption and 1,016,858 million British thermal units per year of natural gas. Converting all operational energy demand to a single unit, land use operations would consume approximately 21,177,214 million British thermal units per year at full buildout of the General Plan.

Projects in the Planning Area would be constructed to meet currently-applicable energy efficiency standards at the time of construction. In accordance with California Code of Regulations Title 20 and Title 24, development under the General Plan would be required to comply with the building energy requirements and California Building Standards Code, including CALGreen. This includes meeting energy standards for water and space heating and cooling equipment, insulation for doors, pipes, walls, and ceilings, and appliances, and other requirements. Improvements would also be eligible for rebates and other incentives from both the electric and gas providers for the Planning Area for the use of energy-efficient appliances and systems, which would further reduce the overall operational energy consumption associated with operations of improvements under the General Plan. Furthermore, the Roseville Electric Utility power mix is approximately 40 percent eligible renewable resources, ensuring that electricity consumption in the Planning Area relies heavily on renewable sources.

As discussed in the Regulatory Framework, energy efficiency requirements have and will continue to become more stringent over time. As a result, new projects would be more energy efficient than existing projects of the same type within the Planning Area that were constructed prior to the existence of energy efficiency standards or

under previous less stringent energy efficiency standards. Therefore, the operational-related energy consumption under the General Plan would tend to reduce per-capita energy use in association with new and revitalized building energy needs during the planning horizon, as well as reducing peak energy use.

| Table 4.15-2 Estimated Annual Operational Energy Demand | | | |
|---|---------------|------------|---------------------------------------|
| End Use | Energy Demand | Unit | Total Energy Consumption (MMBTU/Year) |
| Residential | | | |
| Electricity | 539,230 | MWh/year | 8,335,001 |
| Natural Gas | 1,605,307 | MMBTU/year | 1,605,307 |
| <i>Subtotal</i> | | | <i>9,940,308</i> |
| Non-Residential | | | |
| Electricity | 661,182 | MWh/year | 10,220,047 |
| Natural Gas | 1,016,858 | MMBTU/year | 1,016,858 |
| <i>Subtotal</i> | | | <i>11,236,905</i> |
| Total Annual Land Use Operational Energy Demand | | | 21,177,214 |
| Note: This analysis is based upon land use operational energy demands modeled in CalEEMod. These estimates assume diesel (heat content) is 5.8 MMBtu/barrel, that for vehicular gasoline there are 5.2 MMBtu/barrel that there are 42 gallons/barrel, and that the City of Roseville Electric Utility-provided electricity has an average heat content of 15.457 MMBTU/MWh factor of 365 days/year. This data is per U.S. Energy Information Administration and California Energy Commission. Source: Modeled by AECOM in 2019 | | | |

Operational Transportation Energy Consumption

As noted previously, transportation is the largest energy consuming sector in California. The General Plan contemplates development in the Planning Area, including new growth areas, as well as a focus on infill locations. The total estimated VMT for the Planning Area in 2035, the planning horizon year for the General Plan, is 10,289,735 miles per day (Fehr & Peers 2020). Using estimates for the fuel consumption rates based on the average fleet in the region from EMFAC2017, this level of mobile operations would result in the consumption of approximately 91.6 million gallons of gasoline and 29.4 million gallons of diesel fuel per year. As a point of comparison to other energy consumption, this fuel consumption would equate to approximately 15,510,932 MMBTU per year.

It is important to note that the VMT estimate used to inform this estimate does not take into consideration mobile source emissions reductions that would result from implementation of the proposed General Plan Update's revised policies related to infill development, vehicle miles traveled (VMT), transit service, bicycle and pedestrian access, and related topics. Therefore, this is considered a conservative estimate and actual fuel use with implementation of the proposed General Plan Update would likely be less than estimated here.

The following goals and policies related to energy conservation would be revised as a part of proposed General Plan Update, with additions shown in **bold, underlined** text and deletions shown in ~~strikethrough~~ text:

- **Policy LU2.1**: Promote ~~land use~~ **development** patterns that support a variety of transportation modes and accommodate pedestrian mobility.

- ▶ **Policy LU2.2:** Allow ~~for land use patterns and mixed-~~ use development that integrates residential and non-residential land uses, ~~such~~ that residents may easily walk or bike to shopping, services, employment, and leisure activities.
- ▶ **Policy LU2.3:** Concentrate higher-intensity uses and appropriate support uses in **Pedestrian Districts and** within close proximity of transit and bikeway corridors, as identified in the **Transit Master Plans and** Bicycle Master Plan. ~~In addition, some component of public~~ **Public** uses, such as parks, plazas, public buildings, community centers, **schools**, and/or libraries, ~~should be located within Pedestrian Districts and transit and bikeway corridors~~ **easily accessible to the public.**
- ▶ **Policy LU2.4:** Promote and encourage the location of employee services, such as child care, restaurants, banking facilities, convenience markets, ~~etc~~ **and other daily needs**, within major employment centers for the purpose of reducing mid-day ~~service-related~~ vehicle trips.
- ▶ **Policy LU2.5:** Where feasible, improve existing developed ~~ment~~ areas to create better pedestrian, **bicycle**, and transit accessibility.
- ▶ **Policy LU2.6:** ~~Through City land use planning and development approvals,~~ Require **proposed** that neighborhood-serving uses (e.g. neighborhood commercial uses, day care, parks, schools, and other community facilities **and services**) **to** be physically linked with adjacent residential neighborhoods **through multi-modal transportation connections.**
- ▶ **Policy LU3.4:** Encourage infill development and ~~rehabilitation~~ **reinvestment** that:
 - **Upgrades the quality and enhances the character of existing areas;**
 - **Enhances the mix of land uses in proximity to one another so that more households can access services, recreation, and jobs without the use of a car;**
 - ~~enhances~~ **Facilitates pedestrian activity and** public transit use, ~~and pedestrian access;~~
 - **Efficiently utilizes and does not overburden existing services and infrastructure; and**
 - **Results in land use patterns and densities that provide the opportunity for the construction of a variety of household-housing types that are** affordable to all income groups.
- ▶ **Policy LU7.2:** Continue to develop and apply design standards that result in efficient site and building designs, pedestrian-friendly projects that stimulate the use of alternative modes of transportation, and ~~the establishment of~~ functional relationships between adjacent developments.
- ▶ **Policy LU8.9:** Work aggressively to address traffic generated outside of Roseville by working in collaboration with neighboring jurisdictions, regional, state, and federal entities to ensure **that** traffic through Roseville is mitigated by regional solutions. ~~Ensure that transportation solutions are supported by land use and design policies~~ **The City will encourage changes in land use mix and community design** that promote walking, biking, and transit, ~~consistent with the Growth Management Visioning Committee's Vision Statement.~~

- ▶ **Policy CIRC2.6: Prioritize investments in pedestrian, bicycle, and transit access in Pedestrian Districts.**
- ▶ **Goal CIRC3: ~~Promote~~ Provide a safe, convenient, and efficient transit system, ~~utilizing both bus and rail modes, to~~ to enhance mobility; reduce congestion; reduce auto emissions, including emissions that contribute to climate change; improve the environment; and provide viable non-automotive means of transportation in and through Roseville.**
- ▶ **Policy CIRC3.1: Pursue and support transit services within the community and region and pursue land use, design, and other mechanisms that promote the use of such services. Promote transit service that is convenient, cost- effective, and responsive to the challenges and opportunities of serving Roseville and surrounding communities, and explore opportunities for transit innovation and service improvements.**
- ▶ **Policy CIRC3.6: Identify opportunities to increase the number and/or capacity of park-and-ride lots as needed, to increase transit and carpool/vanpool use.**

Goal CIRC4: Reduce travel demand ~~and vehicle miles traveled~~ on the City's ~~and regional roadway~~ systems, while expanding mobility options for residents, employees, and visitors.

- ▶ **Policy CIRC4.1: Continue to enforce the City's TSM ordinance and monitor its effectiveness. The City will review and condition projects, as appropriate, to reduce travel demand per capita and per employee by promoting increased density near transit, improving the quality of non-vehicular transportation options, providing incentives for non-vehicular travel, encouraging the mixing of complementary land uses in proximity to one another, and using other feasible methods.**
- ▶ **Policy CIRC4.2: Work with appropriate agencies to develop ~~implementation~~ measures to reduce vehicular travel demand and total vehicle miles traveled and meet air quality goals.**
- ▶ **Policy CIRC4.3: Specific Plan Amendments and land use development projects not included in a Specific Plan shall be evaluated for consistency with the City's VMT Impact Standards.**
- ▶ **Policy CIRC4.4: If the evaluation required by CIRC4.3 finds a Specific Plan Amendment or land use development project not included in an adopted Specific Plan is inconsistent with thresholds established within the City's VMT Impact Standards, on-site land use, transportation, and urban design-related VMT-reducing features should be prioritized to demonstrate consistency. If feasible on-site features cannot achieve the VMT threshold, Specific Plan Amendments and land use development projects outside Specific Plan Areas may demonstrate equivalent consistency through off-site actions or fair-share fee contributions, or if consistency cannot be achieved, shall implement all feasible measures.**
- ▶ **Policy CIRC4.5: Policy CIRC4.3 does not apply to projects that propose residential or office uses in Transit Priority Areas or low-VMT areas. Low-VMT areas are those shown by the General Plan travel demand model or the SCS travel demand model to have per-capita, per-employee, or per-service-population VMT rates that are at least 15 percent less than the baseline citywide or regional rate.**
- ▶ **Policy CIRC4.6: Promote and incentivize Infill development, particularly affordable housing development, through assistance in obtaining outside grant funding and reductions or deferrals in impact fees.**

- ▶ **Policy CIRC5.1:** Develop a comprehensive and safe system of recreational and commuter bicycle routes and trails that provides connections between the City's major ~~employment~~ **destinations (including employment)** and housing areas and between its existing and planned bikeways.

Goal CIRC6.1: Increase the percentage of pedestrian trips in Roseville.

- ▶ **Policy CIRC6.1:** Establish and maintain a safe and continuous pedestrian network that provides **connections between residential areas and commercial retail and services, employment, public services, parks, and public transit.**
- ▶ **Policy CIRC6.2:** Promote development patterns that encourage people to walk to destinations.
- ▶ **Policy PF4.6:** Pursue reasonable and cost-effective energy efficiency, conservation, and management programs that **provide benefits to the community** ~~pertinent to the electric utility system.~~

Goal PF9.1: Preserve scarce resources by recognizing the importance of **efficiency** ~~conservation~~ in water and energy management.

Goal PF9.2: Balance ~~conservation~~ **efficiency** efforts with water and energy supplies for the maximum benefit of Roseville's residents.

- ▶ **Policy PF9.1:** Develop and implement water ~~conservation~~ **efficiency** standards.
- ▶ **Policy PF9.5:** Develop and implement public education programs designed to increase public participation in energy, water ~~conservation~~ **efficiency**, and recycled water use.
- ▶ **Policy PF9.8:** Preserve ~~scarce~~ **natural** resources by undertaking ~~major~~ projects in energy conservation and load management, including increasing efficiency in the City's electrical system.
- ▶ **Policy PF9.9:** Continue ~~and expand~~ energy efficiency and conservation programs to serve all utility users.

Goal AQ1.3: ~~Encourage the coordination~~ **Coordinate** and integration of all forms of public transport ~~to, while reducing motor vehicle emissions, through a decrease in the average daily vehicular trips and vehicle miles traveled,~~ **while encouraging an increase in,** and by increasing the commute vehicle occupancy rate by 50% to 1.5 or more persons per vehicle.

Goal AQ1.4: Increase the capacity of the **pedestrian, bicycle, and transit** transportation systems ~~and~~ **Promote and the share of City owned vehicular transportation that uses less-polluting fuels, such as electricity,** including the roadway system and alternate modes of transportation.

Goal AQ1.5: Provide adequate pedestrian and ~~bikeway~~ **bicycle** facilities for present and future transportation needs.

Goal AQ1.6: Promote a well-designed and efficient ~~light rail and~~ transit system.

Goal AQ1.7: ~~While recognizing that the automobile is the primary form of transportation, the City of Roseville should make a commitment to shift from the automobile to other modes of transportation.~~ **Improve transit,**

biking, bicycle, and pedestrian access to lessen dependence on automobile travel and reduce household transportation costs.

- ▶ **Policy AQ1.12:** Develop transportation systems that ~~minimize vehicle delay and~~ **reduce vehicle emissions by improving the desirability of walking, bicycling, and public transportation relative to vehicular travel** ~~air pollution.~~
- ▶ **Policy AQ1.16:** ~~Encourage~~ **Implement** land use policies that maintain and improve air quality **and expand opportunities for transit-oriented development, which allows residents to significantly reduce vehicular transportation and associated air pollutant emissions.**
- ▶ **Policy AQ1.17:** Conserve energy and reduce air **pollutant** emissions by encouraging energy efficient building designs and transportation systems **and promoting energy efficiency retrofits of existing structures.**
- ▶ **Policy AQ1.18: Promote building and transportation energy efficiency in new residential and commercial development through encouraging and incentivizing implementation measures early in the design and development process.**
- ▶ **Policy AQ1.19: Encourage energy efficiency by identifying potential cost savings, resource, and health benefits.**

The proposed General Plan Update policy changes listed above would result in improved energy efficiency by providing greater clarity related to the City's intent to encourage infill development and mixing of land uses, which allows non-vehicular transportation (and therefore less fuel consumption; the transportation sector is the highest user of energy). General Plan revisions also relate to improving public transit options and bicycle and pedestrian facilities to encourage a shift away from vehicular travel. The proposed General Plan Update policy changes and the new policies listed above would reduce vehicular travel demand (vehicle miles traveled, or VMT) and associated energy demand. Policy revisions also emphasize the City's interest in promoting energy efficient building design and retrofits. None of the changes to goals or policies would have any adverse environmental impacts.

Conclusion

Energy would be consumed during all phases of construction and operations under buildout of the General Plan. EPA and ARB have developed a body of regulations, programs, and strategies that address energy use from construction and land use development projects. See Section 4.15.2, "Regulatory Framework," for a description of regulations that would help reduce GHG emissions associated with the General Plan Update. Those regulations that pertain to reduction of VMT and improvements in building energy efficiencies would have the most substantial effect on reducing future energy consumption within the Planning Area. As fuel efficiency of vehicles improves over time, transportation energy efficiency would improve. In addition, as energy efficiency standards for buildings increase over time, consistent with the trend following each review and update of CALGreen, the energy efficiency of new development in the Planning Area would likely improve compared to existing development and infrastructure.

Implementation of existing General Plan Community Form – Downtown Neighborhoods Policy 2, Community Form - Relationship to Transit, Pedestrian, Air Quality (RTPAQ) Policy 1, Bikeways/Trails Goal 1 and Policy 2, and Air Quality General Policy 4 (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Policies LU2.1–2.6 and 3.4, 7.2, and 8.10; Goal CIRC3 and Policies 2.6, 3.1, and 3.6; Goal CIRC4 and Policies CIRC4.1–4.7; Policy CIRC5.1; Goal CIRC6.1 and Policies CIRC6.1 and 6.2; Goal PF9.1 and 9.2 and Policies PF9.1, 9.4, 9.5, 9.8, and 9.9; Goals AQ1.3–1.9 and Policies AQ1.1, 1.3, 1.6, 1.9–1.19 and 1.22 listed above, combined with current laws, regulations, and policies, would reduce energy consumption within the Planning Area. The extensive body of regulatory requirements would increase energy efficiency, reduce peak energy demand, and therefore reduce actual adverse physical environmental effects associated with energy use. In addition, the proposed General Plan Update contains several policies that would promote energy efficiency and reduce peak energy demand in new development and promote increased energy efficiencies in existing development, including retrofits of existing structures.

As noted previously, transportation is the largest energy consuming sector in California. Therefore, the transportation fuel demand-reducing features of the proposed General Plan Update are important for consideration in an assessment of energy efficiency. As described in Section 4.4, “Air Quality,” proposed General Plan Update Policy AQ1.3 would result in reduced vehicle emissions during construction activities, thereby reducing construction-related fuel consumption. Buildout of the General Plan would include development in the western portion of the Planning Area, as well as a focus on development in infill locations. Land uses developed in infill, mixed-use, and/or transit accessible areas would reduce VMT by allowing residents to use alternatives to vehicular travel, and reducing trip distances to access destinations such as grocery stores and amenities such as parks. This is demonstrated in the Transportation chapter of this EIR (Chapter 4.3), which includes Table 4.3-7 listing average VMT in each of the City’s Specific Plans. Areas near the City’s downtown and core, where infill development would occur, have the lowest VMT per capita and therefore would have relatively higher transportation energy efficiency.

Buildout of the General Plan also includes employment-generating developments that would attract some vehicular trips by customers, as well as employees that may commute from areas within or outside the Planning Area. The City’s Land Use Map is designed to promote a range of housing opportunities and employment opportunities within the Planning Area so that more households would have the opportunity to reside near their workplace, and also promotes regional transit systems that would support multi-modal commutes to and from employment opportunities within the Planning Area.

Policies throughout the proposed General Plan Update, as identified above, would promote energy efficiency in buildings and transportation systems. Implementation of the proposed General Plan Update in accordance with these goals and policies would encourage transportation and energy efficiencies within the Planning Area that would increase energy efficiency over time within the Planning Area. Therefore, implementation of the proposed General Plan Update would not develop land uses and patterns that cause wasteful, inefficient, and unnecessary consumption of energy. This impact is less than significant. The actual physical effects of energy use (air pollutant emissions, greenhouse gas emissions, etc.) are addressed throughout this EIR.

Implementation of Mitigation Measure 4.4-2, as detailed in Section 4.4, “Air Quality,” and Mitigation Measure 4.5-1, as detailed in Section 4.5, “Greenhouse Gas Emissions,” would further reduce construction and operational energy consumption. Mitigation Measure 4.4-2 would result in reduced area, energy, and mobile source

emissions, several of which related actions would reduce fuel and energy demand of operations under the General Plan Update. Mitigation Measure 4.5-1 would require the implementation of measures to minimize GHG emissions. There is substantial overlap between GHG emissions reductions achieved and overall reduced energy consumption due to reduced fuel demand and energy and water conservation. Therefore, implementation of Mitigation Measure 4.5-1 would also ensure that implementation of the General Plan Update would develop more energy efficient land uses and development patterns, and impacts would be **less than significant**.

Mitigation Measure

No mitigation is required.

IMPACT 4.15-2 **Conflict with or Obstruct a State or Local Plan for Renewable Energy or Energy Efficiency.** *Buildout of the proposed General Plan Update would not conflict with or obstruct a State or local plan for increasing renewable energy or energy efficiency. Policies and implementation measures in the proposed General Plan Update include actions to increase the use and implementation of renewable energy resources. The impact is less than significant.*

As described above in the discussion of Impact 4.15-1, implementation of the proposed General Plan Update would result in the development of new land uses that would induce new demand for electricity and natural gas. However, design and construction of new and retrofit buildings would be required to comply with the most recently adopted California Energy Code and California Green Building Standards Code (CalGreen), which are expected to become increasingly more stringent over time to further the State's renewable energy and GHG reduction goals. In addition, design of new and retrofit construction within the Planning Area would be reviewed by the City of Roseville for consistency with the City's Community Design Guidelines, which includes requirements for consideration of energy efficiency measures and incorporation of renewable energy production features in the design of projects.

The following proposed General Plan Update goals and policies related to energy conservation in Roseville are proposed for revision, with additions shown in **bold, underlined** text and deletions shown in ~~striketrough~~ text:

- ▶ **Policy LU7.2:** Continue to develop and apply design standards that result in efficient site and building designs, pedestrian-friendly projects that stimulate the use of alternative modes of transportation, and ~~the establishment of~~ functional relationships between adjacent developments.
- ▶ **Policy PF4.4: Comply with federal, state, and local greenhouse gas reduction targets, including the renewable portfolio standards and carbon-free electricity requirements.**
- ▶ **Policy PF4.6:** Pursue reasonable and cost-effective energy efficiency, conservation, and load management programs **that provide benefits to the community.** ~~pertinent to the electric utility system.~~
- ▶ **Policy PF9.1:** Develop and implement water ~~conservation~~ **efficiency** standards.
- ▶ **Policy PF9.4:** Develop and ~~adopt a landscape ordinance that provides~~ **implement** standards for the use of drought tolerant, and water-~~conserving~~ **efficient** landscape practices for both public and private projects.

- ▶ **Policy PF9.5:** Develop and implement public education programs designed to increase public participation in energy, water ~~conservation~~**efficiency**, and recycled water use.
- ▶ **Policy PF9.8:** Preserve ~~scarce~~ **natural** resources by undertaking ~~major~~ projects in energy conservation and load management, including increasing efficiency in the City's electrical system.
- ▶ **Policy PF9.9:** Continue ~~and expand~~ energy efficiency and conservation programs to serve all utility users.
- ▶ **Policy AQ1.15: Promote and incentivize low-emissions vehicles and associated charging infrastructure. Pursue funding from state programs and other sources to facilitate local purchase and use of electric vehicles.**
- ▶ **Policy AQ1.17:** Conserve energy and reduce air **pollutant** emissions by encouraging energy efficient building designs and transportation systems **and promoting energy efficiency retrofits of existing structures.**
- ▶ **Policy AQ1.18: Promote building and transportation energy efficiency in new residential and commercial development through encouraging and incentivizing implementation measures early in the design and development process.**
- ▶ **Policy AQ1.19: Encourage energy efficiency by identifying potential cost savings, resource, and health benefits.**

The proposed General Plan Update policy changes listed above would result improved energy efficiency, and would not result in any adverse environmental impacts.

Conclusion

State plans and policies for renewable energy and energy efficiency include the California Energy Code and California Green Building Standards Code (CalGreen). Development under the proposed General Plan Update would be required to comply with these policies per the California Code of Regulations. Locally, project designs would be subject to review with consideration for the City of Roseville's Community Design Guidelines. Proposed General Plan Update Policies LU7.2, PF4.4, 4.6, 9.1, 9.4, 9.5, 9.8, and 9.8, AQ1.15, and AQ1.17-1.19 also encourage energy efficient design standards and transportation systems, promote energy efficiency retrofits of existing structures, promote energy efficiency and conservation programs associated with utilities, and require compliance with federal, state, and local energy-related regulations, all of which are consistent with the aforementioned plans and policies to promote renewable energy and energy efficiency. Implementation of the proposed General Plan Update would not conflict with or obstruct a State or local plan for renewable energy or energy efficiency. Therefore, this impact is **less than significant**.

Mitigation Measure

No mitigation is required.

This page intentionally left blank

5 OTHER CEQA CONSIDERATIONS

5.1 INTRODUCTION

Section 15130 of the CEQA Guidelines requires that an EIR identify cumulative impacts of a project when the project's incremental effect is cumulatively considerable. Section 15126 of the CEQA Guidelines, requires that all phases of a project be considered when evaluating its environmental impacts, including planning, acquisition, development and operation. This chapter discusses:

- ▶ Cumulative Impacts (Section 5.2)
- ▶ Growth-Inducing Impacts (Section 5.3);
- ▶ Significant Irreversible Environmental Changes (Section 5.4);
- ▶ Significant and Unavoidable Environmental Impacts (Section 5.5)

Alternatives are discussed in Section 6.0, "Alternatives."

5.2 CUMULATIVE IMPACTS

Section 15355 of the CEQA Guidelines defines a cumulative impact as "two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts."

Cumulative impacts can originate from one project or from separate projects. Cumulative impacts result when two or more impacts of a project combine and increase the severity or significance of either impact. Cumulative impacts can also be created when impacts from separate projects combine to make a compound impact that is more severe than the impacts would have been had the projects occurred in isolation.

Pursuant to Section 15130 of the CEQA Guidelines, "(t)he discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone." According to the CEQA Guidelines, the discussion in this section is guided by the standards of practicality and reasonableness and focuses on the cumulative impacts to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact.

The cumulative analysis examines impacts of a proposed project taken together with past, present, and probable future projects producing related impacts. The analysis in this section includes:

- ▶ a determination of whether the long-term impacts of all related past, present, and future plans and projects would cause a cumulatively significant impact; and
- ▶ a determination as to whether implementation of the proposed project would have a "cumulatively considerable" contribution to any significant cumulative impact.

5.2.1 PROJECTS CONTRIBUTING TO POTENTIAL CUMULATIVE EFFECTS

The CEQA Guidelines identify two basic methods for establishing the cumulative environment in which the proposed project is to be considered:

- ▶ **List method**—A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the lead agency (in this case, the City of Roseville).
- ▶ **Plan method**—A summary of projections contained in adopted general plans or related planning documents, or in a prior environmental document that has been adopted or certified, which described or evaluated regional or areawide conditions contributing to the cumulative impact.

The cumulative analysis for this EIR uses the plan method.

5.2.2 CUMULATIVE CONTEXT

The cumulative context for this analysis is based on regional growth projections. The analysis examines population, housing, and employment growth for the six-county Sacramento Area Council of Governments (SACOG) region, which includes Roseville. SACOG's Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) includes a regional-scale land use change scenario covering the period from 2016 to 2040 (SACOG 2020a).

The City has collected information on existing and projected future population and employment. Table 5-1 lists the estimated population, number of housing units and jobs in the six-county SACOG region. As shown, developed acreage in the region is forecast to increase by 7 percent between the baseline year for the MTP/SCS (2016) and the MTP/SCS planning horizon of 2040. This 7-percent increase in developed acreage contrasts with an increase in housing units of 28 percent and an increase in jobs of 26 percent, indicating that new development needs to be relatively more compact in order to promote economic development and quality of life, preserve open space and agricultural resources, protect air quality and public health, promote fiscal sustainability in public infrastructure and transportation facilities, allow more affordable methods of transportation, and provide housing opportunities for existing and future households (SACOG 2020b). This theme is reflected in the Placer County portion of the MTP/SCS region, as well, where SACOG has forecast an increase in developed acreage of 13 percent, with an accompanying housing unit growth of 37 percent and job growth of 38 percent – Placer County accounts for the highest percentage of housing and job growth of any county in the region in SACOG's forecast.

| Table 5-1 Existing and Future Developed Acres, Dwelling Units, and Employment—2016-2040 | | | | | | | | | |
|--|-----------------|----------------|-----------|----------------|------------------|------------|------------------|------------------|------------|
| County | Developed Acres | | | Dwelling Units | | | Jobs | | |
| | 2016 | 2040 | Growth | 2016 | 2040 | Growth | 2016 | 2040 | Growth |
| El Dorado | 208,992 | 214,851 | 3% | 63,793 | 72,291 | 13% | 48,690 | 57,965 | 19% |
| Placer | 139,588 | 157,175 | 13% | 146,701 | 200,870 | 37% | 162,577 | 224,082 | 38% |
| Sacramento | 190,564 | 207,135 | 9% | 570,360 | 724,860 | 27% | 688,895 | 840,273 | 22% |
| Sutter | 12,691 | 14,292 | 13% | 34,186 | 42,279 | 24% | 34,417 | 43,969 | 28% |
| Yolo | 39,671 | 42,635 | 7% | 77,705 | 106,367 | 37% | 104,771 | 135,376 | 29% |
| Yuba | 95,341 | 97,162 | 2% | 28,378 | 34,584 | 22% | 21,401 | 29,149 | 36% |
| Total | 686,847 | 733,250 | 7% | 921,123 | 1,181,251 | 28% | 1,060,751 | 1,331,813 | 26% |
| Source: SACOG 2020a, Tables 2.3, 2.4, and 2.5 | | | | | | | | | |

Roseville is identified primarily as an Established Community, which are typically adjacent to, or surrounding, Center and Corridor Communities with existing low- to medium-density residential neighborhoods, office and industrial parks, or commercial strip centers (SACOG 2020b). SACOG has identified Downtown Roseville in the vicinity of the Roseville Intermodal Station and along Douglas Boulevard being part of a Center and Corridor Community (SACOG 2020b). Center and Corridor Communities are typically denser and more mixed than surrounding land uses, including historic downtowns, main streets, commercial corridors, rail station areas, central business districts, town centers, or other high-density destinations. They have more compact development patterns, a greater mix of uses, and a wider variety of transportation infrastructure compared to the rest of the region. Some have frequent transit service, either bus or rail, and all have pedestrian and bicycling infrastructure that is more supportive of walking and bicycling than other Community Types. The northern and western portions of the Planning Area are identified by SACOG as Developing Communities, which represent vacant lands at the edge of existing urban or suburban development that are the next increment of urban expansion.

SACOG forecasts show substantial growth for Roseville between 2016 and 2035, with an increase of 34 percent in dwelling units and 25 percent in jobs. This is a similar rate of growth as shown for Rocklin (housing units increase by 36 percent and jobs by 34 percent), Placer County as a whole (dwelling units increase by 31 percent and jobs by 31 percent), and more than neighboring Sacramento County (24 percent increase in housing units and 18 percent increase in jobs) and Citrus Heights (3 percent increase in housing units and 13 percent increase in jobs).

5.2.3 CUMULATIVE IMPACT ANALYSIS

5.2.3.1 LAND USE AND AGRICULTURE

Physically Divide an Established Community

The regional planning efforts considered in this cumulative analysis incorporate both regional and local land use and infrastructure planning, with the goal of ensuring that established communities are not physically divided. Regional plans such as the MTP/SCS, as well as other City and County General Plans, are designed to improve mobility and connectivity amongst existing development and new development including a focus on pedestrian, bicycle, and transit mobility. New roadways are generally planned in undeveloped areas, where new infrastructure would not divide existing communities. Updates to existing roadways would add additional through lanes, turn lanes, and transit turnouts, along with traffic signals; these improvements would benefit the entire community and would not physically divide established communities. New natural gas, water, and wastewater pipelines are installed underground, and are required for equal service among all communities at both the regional and local level. Therefore, the regional planning efforts would not result in a significant cumulative impact.

The existing General Plan Land Use Map and infrastructure planning is designed to integrate into regional plans and adjacent County development plans. Compliance with goals and policies in the proposed General Plan Update would ensure that buildout of the General Plan would not disrupt or divide established communities. The proposed General Plan Update policies are designed to improve mobility and connectivity amongst existing development and new development, including a focus on pedestrian, bicycle, and transit mobility. New roadway improvements are primarily in undeveloped areas where new infrastructure would not divide existing communities. The proposed General Plan Update does not identify new infrastructure improvements that would divide an established community. The proposed General Plan Update would have **no cumulative impact** due to physically dividing an established community.

Conflict with an Applicable Land Use Plan, Policy, or Regulation

For the proposed General Plan Update, relevant plans, policies, and regulations to consider include the SACOG MTP/SCS, SACOG Region Blueprint, Placer County General Plan, and City of Roseville/Placer County MOU (see Section 4.1 of this EIR for more detail). The proposed General Plan Update was drafted to ensure consistency with other relevant plans, policies, and regulations that were developed to reduce or avoid environmental impacts. Indirect effects from those plans and policies adopted for the purpose of avoiding or mitigating environmental impacts can lead to physical environmental impacts, which are considered in the appropriate sections of this environmental assessment. The impact of the proposed General Plan Update would be less than cumulatively considerable because it would not conflict with an applicable land use plan, policy, or regulation.

Conflict with Existing Agricultural Operations

The regional planning efforts have and will continue to locate urban land uses adjacent to existing agricultural and grazing lands. This includes existing, approved, proposed, and reasonably foreseeable development projects within Placer County. Placer County has approved urban development along the northern, western, and southern boundaries of the Planning Area. The Placer Vineyard Specific Plan Area is south of the Sierra Vista Specific Plan Area, south of Baseline Road; the Curry Creek Community Plan Area is west of the City, north of Baseline Road and south of Philip Road; the Placer Ranch Specific Plan shares a three-mile boundary with the City, from the eastern Boundary of the Amoruso Ranch Specific Plan to just east of Woodcreek Oaks Boulevard; and Regional University is located on the western side of the City at the intersection of Pleasant Grove Boulevard and Santucci Boulevard. Many of these projects would locate urban development adjacent to existing agricultural and grazing lands potentially resulting in urban-agricultural interfaces that cause the conversion of agricultural lands to nonagricultural uses. Therefore, the regional planning efforts would result in a potentially significant cumulative impact.

Buildout of the General Plan would locate urban land uses adjacent to existing grazing lands along the northwestern, western, and southern boundaries outside of the Planning Area. However, in the cumulative context most of these existing grazing lands will be converted to urban uses as a result of approved urban development in the County. The northern and western portions of the Amoruso Ranch Specific Plan Area will be adjacent to grazing land in unincorporated Placer County, including the Gleason cattle ranch to the west, Toad Hill Mitigation Bank to the northwest, and Reason Farms to the west within the City limits. The southern and western portions of the Sierra Vista Specific Plan Area would be adjacent to the Placer Vineyards and Curry Creek urban development areas. Until these future planning areas are developed, development within the Amoruso Ranch, West Roseville, and Sierra Vista Specific Plan Areas would result in urban development adjacent to grazing lands. Future development on the City/County boundary would be separated by open space/buffers and/or road rights-of-way. Any residential uses would be set back from grazing lands and separation would be created by design features, such as fences or walls. Future land use plans would be subject to project-level CEQA analysis and mitigation, if necessary, to ensure urban development does not conflict with on-going grazing operations. In addition, to reduce potential conflicts between sensitive uses and agricultural uses, previously adopted mitigation measures associated with the Specific Plans require all future occupants of properties adjacent to the County to be provided with a deed disclosure or similar notice regarding the proximity and nature of neighboring potential agricultural uses. Therefore, no long-term conflicts with grazing lands would occur as urban development occurs in unincorporated Placer County. In addition, Reason Farms, located in the northwestern corner of the Planning Area, is proposed as a major stormwater retention facility and future open space recreation area. Buildout of the

General Plan would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of grazing lands. Therefore, the impact of the proposed General Plan Update due to conflicts with existing agricultural operations would be **less-than-cumulatively considerable**.

5.2.3.2 POPULATION, EMPLOYMENT, AND HOUSING

Displace a Substantial Number of Existing People or Housing

Population growth, by itself, is not an environmental impact. However, the direct and indirect effects of population growth, such as housing and infrastructure needed to accommodate population growth, can lead to physical environmental effects. The region is expected to continue to grow through 2035 and 2040, adding more than 223,000 housing units and 217,000 jobs between 2016 and 2035 (SACOG 2020b). Placer County's population is anticipated to continue to grow, along with employment through 2035, adding approximately 44,860 dwelling units and 50,890 jobs (SACOG 2020b). The rate of development changes over time and depends on changes in the local and regional economy, demographic trends, and other factors. Regional planning efforts are specifically designed to accommodate new growth and infill development. Infill housing, if it involves demolition and replacement of existing structures, can result in the temporary and short-term displacement of people or housing from individual site-specific projects. However, regional planning efforts include new housing that would accommodate any persons who are displaced. Therefore, the regional planning efforts would not have a significant cumulative impact.

As discussed throughout this EIR, the proposed General Plan Update would not increase development beyond the level that has already been planned for in the existing General Plan. Increased population and employment in the region could generate the need for additional housing and infrastructure, which could lead to conversion of undeveloped land and associated adverse physical environmental impacts of the sort that are considered in Chapter 4 of this EIR. However, if there is unanticipated displacement, the existing General Plan land use plan includes capacity for the construction of between 20,000 and 25,000 residential dwelling units, which could provide housing for displaced residents. The impact of the proposed General Plan Update would not displace substantial numbers of people or housing; therefore, this impact would be **less than cumulatively considerable**.

Induce Substantial Unplanned Population Growth

The primary purpose of the regional planning efforts considered in this cumulative analysis is to avoid inducing substantial unplanned population growth. Within that context, the proposed General Plan Update provides a framework for the orderly and efficient long-term growth within Roseville through the year 2035. In addition, the majority of the vacant land adjacent to the City's boundaries is within existing adopted Specific Plans in Placer County, and is already planned for urbanization and development. The regional planning efforts all contain goals, policies, and implementation measures to appropriately plan for and accommodate additional growth. Therefore, the proposed General Plan Update does not have the potential to indirectly induce substantial unplanned growth outside of the Planning Area and the impact of the proposed General Plan Update would be **less than cumulatively considerable**.

5.2.3.3 TRANSPORTATION

Section 4.3 of this EIR addresses cumulative transportation-related effects. Section 4.3 addresses the following three impacts:

- ▶ Vehicular Travel Demand (VMT). VMT Per Capita Exceeds the Threshold of 15 Percent Below the City Baseline of 12.8 VMT per capita.
- ▶ Increase Hazards Due to a Design Feature, Incompatible Uses, or Inadequate Emergency Access.
- ▶ Conflict with Adopted Policies, Plans, or Programs Regarding Public Transit, Bicycle, or Pedestrian Facilities, or Create or Exacerbate Disruptions to the Performance or Safety of these Systems.

For Impact 4.3-1, related to VMT, under SB 375 (Chapter 728, Statutes of 2008), the California Air Resources Board (ARB) is responsible for issuing greenhouse gas targets to metropolitan planning organizations (MPOs) that reduce vehicle emissions, consistent with state climate goals, by a future planning horizon compared to an established baseline. SB 375 requires each MPO to adopt a sustainable communities strategy (SCS) or alternative planning strategy (APS) that shows how a land use/transportation scenario will achieve the assigned greenhouse gas target. The MPO for Roseville is the Sacramento Area Council of Governments (SACOG). SACOG is responsible for preparing the Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) every four years. The current adopted 2020 MTP/SCS is for the years 2020 to 2040. For the 2020 MTP/SCS, ARB assigned SACOG a target of 19 percent per-capita GHG emissions reduction. The MTP/SCS indicates that VMT per capita in the SACOG region, which dipped significantly during the Great Recession, has increased starting in 2011. The MTP/SCS projects a 10-percent reduction in VMT per capita by 2040 for the SACOG region. This does not achieve a 15-percent reduction in VMT compared to the baseline and is considered a significant cumulative impact.

As discussed in Section 4.3, the City's existing baseline is 15.1 VMT per capita, and development under buildout of the General Plan would generate 15.4 VMT per capita with constrained network conditions, and 14.9 VMT per capita with unconstrained network conditions. Therefore, development under buildout of the General Plan could lead to an increase in VMT per capita, and in either case will not reduce VMT to levels below the threshold of 12.8 VMT per capita. Therefore, the City's VMT will contribute to the regional impacts, and impacts would be **cumulatively considerable**. There is no additional feasible mitigation beyond that included as a part of Section 4.3. This cumulative impact would be **significant and unavoidable**.

For Impact 4.3-3, related to increasing hazards due to design features, incompatible uses, or inadequate emergency access, the cumulative environment does not change the conclusions and analysis discussed in Section 4.3. The City's land uses and transportation networks have been comprehensively planned through the Specific Plan process to conform to the City's Design and Construction Standards, and establish appropriate and safe designs. Impacts related to increasing transportation network hazards would be **less than cumulatively considerable**.

For Impact 4.3-4, related to conflicts with or disruptions to public transit, bicycle, or pedestrian facilities, the cumulative environment does not change the conclusions and analysis discussed in Section 4.3. The proposed General Plan Update does not conflict with adopted policies, plans, or programs for transit, bicycle, or pedestrian facilities nor would it adversely affect performance or safety of such facilities. Impacts related to conflicts with or disruptions to public transit, bicycle, or pedestrian facilities would be **less than cumulatively considerable**.

5.2.3.4 AIR QUALITY

By its nature, air pollution is largely a cumulative impact. The implementation of plans and projects within the Sacramento Valley Air Basin would contribute to this impact on a cumulative basis. The emissions of an individual project may be individually limited but cumulatively considerable when taken in combination with past, present, and future development projects. All new development that would result in an increase in air pollutant emissions would contribute to cumulative construction air quality impacts. The nonattainment status of regional pollutants is a result of past and present development within the air basin.

Generation of Short-Term Construction-Related Emissions of Criteria Air Pollutants and Precursors for Which the Region is in Nonattainment, and Conflict with or Obstruct and Air Quality Plan

Construction-related activities associated with buildout of the General Plan would result in temporary emissions of criteria air pollutants from ground disturbing activities, exhaust emissions from use of off-road equipment, material delivery, and construction worker commutes, building construction; asphalt paving, and application of architectural coatings. Implementation of the General Plan would include new development in the Planning Area, including buildings, structures, paved areas, roadways, utilities, and other improvements. Daily activities associated with the operation of these land uses would generate criteria air pollutant and precursor emissions from mobile, energy, and area sources. While Placer County Air Pollution Control District (PCAPCD) and City policies and regulations would reduce construction-related emissions, the effectiveness of these measures would depend on the number and extent of strategies feasible to incorporate in any given project. Because the timing and level of construction activities, and specific projects to be implemented, each year is unknown, it is not possible to estimate the extent to which the reduction strategies would result in emission reductions. Therefore, implementation of the proposed General Plan Update could combine with cumulative emissions and hamper implementation of the applicable air quality plan and result in a cumulatively considerable net increase of criteria air pollutants for which the project region is designated a nonattainment area under an applicable federal or state ambient air quality standard. The impact of the proposed General Plan Update would be **cumulatively significant and unavoidable**.

Generation of Long-Term Operational Emissions of Criteria Air Pollutants and Precursors for Which the Region is in Nonattainment, or Conflict with or Obstruct and Air Quality Plan

The proposed General Plan Update will generate long-term operational emissions that exceed PCAPCD significance thresholds. PCAPCD currently enforces several rules and regulations that would reduce the long-term operational impacts described in Section 4.4-1. Rules that establish emissions standards for various commercial and industrial emission sources (e.g., internal combustion engines, gasoline dispensing facilities, water heaters and boilers) and ROG concentrations in architectural coatings would help reduce operational emissions. In addition, vehicle emission standards established by ARB, such as the Low Emissions Vehicle Program and On-Road Heavy-Duty Program would help reduce long-term mobile source emissions. Even with adherence to General Plan policies and Specific Plan mitigation, operational emissions from implementation of the General Plan could still result in a net increase of criteria air pollutant emissions that could exceed PCAPCD-recommended thresholds of significance. In addition, mitigation measures would add new General Plan implementation measures to reduce operational emissions of criteria air pollutants from development projects within the Planning Area.

The ARB Technical Advisory identifies several strategies to reduce air pollution exposure near high-volume roadways, including strategies to reduce overall emissions from traffic through speed reduction mechanisms and traffic management, strategies to increase dispersion of emissions through design mechanisms that promote air flow and the use solid and vegetation barriers, and strategies that remove pollution from the air through indoor filtration technology. The proposed General Plan Update incorporates such recommendations, but the City cannot enforce strategies to reduce pollutant concentrations or policies that ensure appropriate indoor air quality for sensitive uses located near high-volume roadways outside the Planning Area.

PCAPCD rules and regulations, City policies and implementation measures, and mitigation measures would reduce criteria air pollutant emissions. However, because the specific development projects within the Planning Area cannot be defined at the time of this analysis, precise effectiveness of these measures cannot be determined. Such emissions could exceed or contribute substantially to an existing or projected air quality violation and/or expose sensitive receptors to substantial pollutant concentrations. In addition, these emissions could conflict with or obstruct implementation of the applicable air quality plan. There are no additional feasible mitigation measures available to address this impact. For the foregoing reasons, the impact of the proposed General Plan Update on air quality due to long-term operations of development accommodated by the General Plan would be **cumulatively significant and unavoidable**.

Exposure of Sensitive Receptors to Substantial Pollutant Concentrations

Construction Impacts

Construction activities associated with development throughout the region would occur at various locations, potentially exposing sensitive receptors to substantial construction-related toxic air contaminant (TAC) concentrations. It is anticipated that over time, construction-related emissions will decrease with construction equipment fleet turnover, increased emissions technology, and more stringent emissions standards. Air districts throughout the Sacramento region have standard mitigation that would also help reduce construction-related pollutant concentrations. TACs disperse at a relatively short distance and, as a result, the proposed General Plan Update would have **no cumulative** impacts associated with construction-related TAC emissions occurring elsewhere in the region.

Long-Term Operational Impacts

Existing TAC sources in the Planning Area include mobile sources, stationary sources, and areawide sources, which all cumulatively contribute to the existing TAC concentrations and the associated health risk. Mobile sources are dispersed on roadways throughout the Planning Area, which are generated, in part, by existing and planned uses throughout the region. SR 65 and I-80 both handle heavy-duty diesel trucks with emissions that can expose residents and other adjacent sensitive receptors to TACs. Future development anticipated under SACOG's MTP/SCS would involve substantial development that would further increase traffic along main regional roadways. The proposed General Plan Update would generate additional long-term operational TACs that would contribute substantially to regional TAC emissions and potential health issues. Therefore, the proposed General Plan Update would have a **significant and unavoidable cumulative** impact due to the operation of development accommodated under the General Plan.

Result in Concentrated Carbon Monoxide Levels (“hotspots”)

As discussed in Section 4.4-4, screening levels have been established to determine if a project would have the potential to create a violation of the CO standard, based on the CO emissions generated by the project and whether the affected intersection is operating at acceptable levels of service. The analysis concludes that the proposed General Plan Update would not cause significant adverse impacts related to CO hotspots. This analysis is based on cumulative traffic volumes contributed from developments outside the Planning Area. Therefore, the impact of the proposed General Plan Update would be **less than cumulatively considerable**.

Other Emissions (Odor)

Odor impacts are generally localized and do not combine with odor impacts in nearby jurisdictions to increase the severity of impacts. Because odor emissions from various land uses differ in nature, these emissions would not cumulatively contribute to each other to expose a substantial number of people to odors. The proposed General Plan Update would have **no cumulative** impact due to the emissions of odors.

5.2.3.5 GREENHOUSE GAS EMISSIONS

Section 4.5 of this EIR considers the cumulative contribution of implementation of the General Plan to the significant cumulative impact of climate change, and concludes that impacts are **cumulatively significant and unavoidable**.

5.2.3.6 NOISE AND VIBRATION

Short-Term Noise: Construction

Construction noise is generally a localized impact that does not have regional or cumulative considerations. Because it is localized and short-term, construction noise in the Planning area would not combine with construction noise sources outside of the Planning area to create a cumulative increase in noise, and therefore this impact would be **less than cumulatively considerable**.

Long-Term Noise: Operational Traffic Noise

Development forecast under the MTP/SCS would generate and attract vehicular travel along roadways located throughout the region, including within and near the Planning Area, which would combine with traffic associated with development in the Planning Area to increase vehicular traffic noise in areas directly adjacent to roadways. As explained in Section 4.6 of this EIR for roadways within the Planning Area, the traffic volumes used to estimate future noise levels include traffic contributed by developments outside the Planning Area. Buildout of the General Plan would involve a substantial amount of additional new future development and associated travel demand within the Planning Area. The residences and other sensitive land uses located along the region’s roadways that would be affected by buildout of the General Plan are currently affected by existing traffic noise. Traffic associated with buildout of General Plan, along with regional growth will increase noise levels along regional thoroughfares. While in most cases, the increase in noise levels attributable to traffic associated with buildout of the General Plan would be imperceptible, as shown in Table 4.6-9 (please see Section 4.6 of this EIR, “Noise and Vibration”), traffic associated with buildout of the General Plan and regional growth is expected to increase noise levels along City streets and regional thoroughfares throughout the Planning Area, and the traffic noise level increase would be substantial in some areas compared to existing conditions. Traffic generated by the

proposed General Plan Update would have a **cumulatively significant and unavoidable** impact. Mitigation to offset this impact is available in future development areas because setbacks, walls, and other features can be incorporated into development designs, but in many existing areas of the City mitigation is infeasible.

Long-Term Noise: Stationary Sources

Noise sources associated with regional planning efforts in the SACOG region include landscape and building maintenance activities, mechanical equipment, solid waste collection, parking lots, commercial, office, and industrial activities, and residential, school, and recreation activities and events. Noise sources that are adjacent to one another could combine to increase cumulative noise levels. However, stationary noise sources within the Planning Area would not generally combine with noise sources outside the Planning Area to create a cumulative increase in stationary noise. Ambient noise is increasing in urbanized areas over time as a result of increased development, and because cumulative noise increases could occur where site-specific projects are in close proximity to one another, cumulative regional planning efforts would result in a **cumulatively significant and unavoidable** impact.

Ground-Borne Vibration

Construction activities associated with the regional planning efforts would result in varying degrees of temporary ground-borne vibration, depending on the specific construction equipment used and activities involved. Although detailed information is not currently available, construction would be anticipated to result in maximum ground-borne vibration levels associated with bulldozing, and with blasting and vibratory jackhammer activities in hard rock (such as the Mehrten Formation). Sensitive receptors could be located within the threshold distances established by the FTA; therefore, the regional planning efforts could result in a significant cumulative impact.

Site-specific projects envisioned under the proposed General Plan Update could result in a significant impact from temporary, short-term ground-borne vibration levels. However, the City does not anticipate multiple, adjacent, large-scale infill projects occurring simultaneously adjacent to vibration-sensitive uses that would generate any impact that is cumulatively more severe than the impacts described under Impact 4.6-3. Impacts associated with vibration are localized; therefore, the contribution of the proposed General Plan Update to this impact would be **less than cumulatively considerable**.

5.2.3.7 GEOLOGY, SOILS, AND PALEONTOLOGICAL RESOURCES

The geographic context for geology, soils, and paleontological resources encompasses the western Placer County region, which is part of two different geomorphic provinces: the Central Valley and the Sierra Nevada. Specifically, the western Placer County region is located in the eastern margin of the Sacramento Valley and the western margin of the Sierra Nevada foothills. Because the geologic formations and soil types vary widely depending on project location, and are site-specific, the regional planning efforts would have no cumulative impacts related to geology and soils.

Seismic Ground Shaking

The western Placer County region is not seismically active. Thus, there is a low probability that the projects considered in this cumulative analysis, or the proposed project, would experience damage from seismic hazards such as surface fault rupture, strong seismic ground shaking, or liquefaction. Furthermore, each project considered in this cumulative analysis, along with the project developed as a part of buildout of the General Plan, must

individually meet the requirements of the California Building Standards Code (CBC) as well as the requirements of local City and County building codes, ordinances, and policies (e.g., grading and erosion control plans), all of which are specifically designed to reduce damage from seismic hazards. Finally, the potential for damage from seismic hazards is site-specific, and thus there is no additive effect. Therefore, there would be **no cumulative** impact due to seismic ground shaking.

Soil Erosion

Please see the cumulative impact analysis below under the heading “Water Quality, Erosion, and Conflicts with Water Quality Planning,” in Subsection 5.2.3.13, “Hydrology and Water Quality.”

Unstable or Expansive Soils

Portions of the western Placer County region are in areas with a high soil shrink-swell potential, which can result in damage to building, road, and bridge foundations, as well as underground pipelines. Furthermore, areas of steep slopes are present throughout the region. Construction within, or at the top or base of, steep slopes can result in landslide hazards from unstable rock or soil. Depending on the location of the projects considered in this cumulative analysis, damage from these geologic and soils hazards could occur. Portions of the Planning Area could also be subject to these hazards. However, the projects considered in this cumulative analysis, along with projects developed under the General Plan, are required to comply with the CBC and local building codes, which regulate construction in expansive and unstable soils. Compliance with state and local building codes, in addition to compliance with proposed General Plan Update policies and programs, would reduce the potential for damage from these potential hazards. Furthermore, the potential for damage is site-specific, and thus there is no additive effect. Therefore, there would be **no cumulative** impact due to unstable or expansive soils.

Paleontological Resources

Fossil discoveries resulting from excavation and earth-moving activities associated with development are occurring with increasing frequency throughout the state. The value or importance of different fossil groups varies depending on the age and depositional environment of the rock unit that contains the fossils, their rarity, the extent to which they have already been identified and documented, and the ability to recover similar materials under more controlled conditions (such as for a research project). Unique, scientifically-important fossil discoveries are relatively rare, and the likelihood of encountering them is site-specific and is based on the specific geologic rock formations that are present at any given project site. These geologic formations vary from location to location.

The western Placer County region includes rock formations such as the Modesto, Riverbank, Turlock Lake, Mehrten, and Ione (among others). Due to the large number of vertebrate fossils and plant fossil assemblages that have recovered from these rock formations, they are considered paleontologically sensitive. Therefore, earthmoving activities associated with the projects considered in this cumulative analysis could damage or destroy unique paleontological resources that may be present in these rock formations, and potentially within other paleontologically sensitive formations as well. Therefore, regional planning efforts could result in a significant cumulative impact.

Buildout of the General Plan would also result in earthmoving activities in the paleontologically sensitive Modesto, Riverbank, Turlock Lake, Mehrten, and Ione Formations. Implementation of Policy OS4.11, requiring

education of construction workers about fossils prior to the start of earthmoving activities, and consulting with a qualified paleontologist who would recommend appropriate actions if fossils are encountered. Therefore, the proposed General Plan Update would have a **less-than-cumulatively considerable** impact on paleontological resources.

5.2.3.8 BIOLOGICAL RESOURCES

The cumulative context for the evaluation of impacts on biological resources is regional development, particularly western Placer County, which contains habitat very similar to the Planning Area. Over the past few decades, tens of thousands of acres of grasslands have been developed or designated for development in western Placer County. Development has occurred in and around the cities of Roseville, Lincoln, and Rocklin. Development has also occurred to the south in grasslands of Sacramento County. Future development would result in the further decline of native plant communities, including vernal pool habitat. The proximity of urban development also would contribute to the distribution of non-native plant and wildlife species, which would further degrade the habitat and available niches for native species in the surrounding region (City of Roseville 2016). Therefore, the impacts of the regional planning efforts on biological resources are cumulatively significant.

Special-Status Plants, Loss or Degradation of Riparian Habitat/Sensitive Natural Communities or Wetlands and Other Waters

According to the USFWS, Placer County contains almost 35 percent of all vernal pools within the southeastern Sacramento vernal pool region. The Placer County Conservation Plan (PCCP) covers most of South Placer, excluding the Cities of Roseville, Rocklin, Loomis, and Auburn. The Draft Environmental Impact Statement/Environmental Impact Report (EIS/EIR) prepared for the PCCP indicates that the south Placer region includes over 40,000 acres of vernal pool complex habitat, over 3,000 acres of other wetland complexes, over 30,000 acres of grassland, over 1,000 acres of valley oak woodland, and over 6,000 acres of riparian habitat. Although the purpose of the PCCP will be to preserve large, contiguous habitat areas, the EIS/EIR indicates cumulative regional development will nonetheless result in the loss of more than half of the vernal pool and wetland habitat area in the PCCP, most of the grassland habitat, and significant portions of other habitats.

Full buildout of the General Plan would allow conversion of 3,025 acres of annual grassland, 141 acres of oak woodland/savannah, 251 acres of riparian woodland/wetlands, 53 acres of vernal pool complexes, and 3 acres of open water, for a total of 3,473 acres of habitat loss. This habitat loss could result in loss of special-status plants either through direct removal or through habitat degradation.

Furthermore, development in these areas could result in removal of vegetation or further habitat degradation from pollutants transported by urban runoff, changes in vegetation as a result of changes in land use and management practices, as well as altered site hydrology from the construction of adjacent urban development and roadways. The loss of this habitat will contribute to cumulative habitat losses in the region. Therefore, the impact of the proposed General Plan Update on special status plant species would be **cumulatively significant and unavoidable**.

Special-Status Wildlife Species

Based on information from the CNDDDB, potential habitat for Swainson's hawk, burrowing owl, other special status birds, and special status mammals are widely distributed within Placer and adjacent counties. As stated in

the section above, regional planning is anticipated to result in the loss of significant habitat acreage in south Placer County, and could result in direct mortality of individuals. Therefore, the regional planning efforts considered in this cumulative analysis would result in cumulatively significant impacts.

Compliance with the MBTA and Section 3503 of the California Fish and Game Code would ensure that nesting raptors and other birds are not adversely affected because this requires project applicants to avoid disturbing or destroying active bird nests either directly or indirectly. Project applicants would be required to conduct preconstruction nesting bird surveys for any work conducted during the nesting season, which is generally considered to be February 1–September 15, and avoid removing or destroying active nests, or disturbing nesting birds in such a way that it results in nest abandonment. Compliance with the federal ESA and CESA would reduce potential impacts on vernal pool fairy shrimp, vernal pool tadpole shrimp, valley elderberry longhorn beetle, steelhead, tricolored blackbird, Swainson’s hawk and California black rail because it would require that these State and/or federally listed species be avoided or that any loss of these species be fully mitigated as a condition of take authorization.

No direct impact on special-status fish habitat (i.e., removal) would occur from the proposed General Plan Update. However, buildout of the General Plan would allow for some new residential, commercial, and parks/recreation development in vacant lands adjacent to existing development in the vicinity of Dry Creek, Antelope Creek, Linda Creek, Secret Ravine, and Miners Ravine. Indirect impacts could occur from increased sediment load in the creeks due to increased urban development. This impact would be reduced through required compliance with the City’s MS4 permit and the State Water Resources Control Board’s Construction General Permit, both of which require implementation of Best Management Practices to prevent pollutant transport in waterways.

Full buildout of the proposed General Plan Update would result in the permanent loss of habitat for special-status species, which are present within the Planning Area. Even with implementation of existing and proposed General Plan Update goals, policies, and mitigation measures, a substantial change in habitat conditions would result as a consequence of development, transitioning from a rural to an urban environment particularly in the northern and western portions of the Planning Area. The amount of undeveloped habitat available for wildlife use will decrease as development occurs and as the amount of habitat decreases, wildlife species that are incompatible with urban development will be displaced. Development in the Planning Area would result in the loss of substantial grasslands and cropland, both of which provide habitat for many special status species. In addition, direct mortality of individuals could also occur. The impact of the proposed General Plan Update on special status wildlife species would be **cumulatively significant and unavoidable**.

Interference with Wildlife Movement Corridors and Nursery Sites

Wildlife corridors link areas of suitable wildlife habitat that are otherwise separated by changes in vegetation or human disturbance. The fragmentation of open space areas by urbanization creates isolated islands of wildlife habitat. In the absence of habitat linkages that allow movement to adjoining open space areas, various studies have concluded that some wildlife species, especially the larger and more mobile mammals, may not persist over time because fragmentation prohibits the infusion of new individuals and genetic information. Implementation of regional planning efforts would result in an increase in conversion of rural areas to urban development, which would result in a loss of wildlife movement corridors. Therefore, the impact of the regional planning efforts is considered cumulatively significant.

Implementation of General Plan goals, policies, and mitigation measures combined with current laws and regulations, would reduce the level of impact because these provisions would require projects to identify, avoid, and preserve habitats that function as wildlife migration corridors, including riparian areas and wetlands, or provide compensation for loss of habitat in coordination with state and federal agencies. Therefore, although regional development will adversely impact wildlife movement, the proposed General Plan Update does not contribute significantly to this impact; therefore, impacts due to interference with wildlife movement corridors and nursery sites would be **less than cumulatively considerable**.

Conflict with Local Ordinances Protecting Biological Resources

Local city and county jurisdictions that are part of regional planning efforts all have tree preservation ordinances. Site-specific project applicants are required by law to follow these requirements, which include preparing a tree preservation plan that must be approved by the local jurisdiction, planting replacement trees for any trees over a certain size that are lost, and obtaining a permit prior to pruning or cutting down an existing protected tree. The City of Roseville Tree Preservation Ordinance (Municipal Code Chapter 19.66) regulates the removal and preservation of trees within the City. Protected trees include native oak trees equal to or greater than six inches diameter at breast height. The City's Tree Preservation Ordinance require a permit for the removal of any protected tree. The City's Tree Preservation Ordinance also requires that applications for development projects with activity occurring within the protected zone of a protected tree obtain a permit prior to construction, and must to identify measures that will aide in the preservation of native oak trees. The impact of the proposed General Plan Update would not conflict with local ordinances protecting biological resources, and this impact would be **less-than-cumulatively considerable**.

Conflict with Provisions of an Adopted Habitat Conservation Plan, Natural Conservation Community Plan, or Other Approved Conservation Plan

There is no adopted HCP, NCCP, or other approved local, regional, or State HCP that applies to the Planning Area. If/when the County's PCCP is adopted, the City may choose to participate and may be included in the PCCP as a special entity. Implementation of the proposed General Plan Update would help protect biological resources throughout the Planning Area, including resources associated with the proposed Western Placer County HCP/NCCP, if and when it is adopted. Therefore, the impact of the proposed General Plan Update due to conflicts with an adopted HCP, NCCP, or other approved habitat plan would be **less-than-cumulatively considerable**.

5.2.3.9 CULTURAL AND TRIBAL CULTURAL RESOURCES

Cultural resources in the region generally consist of prehistoric sites, historic sites, historic structures, and isolated artifacts. These may be historical, archeological, and/or tribal cultural resources, and may involve human remains (collectively "resources"). During the 19th and 20th centuries, localized urbanization and intensive agricultural use in the region caused the destruction or disturbance of numerous prehistoric sites, while many structures now considered to be historic were erected. From the latter half of the 20th century to the present, prehistoric and historic structures have been disturbed and destroyed. During this period, the creation and enforcement of various regulations protecting cultural resources have substantially reduced the rate and intensity of these impacts. However, even with these regulations, cultural resources are still degraded or destroyed as cumulative development in the region proceeds. Development of projects and plans in the region has the potential to result in the discovery of undocumented subsurface cultural resources or unmarked historic-era or prehistoric Native American burials. Cumulative gains in population, households, and jobs would require a commensurate increase

in infrastructure, capital facilities, services, housing, and commercial uses in the region. Each of these increases carries with it a corresponding increase in the magnitude of ground disturbance and the construction of new buildings and structures and other site development activities. The impact on archaeological deposits, human remains, tribal cultural resources, and potential historic resources would be substantial given the past extent of urban development, and anticipated gains in population, jobs, and housing. Therefore, the regional planning efforts would result in a potentially significant cumulative impact on cultural and tribal cultural resources.

Due to the nature of cultural resources, adverse impacts are site-specific and need to be determined on a project-by-project basis. As discussed in Section 4.9, future development and infrastructure improvements associated with buildout of the General Plan could result in significant impacts to resources through either direct physical impacts or by indirect impacts. Direct physical impacts would result from activity such as excavation, demolition, grading, or ground compaction required for construction of new land uses. Indirect impacts would occur if these activities change the setting in a way that diminishes the integrity of a resource.

Ground-disturbing construction would result from buildout of property in areas where the City anticipates infill development will happen during the planning horizon, as well as in the Specific Plan Areas. Specific Plan Areas are primarily used for agricultural purposes, consisting of relatively large, rural, open, and minimally developed parcels and agricultural fields. When projects occur in these undeveloped areas, impacts are more likely to occur as a result of unanticipated discovery of buried resources during construction activities. When projects occur in existing developed areas, and depending on the context, development could add incompatible architectural elements; diminish the historic integrity of a cultural resources setting, feeling, or association; or destroy the historic character of a property. The City has numerous buildings and structures that are either individually significant or contributors to a historic district as well as buildings, structures, and infrastructure that could represent historic resources. These properties are representative of numerous development patterns, property types (residential, civic/cultural, commercial), and architectural styles important to the City's past, and are listed in or eligible for listing in a federal, State, or local register. Although resources have a different character and context in a greenfield setting when compared to a developed setting, if preservation-oriented policies are not in place, new development in greenfield areas could also diminish the historic integrity of a cultural resources setting, feeling, or association, or destroy the historic character of a property in a greenfield setting.

The goals, policies, and mitigation measures in the proposed General Plan Update will minimize the severity of significant impacts associated with the above described changes; however, impacts to cultural and tribal cultural resources cannot altogether be avoided. Therefore, the proposed General Plan Update would combine with impacts occurring in the broader region and result in a **cumulatively significant and unavoidable** impact.

5.2.3.10 HAZARDS, HAZARDOUS MATERIALS, AND WILDFIRE

Routine Transport, Use, and Disposal/Construction in Hazardous Materials Sites/Hazardous Materials within One-Quarter Mile of a School/Interference with Emergency Access

All of the regional planning efforts considered in this cumulative analysis could expose people or the environment to hazardous materials present in the underlying soils and groundwater; or through the routine use, transport, or disposal of hazardous materials typically associated with construction, and with operation of commercial and industrial facilities that handle hazardous materials. For cumulative projects involving improvements to or development of a site where soil or groundwater contamination has already occurred, the potential exists for a release of hazardous materials during construction and/or remediation of those sites. Some of the cumulative

projects could occur in areas with known existing contamination, and other projects may encounter previously unknown contamination issues. Exposure to hazardous materials also includes toxic air contaminants (which consist primarily of diesel particulate matter and fugitive dust), which are of particular concern where the cumulative projects would take place within 0.25 mile of a K–12 school. Finally, site-specific projects could result in interference with emergency access or evacuation routes. Therefore, the cumulative planning efforts could result in potentially significant cumulative impact.

Buildout of the General Plan could also expose people or the environment to all of the same hazards discussed above. Compliance with local, state, and federal regulations for transport, use, and disposal of hazardous materials and adherence to the mandatory stormwater pollution prevention plan (SWPPP) would address impacts associated with construction-related handling of hazardous materials. Site-specific investigations for projects developed under the proposed General Plan Update will be required to address hazardous materials conditions. These activities would be conducted during subsequent environmental reviews, required for future development activities. For example, Phase I environmental site assessments would be required for projects where the presence of hazardous materials is known or suspected, and (if necessary), subsequent Phase II soil/groundwater testing and remediation could be required before development on a site-specific basis. Remediation of contaminated soil and groundwater is regulated by the local Certified Unified Program Agency (CUPA), the State Water Resources Control Board (SWRCB) and the Regional Water Resources Control Boards, and the California Department of Toxic Substances Control (DTSC). Cleanup at federally-designated Superfund sites is regulated by the U.S. Environmental Protection Agency (EPA). The City would continue to require Hazardous Materials Management Plans and, where necessary, Risk Management Prevention Plans pursuant to state law. The use of toxic or hazardous materials requiring the filing of a business plan for emergency response pursuant to Section 25503.5 of the California Health and Safety Code, or materials identified in Section 5194, Title 8 of the California Code of Regulations, which would be analyzed by the City's Planning Division when considering the request for permit applicants for any land use. The California Department of Education (CDE) enforces school siting requirements, and new school facilities would not be constructed within 0.25 mile of facilities emitting or handling materials based on CDE requirements. Furthermore, permitting requirements for individual hazardous material handlers or emitters, including enforcement of Public Resources Code Section 21151.4 requires notification to schools where potential hazardous materials handling and emissions could occur in proximity, allowing to consultation to reduce potential hazards. The City of Roseville Design and Construction Standards contain a variety of requirements that must be implemented by all projects, which are intended to provide safe access to property and on streets throughout the City for emergency vehicles and evacuation routes including driveways, turn lanes, streets, and traffic lights. Compliance with the above-listed regulatory standards, along with policies contained in the proposed General Plan Update that would further regulate the emissions, cleanup, and development of land uses in relationship to hazardous material, would result in a **less than cumulatively significant** impact.

Wildland Fire Hazard

Wildland fire hazards are present throughout the state where large areas of heavy vegetation are present. The largest concentration of these areas is in the National Forests, which are administered by the U.S. Forest Service. Smaller areas of heavy vegetation are also present throughout California on state- and privately-owned land. Areas where large trees are mixed with heavy understory shrubs are particularly subject to wildland fire hazards. All of the regional planning efforts considered in this cumulative analysis include policies and program to reduce wildland fire hazards, where they occur. Active fuels reduction programs throughout California, including the

regional planning area, are ongoing at both the federal, state, and local level. Therefore, the regional planning efforts would not result in a significant cumulative impact.

Areas at risk for extreme wildfires are designated by the California Department of Forestry and Fire Protection (CAL FIRE) as those lands where dense vegetation with severe burning potential prevails, as well as areas with limited access due to topography or lack of roads. The central and eastern portions of the Planning Area are heavily urbanized. The western and northwestern portions of the Planning Area consist of agricultural land, including row crops and orchards. The Planning Area is not located in or near any designated State Responsibility Areas or land classified as Very High Fire Hazard Severity Zones. The Planning Area is designated by CAL FIRE as a Local Responsibility Area, and there are no Very High Fire Hazard Severity Zones in or adjacent to the Planning Area. Therefore, the wildfire hazard risk for the City is considered low, and the proposed General Plan Update would result in a **less-than-cumulatively considerable** impact.

5.2.3.11 PUBLIC SERVICES AND RECREATION

Buildout of the proposed General Plan Update would increase demands on public services and recreation facilities. In terms of cumulative impacts, the appropriate service providers are responsible for ensuring adequate provision of public services and recreation facilities within their service boundaries. Fire protection services would be provided by the Roseville Fire Department and police protection services would be provided by the Roseville Police Department. School services in Roseville are provided by the Roseville City School District, Eureka Union School District, Dry Creek Joint Elementary School District, Center Joint Unified School District, and Roseville Joint Union High School District. Parks and recreation facilities are provided by the City of Roseville. Because the provision of public services and recreational facilities is specific to each local jurisdiction and each local service provider, the regional planning efforts would not result in a cumulative impact.

Fire Protection Services

The Roseville Fire Department provides fire protection services for the City. Buildout of the General Plan would result in additional population and structures within the Planning Area that would create additional demands for fire protection services over current demand levels. Fire stations, equipment, and personnel must be planned in coordination with development to ensure adequate fire suppression in the City's growing areas. New fire stations have been planned for the North Industrial Planning Area (Station No. 8), the Sierra Vista Specific Plan Area (Station No. 10), and the Amoruso Ranch Specific Plan Area (Station No. 11) to meet new demands for fire suppression and maintain adequate response times.

New fire protection facilities would be constructed within the footprint of development envisioned as part of buildout of the General Plan. The locations of Station No. 8, Station No. 10, and Station No. 11 were identified in the Campus Oaks Master Plan Addendum and Initial Study, the Sierra Vista Specific Plan EIR, and the Amoruso Ranch Specific Plan EIR, respectively, and the environmental impacts of the construction and operation of these stations were analyzed at a programmatic level in those CEQA documents (City of Roseville 2010, City of Roseville 2015, City of Roseville 2016). Besides the development assumed as a part of the General Plan Update, there is no additional development that would create the need for new or expanded facilities, the construction of which could have a significant impact. Therefore, the proposed General Plan Update would result in a **less-than-cumulatively considerable** impact.

Police Protection Services

Law enforcement services in Roseville are provided by the Roseville Police Department. Future land uses consistent with the proposed General Plan Update would accommodate the development of new homes, businesses, and facilities within the Planning Area, which would result in additional population and visitors coming to the City. The increase in the number of people in the City and amount of development would require additional Roseville Police Department staff in order for the department to maintain its present level of service. The addition of new staff would not result in the need for new or physically altered police protection facilities, the construction of which could potentially have adverse impacts on the physical environment, to maintain acceptable response times or other performance objectives for police protection. Besides the development assumed as a part of the General Plan Update, there is no additional development that would create the need for new or expanded facilities, the construction of which could have a significant impact. Therefore, the proposed General Plan Update would result in a **less-than-cumulatively considerable** impact.

Public Schools

Buildout of the General Plan could accommodate the construction of between 20,000 to 25,000 housing units that generate approximately 10,000 additional K–12 students. School services in Roseville are provided by the Roseville City School District, Eureka Union School District, Dry Creek Joint Elementary School District, Center Joint Unified School District, and Roseville Joint Union High School District.

Based upon the growth projections, it is anticipated that the Roseville City School District will require an additional six elementary schools and one middle school in the West Roseville, Creekview, Amoruso Ranch Specific Plan areas, and the Center Joint Unified School District will require an additional two elementary schools and one middle school in the Sierra Vista Specific Plan area to meet growth demands associated with the current General Plan land use allocation. Locations for these facilities have been identified in the West Roseville, Creekview, Amoruso Ranch, and Sierra Vista Specific Plans.

New school facilities would be constructed within the footprint of development envisioned as part of buildout of the General Plan. The locations of new schools have been identified in the West Roseville, Creekview, Amoruso Ranch, and Sierra Vista Specific Plan Areas and the environmental impacts of the construction and operation of these school facilities were analyzed at a programmatic level in CEQA documents prepared for those specific plans. Besides the development assumed as a part of the General Plan Update, there is no additional development that would create the need for new or expanded facilities, the construction of which could have a significant impact.

School impact fees would be collected in accordance with SB 50 to ensure the development of adequate school facilities, and the California Legislature has declared that payment of the State-mandated school impact fee is deemed to be full and adequate mitigation under CEQA (California Government Code Section 65996). Therefore, the proposed General Plan Update would result in a **less-than-cumulatively considerable** impact.

It is possible that future residential development within the City would generate demand for school facilities that cannot be met within the City or cannot be met for some period of time while additional schools are under construction. Transportation of future students to schools with additional capacity could result in indirect cumulative impacts related to transportation, such as air pollutant emissions, greenhouse gas emissions, and transportation noise. The timing and specifics necessary to fully evaluate construction of school projects are

unknown and would be determined by the respective school districts. It is speculative to gauge the extent to which this would create any cumulative impact that is distinct from the analysis of proposed General Plan Update impacts provided in this EIR.

Parks and Recreation

Buildout of the General Plan could accommodate the construction of between 23,200 housing units that generate approximately 198,000 persons. This new population would increase demand for new and existing parks, as well as recreation facilities. As the Planning Area's population increases and demographics shift, continual assessment will be required to determine whether the quantity of parklands and quality of recreational programs are meeting the changing needs of City residents. The proposed General Plan Update identifies the City's policy approach to ensuring adequate provision of parkland as the City grows. This will ensure against overuse of existing facilities that may cause their deterioration. The proposed General Plan Update establishes the overall parkland standard as nine acres of park land per 1,000 residents. General Plan policies and measures provide flexibility in applying parks standards, in terms of size, facilities, and service areas, so that existing and future needs can be met. As a method to achieve the City's park land standards, alternative land dedications may be considered for lands that provide active and passive recreational value and/or by the payment of in-lieu fees. In-lieu fees provided by new development could also be used by the City to improve, expand, and maintain existing city parks to ensure that accelerated deterioration does not occur. In addition, implementation measures would ensure new development provides park lands dedication or pays in-lieu fees and requires Specific Plans to include parks facilities consistent with proposed General Plan Update policies and consider future recreation needs based on projected population (see Appendix A of the existing General Plan).

There would be no additional significant impact related to construction of parks beyond that which is comprehensively analyzed throughout this EIR. Therefore, the proposed General Plan Update would result in a **less-than-cumulatively considerable** impact.

5.2.3.12 UTILITIES AND SERVICE SYSTEMS

Buildout of the proposed General Plan Update would increase demands on utilities and service systems. In terms of cumulative impacts, appropriate service providers are responsible for ensuring adequate provision of utilities and service system within their service boundaries. Water and wastewater services would be provided by the City of Roseville. Electrical service would be provided by the City of Roseville Electric Department and natural gas service would be provided by Pacific Gas and Electric Company (PG&E).

New or Expanded Utilities and Service Systems Facilities

Buildout of the General Plan could require relocation of or construction of new or expanded utilities and service systems. Buildout of the General Plan could result in the expansion of the existing Dry Creek WWTP. Water supply infrastructure, such as water transmission mains, pumping stations, and storage tanks; wastewater conveyance infrastructure, such as gravity sewer pipelines, force mains, and pumping stations; and stormwater drainage facilities will be required in currently undeveloped areas where no such infrastructure currently exists. The impacts of construction of these facilities have been analyzed throughout this EIR. The proposed General Plan Update includes mitigating policies and measures, where necessary, that would reduce or avoid impacts. There is no additional significant impact related to construction of new or expanded utilities and service systems within the footprint of the Planning Area beyond the construction impacts that are analyzed throughout this EIR;

therefore, any remaining impacts of the proposed General Plan Update with regard to new or expanded utilities and service systems would be **less than cumulatively considerable**.

Long-term water treatment plant capacity would be provided by the construction of the Ophir water treatment plant by the Placer County Water Agency, which would be built on a site just south of the existing City of Auburn wastewater treatment plant. The construction of the Ophir water treatment plant (previously referred to as the Foothill Phase II WTP and Pipeline Project) was addressed in the Foothill Phase II Water Treatment Plant and Pipeline Final EIR (Placer County Water Agency 2005). The findings of the Ophir water treatment plant EIR were that construction-related activities (including site grading) would generate short-term emissions of criteria pollutants, including suspended and inhalable particulate matter and equipment exhaust emissions, which would adversely affect air quality. These impacts to air quality were determined to be cumulatively significant and unavoidable. Because buildout of the General Plan would contribute to the need to develop the Ophir water treatment plant, new development under the General Plan would contribute to the cumulatively significant and unavoidable construction-related air quality impacts. There are no additional feasible mitigation measures that could be imposed by the City to further mitigate these short-term impacts from construction of the Ophir WTP. Therefore, indirect impacts from the proposed General Plan Update with regard to new water treatment facilities would be **cumulatively significant and unavoidable**.

Water Supply

Buildout of the General Plan would increase potable and non-potable water demands. The City of Roseville provides water service to the majority of residents within the City limits, and the City's Urban Water Management Plan (UWMP) addresses water supply and demand issues, water supply reliability, water conservation, water shortage contingencies, and recycled water use within the City's service area. It accounts for existing and future land uses in Roseville and its Planning Area (West Yost 2016).

The City's water supply consists of surface water, groundwater in dry years or in times of emergencies, and recycled water for irrigation. The City operates an Aquifer Storage and Recovery (ASR) program allows the City to maximize sustained use of the groundwater basin in conjunction with surface water supplies, while providing a strong backup water supply during critically dry years consistent with the City's commitments contained in the Water Forum Agreement. (Additional analysis related to groundwater is provided below in Subsection 5.2.3.13.) The City currently has contracts for up to 66,000 acre-feet of American River water supplies diverted from the Folsom Reservoir. In addition, the City intends to purchase 1,500 afy of surface water supplies beginning in 2030 from the future PCWA Ophir water treatment plant project. Existing and projected water demands in the City service area will be met by contract entitlements for each agency are summarized in Table 4.12-1 in Section 4.12. The City, as a signatory to the Water Forum Agreement,¹ has agreed to ensure that water conservation and demand management—necessary steps to achieve Water Forum Agreement objectives—are integrated into future growth and water planning activities in its service area.

Water supply is projected to be sufficient in normal water years over the UWMP's 20-year planning period (i.e., 2015 to 2035) (see Table 4.12-6 in Section 4.12). However, in single-dry years, and in certain multiple dry years, a water supply deficit may occur. The City has identified water conservation as one potential strategy to alleviate

¹ The coequal objectives of the Water Forum Agreement are (1) to provide a reliable and safe water supply for the region's economic health and planned development through the year 2030; and (2) to preserve the fishery, wildlife, recreational, and aesthetic values of the lower American River.

the potential water deficits that could occur in single-dry years and multiple dry years. As shown on Table 4.12-4, assuming a 20 percent of normal year demand consistent with the Roseville Water Conservation and Drought Mitigation Ordinance would alleviate potential water supply deficits in single-dry and some multiple-dry years. In the future, groundwater pumping could be available to alleviate water supply deficits (West Yost 2016). State law requires demonstration of adequate long-term water supply for large development as defined by Senate Bill 610 (i.e., more than 500 dwelling units or nonresidential equivalent) through preparation of a Water Supply Assessment that discusses the system's total projected water supplies available during normal, single-dry, and multiple-dry water years during a 20-year projection and discloses that water supplies would meet the project's water demand in addition to the system's existing and planned future uses. Therefore, the City would have sufficient water supplies available to serve buildout of the General Plan from existing or permitted entitlements in normal, single-dry, and multiple-dry water years. The impact of the proposed General Plan Update due to adequacy of water supplies would be **less-than-cumulatively considerable**.

Wastewater Treatment

Wastewater from the City is currently treated at the Dry Creek Wastewater Treatment Plant (WWTP) and the Pleasant Grove WWTP. Both regional facilities are owned and operated by the City of Roseville on behalf of the Regional Partners consisting of the City, the South Placer Municipal Utility District (SPMUD), and portions of unincorporated Placer County (primarily Morgan Creek, Granite Bay and Sunset Industrial Area).

The South Placer Wastewater Authority (SPWA) Wastewater Systems Evaluation provided baseline and projected characterizations of its regional wastewater and recycled water systems. The Wastewater Systems Evaluation determined that buildout of the 2005 service area boundary, which includes areas within Roseville, Rocklin, Loomis, and portions of Granite Bay and unincorporated Placer County, would result in 16.34 million gallons per day (mgd) average dry weather flow at the Dry Creek WWTP and 16.52 average dry weather flow at the Pleasant Grove WWTP. Buildout of the ultimate SPWA service area, which includes the 2005 service area boundary and Urban Growth Areas, would result in 32,86 mgd average dry weather flow.

Dry Creek Wastewater Treatment Plant

The current average dry weather flow is approximately 9.3 mgd, of which approximately 6.0 mgd is generated by the City. As stated above, buildout of the Dry Creek WWTP service area boundary, which includes areas within Roseville, Rocklin, Loomis, and portions of Granite Bay and unincorporated Placer County, would result in 16.34 mgd average dry weather flow at the Dry Creek WWTP. Thus, in the future, the Dry Creek WWTP could require upgrades to provide adequate capacity to serve demand from buildout of the proposed General Plan Update in addition to their existing commitments. The cumulative physical environmental effects from the potential expansion of the Dry Creek WWTP are discussed above under "New or Expanded Utilities."

Individual development projects in unincorporated Placer County would be required to assess impacts related to wastewater treatment capacity during the environmental review process to ensure that the Dry Creek WWTP has sufficient capacity to meet demand. Specific plans prepared for areas within the City limits analyzed wastewater treatment demands and capacity at a programmatic level in their respective CEQA documents. The proposed General Plan Update requires any development proposal that has an impact on the wastewater system to submit project plans to the Environmental Utilities Department for review and comment, and projects are required to identify wastewater treatment plant capacity and potential alternatives to treatment and discharge. Specific Plans are required to specify total projected wastewater generation, impacts, and treated wastewater use potential based

on land use designations within their plan area, and through development agreements, identify the provision of expanded wastewater treatment capacity. By adhering to the goals, policies, and implementation measures in the proposed General Plan Update, the City would ensure adequate wastewater treatment capacity is available to meet future demand. Therefore, the City would ensure sufficient long-term wastewater treatment is available to treat wastewater flows generated by buildout of the General Plan. Therefore, impacts related to wastewater treatment capacity at the Dry Creek WWTP from the proposed General Plan Update would be **less-than-cumulatively considerable**.

Pleasant Grove Wastewater Treatment Plant

The Pleasant Grove WWTP currently serves the north and northwest areas of the City of Roseville, the Stanford Ranch area of the SPMUD service area, the Sunset Industrial Area of Placer County, and will serve the City of Roseville's approved Creekview Specific Plan and Amoruso Ranch Specific Plan Areas. Recent and anticipated acceleration of growth within the SPWA service area resulted in the need to expand the Pleasant Grove WWTP's treatment capacity. Based on growth projections for the SPWA service area, average dry weather flows are projected to exceed 9 mgd around 2025 and be equal to or exceed the Pleasant Grove WWTP's treatment capacity of 9.5 mgd by 2027 (City of Roseville 2017). As a result, the City proposed an increase treatment capacity of the existing Pleasant Grove WWTP so that it can meet its original 12 mgd design capacity (City of Roseville 2017). Increasing treatment capacity of the existing Pleasant Grove WWTP will accommodate the anticipated wastewater treatment demands through approximately 2040 (City of Roseville 2017). The expansion project is currently under construction and is anticipated to be complete in 2020 (City of Roseville 2018). Therefore, **no cumulative** impact related to wastewater treatment capacity at the Pleasant Grove WWTP would occur under the proposed General Plan Update.

Solid Waste

The primary landfill that serves Roseville is the Western Regional Sanitary Landfill, which also accepts wastes from Placer County as well as the cities of Lincoln and Rocklin. Development of new land uses within these areas would increase the amount of solid waste disposal at the Western Regional Sanitary Landfill.

Buildout of the General Plan would generate approximately 305 to 428 tons per day (tpd) of solid waste that would be disposed of at the Western Regional Sanitary Landfill. This landfill has a maximum permitted throughput of 1,900 tpd, has a total maximum permitted capacity of approximately 36.4 million cubic yards, and has a remaining capacity of approximately 29.1 million cubic yards. The Western Regional Sanitary Landfill is anticipated to meet solid waste disposal needs within its service area through January 1, 2058. Therefore, the Western Regional Sanitary Landfill has sufficient permitted capacity to accommodate solid-waste disposal needs for buildout of the future General Plan Update and existing and future development in its disposal area. Therefore, the proposed General Plan Update would have **no significant cumulative** impact with regard to solid waste disposal capacity.

5.2.3.13 HYDROLOGY AND WATER QUALITY

The cumulative context for hydrology and water quality includes waterbodies within the Planning Area that could be affected by projects associated with buildout of the General Plan, and includes downstream waterbodies that receive flows from the Planning Area, such as the Pleasant Grove Creek Canal, Natomas East Main Drainage Canal/Steelhead Creek, and the Sacramento River.

Water Quality, Erosion, and Conflicts with Water Quality Planning

Earthmoving activities associated with regional planning efforts considered in this cumulative analysis have the potential to increase erosion and for accidental spills of hazardous materials during construction. During winter storm events, disturbed soils and hazardous materials could be transported to downstream receiving water bodies, resulting in degradation of water quality from sedimentation and materials such as fuels, lubricants, and paints. This could degrade water quality due to an increase in impervious surfaces (which would increase the amount of stormwater runoff) and handling of hazardous materials (which could contaminate the stormwater runoff). Increases in stormwater runoff could cause downstream erosion, sedimentation, and increase turbidity in receiving waters, depending on waterway conditions. Contaminated stormwater runoff would result in increased pollutant loading due to contact with petroleum and other contaminants deposited on impervious surfaces. In addition, cumulative industrial projects would increase the potential for leakage of diesel, oil, and grease, and for accidental spills of herbicides, that could further degrade surface water quality. Substantial degradation of water quality would result in conflicts with the water quality control plan. Therefore, the regional planning efforts could result in significant cumulative water quality impacts during construction and operation.

Construction activities associated with future projects associated with buildout of the General Plan would involve grading and movement of earth. Construction-related alteration of site-specific drainages could result in soil erosion and stormwater discharges of suspended solids, increased turbidity, and potential mobilization of other pollutants from project-related construction sites. This contaminated runoff could enter local drainage channels and ultimately drain into the Sacramento River. Accidental spills of construction-related contaminants, such as fuels, oils, paints, solvents, cleaners, and concrete, could occur during site-specific construction activities, resulting in surface soil contamination. However, project applicants that disturb more than 1 acre of land must prepare Stormwater Pollution Prevention Plans (SWPPPs) and implement Best Management Practices (BMPs) that are consistent with Central Valley Regional Water Quality Control Board (RWQCB) requirements as part of the National Pollutant Discharge Elimination System (NPDES) Construction General Permit. Implementation of these regulatory requirements would substantially reduce water quality and erosion impacts from construction activities, in compliance with the Water Quality Control Plan (Basin Plan) for the Sacramento and San Joaquin River Basins. Therefore, construction-related impacts on water quality and potential conflicts with a water quality control plan from the proposed General Plan Update would be **less-than-cumulatively considerable**.

Development accommodated under buildout of the General Plan would create new impervious surfaces and landscape features that would increase the volume of runoff that could cause or contribute to long-term discharges of urban contaminants (e.g., sediment, oil and grease, fuel, trash, pesticides, fertilizer). This increase in impervious surface would increase the peak discharge rate of stormwater runoff generated from new development. However, compliance with the West Placer Stormwater Quality Design Manual, Stormwater Quality BMP Guidance Manual for Construction, and the City of Roseville Stormwater Management Program to reduce post-construction runoff through the incorporation of BMPs, Low Impact Development (LID) design features, and hydromodification management techniques. These measures to protect water quality are intended to support the City's compliance with the Water Quality Control Plan (Basin Plan) for the Sacramento and San Joaquin River Basins. Furthermore, industrial or commercial facilities require appropriate NPDES permits/waste discharge requirements, and implementation of BMPs consistent with the California Stormwater Quality Association's Industrial/Commercial BMP Handbook or its equivalent, including annual reporting of any structural control measures and treatment systems. Compliance with these regulations and permit terms, along with the policies in the proposed General Plan Update, would substantially reduce water quality and erosion

impacts from an increase in stormwater runoff. Therefore, operational impacts on water quality and potential conflicts with a water quality control plan from the proposed General Plan Update would be **less-than-cumulatively considerable**.

Stormwater Drainage Systems, Pollutant Transport, and Flooding

The regional planning efforts considered in this cumulative analysis include new and infill urban development that could substantially alter drainage courses and runoff patterns from existing conditions. Compacting soils and constructing impervious surfaces can reduce the net amount of infiltration of rain water into the soil, thereby increasing runoff rates and volumes, which can result in exceedance of stormwater drainage facilities and localized or downstream flooding. Increased impervious surfaces can also result in additional transport of urban pollutants in stormwater runoff. Therefore, the regional planning efforts could result in significant cumulative impacts from alteration of drainages leading to exceedance of the capacity stormwater drainage systems, increased pollutant transport, and flooding.

Expansion of impervious surfaces in the Planning Area would increase the peak discharge rate of stormwater runoff and could result in erosion, sedimentation, and on-site or downstream flooding. Increased volumes of stormwater runoff may exceed drainage system capacities, exacerbate erosion in overland flow and drainage swales and creeks, and result in downstream sedimentation. The City has been developed with a pattern of open space preservation, particularly around the creeks that flow westward through the Planning Area from the Sierra Nevada foothills. All of the creeks are part of the City's Regulatory Floodplain, which includes both 100- and 200-year flood hazard zones. All projects in the Planning Area are required to comply with the West Placer Stormwater Quality Design Manual to reduce the rate of post-construction runoff and control urban runoff pollution in compliance with of the City's Phase II MS4 permit through the incorporation of BMPs, LID, and hydromodification management techniques. Compliance with the City's Urban Stormwater Quality Management and Discharge Control Ordinance requires project applicants to prepare and implement a stormwater management plan and a stormwater BMP maintenance plan. New development must also comply with the City's Design and Construction Standards; Section 10, Drainage, contains the drainage analysis requirements and design criteria for development in the City. The adopted City's Open Space Preserve Overarching Management Plan includes specific requirements and adopted mitigation measures related to open space management, maintenance, and monitoring that are related to drainage, flooding, and water quality. The proposed General Plan Update contains policies that regulate development in the City's Regulatory Floodplain—new development is not allowed within the regulatory floodway. The City's Flood Damage Prevention Ordinance sets standards to minimize public and private losses due to flood conditions. The City of Roseville Municipal Code (Section 19.18.040) prohibits the stockpiling or storage of any buoyant, flammable, toxic, or explosive materials in a designated flood zone; and any materials that are stored must be removed from the area if a flood warning is issued. Compliance with policies in the proposed General Plan Update that are designed to regulate stormwater flows is also required for all projects. In Addition, the City is developing substantial new downstream stormwater detention capacity in new detention basins at the Al Johnson Wildlife Area. When completed, these new facilities will be sufficient to detain stormwater flows generated by full buildout of the proposed General Plan Update such that downstream flooding in Sutter County does not occur. Therefore, the impacts of the proposed General Plan Update related to alteration of drainages such that stormwater drainage system capacity would be exceeded, increased pollutant transport, and downstream flooding, would be **less-than-cumulatively considerable**.

Groundwater Recharge, Groundwater Supplies, and Conflicts with Groundwater Sustainability Plans

Development of the regional planning efforts considered in this cumulative analysis, depending on their size and location, could result in substantial increases in impervious surfaces over large tracts of land and thereby reducing the amount of natural groundwater recharge. These planning efforts could also result in the need for additional potable water supplies through drilling of new groundwater wells. Substantial loss of groundwater recharge and/or substantial depletion of groundwater supplies could conflict with a groundwater sustainability plan (GSP). Therefore, the regional planning efforts considered in this analysis could have a significant cumulative impact.

Full buildout of the General Plan would result in a net increase in impervious area and an associated potential reduction in groundwater recharge potential. However, soils in the central and western portions of the Planning Area where most of the new and infill development are anticipated have a high clay content and a cemented hardpan, which substantially impedes groundwater recharge. Most of the natural recharge occurs in the eastern portion of the Planning Area, and in stream channels throughout the Planning Area. The proposed General Plan Update includes policies that continue to require stream channels to be preserved as open space and for flood control purposes. Placer County conducted a study to determine potential locations for future groundwater recharge, and 12 potential sites have been identified in the Planning Area. The City has plans to construct additional groundwater wells, which would be used for backup water supply and to improve water supply reliability during drought and emergency conditions. The City's ongoing Aquifer Storage and Recovery (ASR) program is designed to inject and store surplus drinking water in the underlying aquifer during periods of normal and above normal precipitation. This stored drinking water would be extracted and used to meet peak demands during dry years. The City's plan for additional groundwater wells and the ongoing ASR program were developed in conjunction with the Western Placer County Groundwater Management Plan, which provides planned and coordinated monitoring, operation, and administration of the local groundwater basins with the goal of long-term groundwater resource sustainability. Development of the GSP for the North American basin (as required by the Sustainable Groundwater Management Act) is underway as a coordinated effort among the West Placer, Sacramento, South Sutter, Sutter County, and Recreation District 1001 groundwater sustainability agencies. The GSP will include plans to provide for safe yield and groundwater sustainability to meet the needs of all of the coordinating agencies (including the Planning Area). Therefore, the impacts of the proposed General Plan Update related to groundwater recharge, depletion of groundwater supplies, and conflicts with a GSP would be **less-than-cumulatively considerable**.

5.2.3.14 AESTHETICS

The cumulative context for aesthetics consists of the areas where additional growth and new development is projected to occur in the western Placer County region. Growth and development in the western Placer County region as a whole would change visual conditions in certain discrete areas as open viewsheds on the urban fringe are replaced with urban development. New development would also lead to increased nighttime light and glare in the region and more limited views of the nighttime sky and skyglow effects. With changes in energy efficiency requirements and the use of different types of lighting, such as light-emitting diode (LED) lighting, skyglow effects may incrementally change in Roseville and nearby communities. Although general plans and other adopted community design standards include design, architectural, development, and lighting standards to ensure that development in the region complies within certain aesthetic guidelines, there is no mechanism to allow regional development, while also avoiding the conversion of local viewsheds to urban development. The change

in visual character in the region attributable to urban development and supportive infrastructure and the associated increase in nighttime light and glare from implementation of the regional planning efforts considered in this analysis are considered significant cumulative impacts.

Degradation of Visual Character/Increased Light and Glare

Buildout of the General Plan would incrementally contribute to changes in regional visual character and lighting. There are no scenic vistas, and no state- or locally-designated scenic highways within the Planning Area, nor is the Planning Area located within the viewshed of any such areas. Most new development would occur in the western and northwestern portions of the Planning Area (where new development is already occurring), and most of this development would consist of residential, open space, and parks, with commercial centers. Infill development would also occur in the Planning Area, and policies in the proposed General Plan Update, as well implementing documents, establish standards for design and compatibility with a project's surroundings. In addition to adding uses and density, new investment in urban infill areas typically improves visual quality by developing vacant or underutilized properties and improving maintenance of existing structures and yards. New development of high-quality design can enhance the built environment with new architecture that is in character with or complements existing structures.

The City's Community Design Standards address a variety of topics related to design, including site planning and architectural design standards; landscaping and screening techniques to preserve and enhance visual quality; signage; streetscape improvements such as street trees, landscaped medians, and street furnishings; and lighting design and provisions to promote public safety and reduce glare and light spillover onto adjacent properties. The Community Design Guidelines provide a list of specific recommendations and requirements for inclusion in site-specific project design, and which are evaluated on a graded scale for level of compliance during each project-specific review process.

The proposed General Plan Update would be consistent with the City's Zoning Ordinance and Municipal Code, all of which contain specific, enforceable provisions related to the preservation of open space, high-quality architectural design, building setbacks and height requirements, landscaping, signage, and lighting. Regardless, buildout of the General Plan would result in a change in visual character, particularly in the non-urbanized northern and western portions of the Planning Area. No feasible mitigation beyond the policies and programs of the proposed General Plan Update and compliance with the City's Community Design Guidelines is available that could fully address impacts associated with the change to the existing visual character, particularly in the non-urbanized areas. Therefore, the proposed General Plan Update would result in a **cumulatively significant and unavoidable** impact due to changes in visual character.

Site-specific projects envisioned under the proposed General Plan Update would result in additional light and glare and skyglow effects. Compliance with the City's Community Design Guidelines would help to reduce light and glare effects. Implementation of Mitigation Measure 4.14-3 would result in the addition of a new policy to the proposed General Plan Update that would require all new development to control artificial lighting to avoid spillover lighting and preserve the night sky, and to use anti-reflective architectural materials and coatings to prevent glare. No feasible mitigation beyond the policies and programs of the proposed General Plan Update is available that could fully address impacts associated with the contribution of nighttime lighting and daytime glare, while also accommodating long-term growth needs of the City. Therefore, the proposed General Plan Update would result in a **cumulatively significant and unavoidable** impact from new sources of light and glare.

5.2.3.15 ENERGY

Increased demand for electrical and natural gas supplies and infrastructure is a byproduct of all future land uses and development in Roseville, Placer County, and the region. Energy is consumed for heating, cooling, and electricity in homes and businesses; for public infrastructure and service operations; and for agriculture, industry, and commercial uses. Each service provider is responsible for ensuring adequate provision of these utilities within their jurisdictional boundaries and would be responsible for upgrading their existing electrical and natural gas distribution systems or constructing new distribution systems to meet the demands of individual projects. Placer County and the cities within the county implement general plans that include goals and policies to reduce energy demands through the use of design features, building materials, and building practices; encourage the use of renewable energy sources; promote land uses and patterns that would not cause wasteful, inefficient, and unnecessary consumption of energy; and ensure adequate electricity and natural gas and related distribution systems are available to meet energy demands. In addition, service providers encourage energy conservation through programs, such as offering rebates for installation of energy efficient appliances and lighting fixtures. The California Public Utilities Commission and California Energy Commission have roles in regulating energy supply and ensuring reliable and sufficient supplies as the state grows.

As dictated by the governing legislation, a primary focus of SACOG's MTP/SCS is the reduction of GHG emissions. This has a co-benefit of reducing transportation energy demand, which would avoid a significant cumulative impact related to consumption of energy at the regional level. Transportation is, by far, the largest energy consuming sector in California, accounting for approximately 39 percent of all energy use in the state (U.S. Energy Information Administration 2020). Because transportation accounts for more energy consumption than heating, cooling, and powering of buildings, powering industry, or any other use, the overall efficiency of energy use in the region will depend importantly on the ability of local lead agencies to plan in a way that reduces travel demand. SACOG's 2020 MTP/SCS demonstrates an increase in energy efficiency in relation to transportation energy use – household generated vehicle miles traveled (VMT) per capita is forecast to decrease (SACOG 2020b).

Energy efficiency will also increase in relation to heating and cooling of buildings. The State of California adopted the California Green Building Standards Code (CALGreen Code), which establishes mandatory standards for all buildings in California, including for energy efficiency. This Code is updated over time and in each instance, the energy efficiency standards are increased.

Because regional transportation and building energy use will become more efficient between present and the SACOG MTP/SCS planning horizon, the regional planning efforts would result in a less-than-cumulatively considerable impact. Because the proposed General Plan Update incorporates appropriate goals and policies to conserve energy, the proposed General Plan Update would result in a **less-than-cumulatively considerable** energy efficiency impact.

5.3 GROWTH-INDUCING IMPACTS

CEQA (*CEQA Guidelines*, CCR Section 15126.2[d]) requires an examination of the direct and indirect impacts of the proposed project, including the potential of the project to induce growth leading to changes in land use patterns and population densities and related impacts on environmental resources. Specifically, CEQA states that the EIR shall:

[d]iscuss ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects that would remove obstacles to population growth (a major expansion of a wastewater treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring the construction of new facilities that could cause significant environmental effects. Also discuss characteristics of some projects that may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

Direct growth-inducement would result if a project involved construction of new housing. Indirect growth-inducement would result, for instance, if implementing a project resulted in any of the following:

- ▶ substantial new permanent employment opportunities (*e.g.*, commercial, industrial, or governmental enterprises);
- ▶ a construction effort with substantial short-term employment opportunities that indirectly stimulates the need for additional housing and services to support the new temporary employment demand; or,
- ▶ removal of an obstacle to additional growth and development, such as removing a constraint on a required public utility or service (*e.g.*, construction of a major sewer line with excess capacity through an undeveloped area) or adding development adjacent to undeveloped land.

Growth-inducement itself is not an environmental effect, but it may lead to foreseeable environmental effects. These environmental effects may include increased demand on other community and public services and infrastructure, increased traffic and noise, degradation of air or water quality, degradation or loss of plant or animal habitats, or conversion of agricultural and open space land to urban uses.

5.3.1 GROWTH-INDUCING IMPACTS OF THE PROPOSED GENERAL PLAN UPDATE

Based on Section 65300 of the Government Code, the proposed General Plan Update is required to serve as a comprehensive, long-term plan for physical development and conservation in the City's Planning Area. The proposed General Plan Update provides a framework for the orderly and efficient long-term growth within Roseville through the year 2035. The General Plan Update proposes new and revised General Plan goals, policies, and implementation measures, all of which have been developed under the proposed General Plan Update to help reduce VMT, provide more detailed and updated implementation measures that can reduce potential impacts, comply with State law changes, add clarity to the goals and policies, and incorporate best practices in planning. The City is not pursuing changes to the Land Use Map or Sphere of Influence as a part of this Update, and therefore does not propose new growth.

The Growth Management Component of the proposed General Plan Update focuses on the development of performance standards rather than time lines or growth rates for future development. This approach has resulted in goals and policies that emphasize performance (*e.g.*, maintaining levels of service, providing adequate park acreage, financing needed school facilities, etc.) rather than on specified growth rates or dates by which plans should be built out. The performance standards provide the criteria for planning and managing growth by requiring the mitigation of growth impacts and the provision of both tangible and intangible benefits to the

community. Therefore, the City's policies ensure that as buildout of the General Plan proceeds, all impacts to services and facilities will be addressed.

Within the City limits, there are 16 subareas that have been defined for planning purposes, as well as the Infill Area and the North Industrial Area. Buildout of the General Plan would include development of currently undeveloped areas, including the Amoruso Ranch Specific Plan, Creekview Specific Plan, and Sierra Vista Specific Plan areas, which would result in infrastructure being extended into areas in locations that are currently undeveloped. The areas that are not designated for Open Space in the Planning Area are assumed for development under the existing General Plan and development proposed in the Amoruso Ranch Specific Plan, Creekview Specific Plan, and Sierra Vista Specific Plan areas has undergone program-level environmental review. Furthermore, these approved plans provide for new and expanded infrastructure that is intended to meet demands for new development and would not create additional utility capacity in the Planning Area beyond what would be necessary to serve the adopted Specific Plan development.

As stated above, the proposed General Plan Update does not specify a maximum growth rate. In general, development in the city would be expected to follow regional and national economic trends. It is possible that the City's objectives to expand its employment base will be very successful during the proposed General Plan Update time horizon and that either the number or type of jobs would involve employees that do not live within the Planning Area. This could lead to a secondary growth-inducing impact related to demand for housing and goods and services associated with the population beyond that planned as a part of the proposed General Plan Update. However, as discussed previously, the regional planning context already includes adopted Specific Plans within Placer County on the northern, western, and southern boundaries of the City which could be the source for these secondary demands.

Whether or not obstacles to growth are eliminated relates to the extent to which the General Plan Update would increase infrastructure capacity or change the regulatory structure such that additional development beyond that assumed in this EIR would be facilitated. A physical obstacle to growth typically involves the lack of infrastructure and public service capacity. The extension of public service infrastructure (e.g., roadways, water and sewer lines) into areas that are not currently provided with these services would be expected to support new development. Similarly, the elimination or change to a regulatory obstacle, including existing growth and development policies, could result in new growth. The proposed General Plan includes policies for both infill and new development that would avoid unplanned development that could be induced through infrastructure expansions into new growth areas.

The majority of new and expanded infrastructure facilities are within the Amoruso Ranch Specific Plan, Creekview Specific Plan, and Sierra Vista Specific Plan areas. Existing infrastructure could require upgrades to serve development – particularly Downtown, along Riverside Avenue, Douglas Boulevard, Harding Boulevard, and other areas where the City is encouraging infill development as a part of this proposed General Plan Update. New and expanded infrastructure would be intended to meet demands for new development and would not create additional utility capacity in the Planning Area beyond what would be necessary to serve new development.

The proposed General Plan Update does not include changes to the Land Use Map or Sphere of Influence, and does not propose any new growth. As described above, the proposed General Plan Update policies ensure services are maintained throughout buildout of the General Plan; infrastructure is sized to serve adopted land uses, not provide additional capacity; and currently vacant lands on the City's northern, western, and southern boundaries

are already within adopted Placer County Specific Plans which plan for urbanization. Therefore, the proposed General Plan Update does not have the potential to induce unplanned growth, and growth inducing impacts would be **less than cumulatively considerable**.

5.4 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

CEQA requires that irreversible and irretrievable commitment of resources be addressed for certain categories of projects, including the “[t]he adoption, amendment, or enactment of a plan, policy, or ordinance of a public agency” (State CEQA Guidelines Sections 15126.2[d] and 15127[a]). Irreversible and irretrievable resource commitments are related to the use of nonrenewable resources and the effects that this use could have on future generations. Irreversible effects result primarily from the use or destruction of a specific resource (e.g., energy and minerals) that cannot be replaced within a reasonable time frame. Irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored as a result of the action (e.g., extinction of a threatened or endangered species or the disturbance of a cultural resource).

There are several resources, both natural and built, that would be expended in the construction and operation of the proposed project. These resources include the building materials used in the construction future site-specific projects under the proposed General Plan Update, and energy in the form of natural gas, petroleum products, and electricity consumed during construction and operation of residential, commercial, industrial, and public/quasi public land uses. Loss of these resources is considered irreversible because their reuse for some other purpose than General Plan buildout would be impossible or highly unlikely. Proposed urban development under the proposed General Plan Update constitutes an irreversible and irretrievable commitment of the land resource, thereby rendering land use for other purposes infeasible, except where existing open space resources would be preserved. For the same reason, urban development would also result in an irreversible and irretrievable loss of plant and wildlife habitat area, because some areas would still be lost to development even after the implementation of mitigation measures to preserve habitat and open space where feasible and practicable. Finally, although the proposed General Plan Update would preserve cultural and tribal resources to the maximum extent that is feasible and practicable, these resources could still be lost as a result of urban development; loss of cultural and tribal resources is considered irreversible.

5.5 SIGNIFICANT AND UNAVOIDABLE ENVIRONMENTAL IMPACTS

Section 15126.2(c) of the State CEQA Guidelines requires EIRs to include a discussion of any significant environmental impacts that cannot be avoided if the project is implemented. Chapter 4 of this EIR provides a detailed analysis of all significant and potentially significant environmental impacts related to implementing the proposed project; identifies feasible mitigation measures, where available, that could avoid or reduce these significant and potentially significant impacts; and presents a determination whether these mitigation measures would reduce these impacts to less-than-significant levels. Section 5.3 of this EIR identifies the significant cumulative impacts resulting from the combined effects of the proposed project and related projects. If an impact cannot be fully reduced to a less-than-significant level, it is considered a significant and unavoidable adverse impact.

As listed in Table 5-2, project implementation would result in significant and unavoidable adverse impacts related to transportation, air quality, noise, cultural and tribal cultural resources, utilities and service systems, and

aesthetics, and significant cumulative effects related to greenhouse gas emissions, air quality, noise, biological resources, cultural and tribal cultural resources, utilities and service systems, and aesthetics.

| Table 5-2. Summary of Significant and Unavoidable Impacts | | |
|--|---|--|
| Chapter Name/Issue Area | Impact Number | Impact Title |
| Transportation | 4.3-1 | VTM Per Capita Exceeds the Threshold of 15 Percent Below the City Baseline |
| Air Quality | 4.4-1 | Generation of Short-Term Construction-Related Emissions of Criteria Air Pollutants and Precursors for Which the Project Region is in Nonattainment, and Conflict with or Obstruct an Air Quality Plan |
| | 4.4-2 | Generation of Long-Term Operational Emissions of Criteria Air Pollutants and Precursors for Which the Project Region is in Nonattainment, and Conflict with or Obstruct an Air Quality Plan |
| | 4.4-3 | Expose Sensitive Receptors to Substantial Pollutant Concentrations (long-term operation only) |
| | 4.4-5 | Result in Other Emissions (Such as Those Leading to Odors) Adversely Affecting a Substantial Number of People (long-term operation only) |
| Noise and Vibration | 4.6-1 | Potential for Substantial Temporary, Short-Term Exposure to Construction Noise |
| | 4.6-2 | Potential for Long-Term Noise Exposure |
| Cultural and Tribal Cultural Resources | 4.9-1 | Cause a Substantial Adverse Change in the Significance of a Historical Resource Pursuant to Section 15064.5 |
| | 4.9-2 | Cause a Substantial Adverse Change in the Significance of an Archaeological Resource pursuant to Section 15064.5 |
| | 4.9-3 | Disturb any Human Remains, Including Those Interred Outside of Formal Cemeteries |
| | 4.9-4 | Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource |
| Utilities and Service Systems | 4.12-1 | Require or Result in the Relocation of or the Construction of New or Expanded Utilities and Service Systems Facilities, the Construction of Which Could Cause Significant Environmental Effects (indirect short-term impacts only, related to construction of the Ophir Water Treatment Plant) |
| Aesthetics | 4.14-2 | In a Non-Urbanized Area, Substantially Degrade the Existing Visual Character or Quality of the Site and its Surroundings |
| | 4.14-3 | Create a New Source of Substantial Light or Glare that Would Adversely Affect Day or Nighttime Views in the Area |
| Significant and Unavoidable Cumulative Impacts | | |
| Greenhouse Gas Emissions | 4.5-1 | Generation of Greenhouse Gas Emissions |
| Transportation | Contribution to Increased VMT Per Capita | |
| Air Quality | Generation of Short-Term Construction-Related Emissions of Criteria Air Pollutants and Precursors for Which the Project Region is in Nonattainment, and Conflict with or Obstruct an Air Quality Plan | |
| | Generation of Long-Term Operational Emissions of Criteria Air Pollutants and Precursors for Which the Project Region is in Nonattainment, and Conflict with or Obstruct an Air Quality Plan | |
| | Expose Sensitive Receptors to Substantial Pollutant Concentrations (long-term operation only) | |
| Noise and Vibration | Long-Term Noise: Operational Traffic Noise and Long-Term Noise: Stationary Sources | |
| Biological Resources | Special-Status Plants, Loss or Degradation of Riparian Habitat/Sensitive Natural Communities or Wetlands and Other Waters | |
| | Loss of Habitat and Special-Status Wildlife Species | |

| Table 5-2. Summary of Significant and Unavoidable Impacts | |
|--|--|
| Chapter Name/Issue Area | Impact Title |
| Cultural and Tribal Cultural Resources | Cause a Substantial Adverse Change in the Significance of a Historical Resource Pursuant to Section 15064.5 |
| | Cause a Substantial Adverse Change in the Significance of an Archaeological Resource pursuant to Section 15064.5 |
| | Disturb any Human Remains, Including Those Interred Outside of Formal Cemeteries |
| | Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource |
| Utilities and Service Systems | Indirect Short-Term Impacts Related to Construction of the Ophir Water Treatment Plant |
| Aesthetics | In a Non-Urbanized Area, Substantially Degrade the Existing Visual Character or Quality of the Site and its Surroundings |
| | Create a New Source of Substantial Light or Glare that Would Adversely Affect Day or Nighttime Views in the Area |
| Source: Data compiled by AECOM in 2020 | |

6 ALTERNATIVES

6.1 INTRODUCTION

The California Environmental Quality Act (CEQA) mandates consideration and analysis of alternatives to the proposed project. According to the CEQA Guidelines, the range of alternatives “shall include those that could feasibly accomplish most of the basic purposes of the project and could avoid or substantially lessen one or more of the significant impacts” (CEQA Guidelines Section 15126.6[c]; see also CEQA Guidelines Section 15126.6[a]).

Section 15126.6(a) of the State CEQA Guidelines requires EIRs to describe:

“...a range of reasonable alternatives to 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. 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 which are infeasible. The lead agency is responsible for selecting a range of project alternatives for examination and must publicly disclose its reasoning for selecting those alternatives. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason.”

In defining “feasibility,” CEQA Guidelines Section 15126.6(f)(1) states, in part:

Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent). No one of these factors establishes a fixed limit on the scope of reasonable alternatives.

The CEQA Guidelines further require that the alternatives be compared to the proposed project’s environmental impacts and that the “no project” alternative be considered (CEQA Guidelines Section 15126.6[e]). The CEQA Guidelines provide guidance on defining and analyzing alternatives. Section 15126.6[b] states:

“... the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.”

The environmental impacts of alternatives are required to be compared to the proposed project’s environmental impacts. This process helps decision makers to consider whether a different project design, location, or other variation on the proposed project would have environmentally superior results.

6.2 PROJECT OBJECTIVES

In determining what alternatives should be considered in the EIR, it is important to analyze the ability of an alternative to achieve most of the basic objectives of the project. These factors are crucial to the development of alternatives that meet the criteria specified in CEQA Guidelines Section 15126.6(a).

The “project” analyzed in this EIR is the proposed General Plan Update. The proposed General Plan Update does not include any changes to land use designations, expansion of the City’s Planning Area, or other physical changes to areas planned for development compared to the existing General Plan. Rather, this Update consists of revisions to goals policies and implementation measures to comply with recently adopted State law, improve and clarify policy language, replace outdated information, and improve the organization and user friendliness of the document.

In identifying potentially feasible alternatives to the project, the ability of alternatives to meet most of the project’s objectives was considered. As described in Chapter 2, “Project Description,” the project objectives for the proposed General Plan Update are as follows:

- ▶ Revise goals and policies, as appropriate, to address recent changes in State law;
- ▶ Prepare a detailed estimate of existing and future greenhouse gas (GHG) emissions associated with implementing the General Plan and feasible mitigating policies that would reduce emissions;
- ▶ Take advantage of GHG reduction strategies that offer co-benefits, such as more practical bicycle, pedestrian, and transit mobility options; reductions in household and business transportation and utility costs; and improvements to air quality and public health;
- ▶ Identify ongoing programs that reduce GHG emissions and incorporate such efforts as policy or implementation measures;
- ▶ Prepare estimates of existing and future vehicular travel demand and identify feasible mitigating policies and implementation measures that would reduce vehicular travel demand;
- ▶ Revise policies and implementation measures, as appropriate, to ensure an appropriate balance between managing traffic congestion and facilitating infill development, promoting public health through active transportation, and reducing GHG emissions;
- ▶ Incorporate changes to the Noise Element that are more appropriate for current and future conditions in Roseville; and
- ▶ Integrate the environmental analysis and policy planning process to promote the City’s planning, environmental, economic, and fiscal goals.

As described below, in identifying potentially feasible alternatives to the project, the ability of alternatives to meet most of the project’s objectives was considered.

6.3 ALTERNATIVES CONSIDERED BUT REJECTED FOR DETAILED ANALYSIS IN THIS EIR

6.3.1 GENERAL PLAN SCENARIO: NO GREENFIELD DEVELOPMENT

This alternative would change urban land use designations in new development areas to Urban Reserve and increase allowable density and non-residential development intensity throughout the Infill Area and the Riverside Gateway and Downtown Specific Plan Areas, and other Specific Plan Areas that are already developed.

If only infill areas were provided for development, this would provide an opportunity for approximately 3,200 to 3,800 additional housing units, 3 to 3.6 million square feet of additional non-residential development, and 8,000 to 10,000 new jobs. While this alternative may reduce the level of impacts identified in this EIR, it would not accommodate the population, housing, or employment growth necessary to support the City's economic development objectives or provide a fair share of the regional housing need. Furthermore, all of the City's greenfield development areas are within Development Agreements which do not expire until after the General Plan's 2035 horizon year. Consequently, the City does not have the authority to redesignate any of this land as Urban Reserve; the Development Agreements vest the existing land use designations and development rights within the City's greenfield areas. Therefore, the No Greenfield Development Alternative was rejected for further analysis because it is infeasible.

6.4 ALTERNATIVES ANALYZED IN THE EIR

6.4.1 INFILL HOUSING ALTERNATIVE

The intent of this alternative is to decrease the rate of GHG emissions and VMT and associated adverse physical environmental effects. This alternative would amend the General Plan Land Use Map in the City's Infill area to allow up to 30 units per acre (a designation of High Density Residential 30) for underutilized multi-family areas which have existing multi-family zoning or land use designations. Underutilized multi-family areas are defined as those that currently have a land use designation of High Density Residential 20 or less (i.e., would allow 20 units per acre or less of residential use). Increasing the allowed densities in these existing multi-family areas would allow redevelopment or intensification, which would result in additional infill and multi-family residential development. This alternative would also involve an additional focus on non-vehicular transportation facility investments in infill locations around the additional multi-family residential development. This may include additional bicycle and pedestrian facilities and amenities, additional transit routes, types of transit (microtransit and/or on-demand transit options, for example), shorter transit headways, and other improvements that make daily non-vehicular travel more convenient and competitive with driving. This alternative would add approximately 1,400 multi-family dwelling units in the City's Infill Area, in addition to the development of 20,000 to 25,000 new housing units assumed under the proposed General Plan Update (Exhibit 6-1); this would result in approximately 21,400 to 26,400 total new housing units under this alternative, or approximately 5 to 7 percent more housing units under this alternative than under the proposed General Plan Update. This alternative would maintain development assumptions in other locations within the Planning Area. The proposed General Plan Update new and revised goals, policies, and implementation measures, as presented in Chapter 2, "Project Description," would also occur under the Infill Housing Alternative. There would be no additional revisions or new goals, policies, or implementation measures under this alternative that are not identified as part of the proposed General Plan Update. The only exception to this would be that, under the Infill Housing Alternative, the

General Plan would be revised to allow for the introduction of additional infill, multi-family housing development. This alternative meets the basic project objectives.

6.4.2 REDUCED GROWTH ALTERNATIVE

The intent of this alternative is to decrease the rate of GHG emissions and VMT and associated adverse physical environmental effects, and biological resources and cultural resources impacts associated with conversion of open space to developed use.

This alternative would reduce 2035 buildout to the amounts identified by the Sacramento Area Council of Governments (SACOG) for Roseville in the *2020 Metropolitan Transportation Plan/Sustainable Communities Strategy* (2020 MTP/SCS). Under this alternative the City would add 17,460 housing units and 20,680 jobs by 2035.

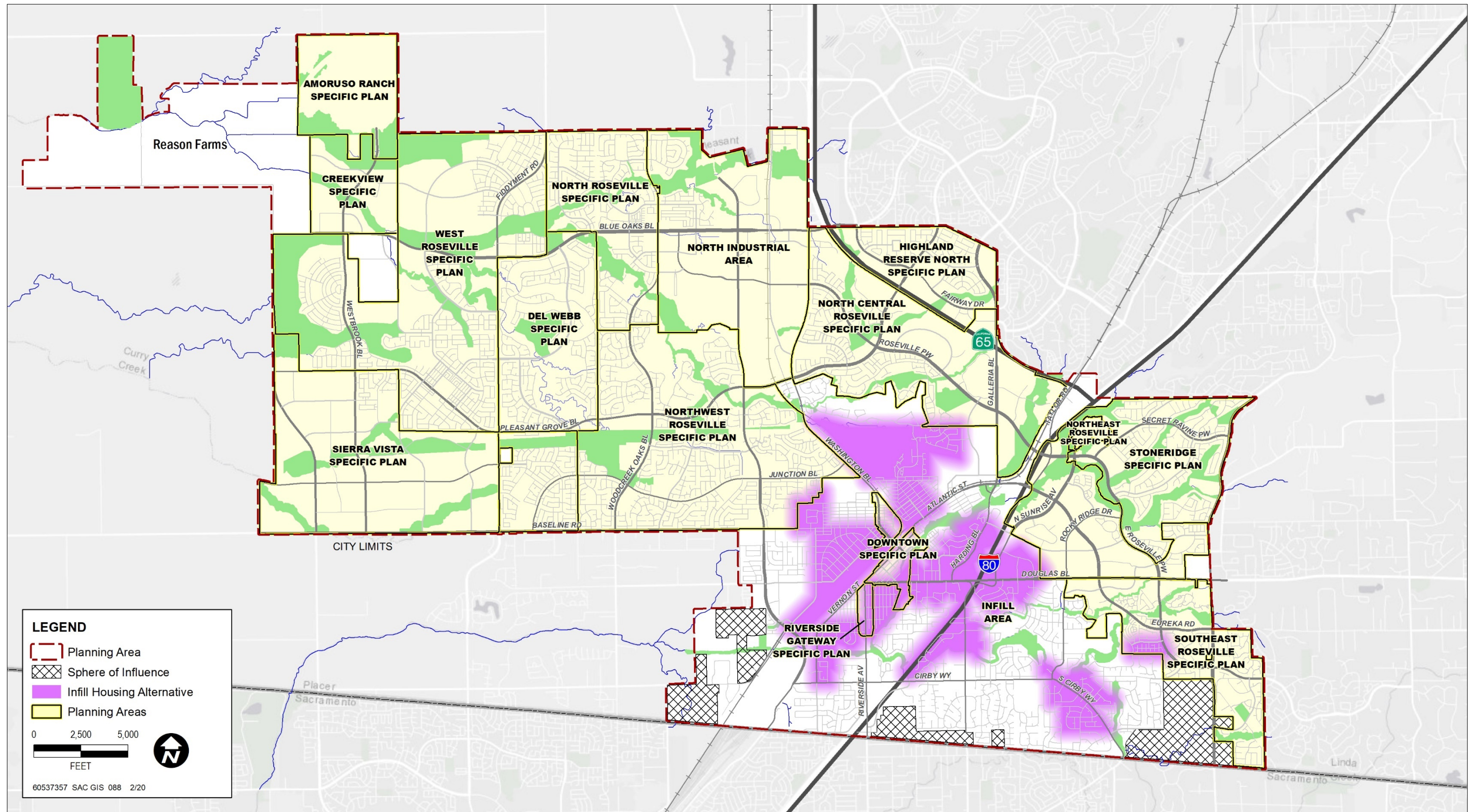
Instead of assuming that the General Plan would be built out by the General Plan horizon year of 2035, the Planning Area would experience development in areas with existing infrastructure (roadways, sewer, water, drainage, etc.), and areas without existing infrastructure would develop after 2035. Under this alternative, the land use change that would occur by 2035 would focus on existing developed areas, including the “Center and Corridor” and “Established” Community types identified in the MTP/SCS – for employment, 92 percent of the new jobs would be in Center and Corridor and Established Communities and 60 percent of the new dwelling units added by 2035 would be in Center and Corridor and Established Communities (see Exhibit 6-2).

Instead of the additional 20,000 to 25,000 housing units and 38,000 to 68,000 new jobs under the proposed General Plan Update assumed to occur by 2035, this alternative would result in an approximate 21 percent reduction in housing units and a 46 to 70 percent reduction in new jobs by 2035 (i.e., there would be 4,500 fewer housing units and 17,320–47,320 fewer jobs).

The proposed General Plan Update new and revised goals, policies and implementation measures, as presented in Chapter 2, “Project Description,” would also occur under this alternative. There would be no additional revisions or new goals, policies, or implementation measures under this alternative that are not identified as part of the proposed General Plan Update. This alternative meets the basic project objectives.

6.4.3 NO PROJECT ALTERNATIVE

The purpose of this alternative is to allow decision makers to compare the impacts of approving the proposed project with the impacts of not approving the proposed project. CEQA Guidelines (Section 15126.6[e]) requires consideration of a No Project Alternative that represents the existing conditions, as well as what would reasonably be expected to occur in the foreseeable future if the project were not approved. When a project involves the revision of an existing plan, the No Project Alternative should reflect continuation of the existing plan.

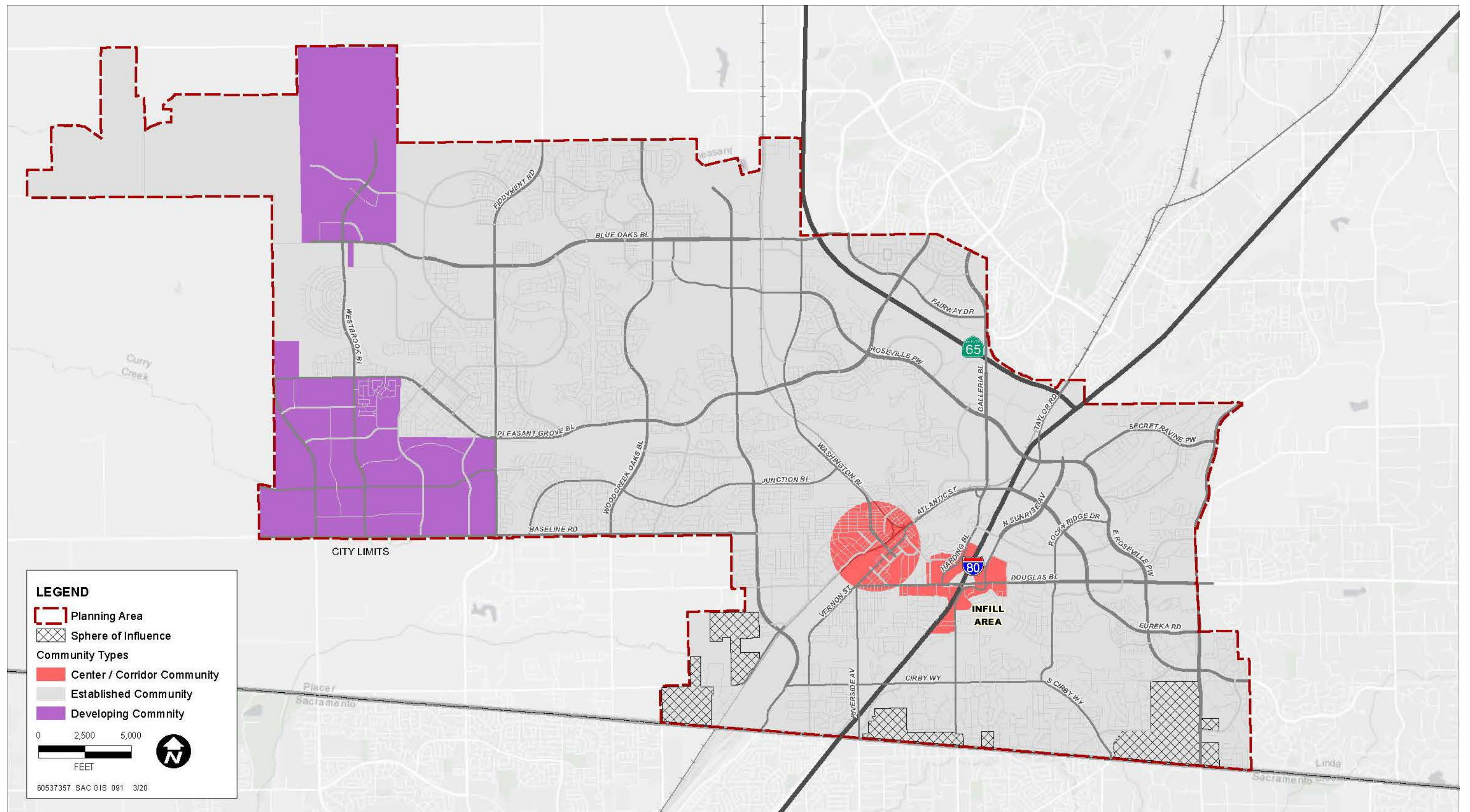


Source: AECOM 2020

Exhibit 6-1

Infill Housing Alternative

This page intentionally left blank



Source: SACOG 2020

Exhibit 6-2.

Planning Area with SACOG Community Types

This page intentionally left blank

The City has a General Plan, which was last amended in 2016, and which has been used to guide development and conservation efforts since that time. Most of the new development in the City would be guided by Specific Plans, most of which are the subject of adopted development agreements. The No Project Alternative would consist of the continuation of the existing General Plan with no revisions. The existing General Plan includes the same level of development as would occur under the proposed General Plan Update. However, under the No Project Alternative, there would be no content revisions to the existing General Plan goals, policies, and implementation measures, and no new General Plan goals, policies, and implementation measures, all of which have been developed under the proposed General Plan Update to help reduce VMT, provide more detailed and updated implementation measures that can reduce potential impacts, comply with State law changes, provide additional clarity in General Plan language, and make other changes detailed in Chapter 2 of this EIR. There would be no revisions to policies that would help to facilitate infill development, such as Policies LU2.3, LU2.5, LU3.1, LU3.3, LU3.4, AQ1.13, PR 1.5, PR1.6, and PF.23.

6.5 ALTERNATIVES ANALYSIS

This section provides an analysis of the potential impacts from implementation of the Infill Housing Alternative, Reduced Growth Alternative, and No Project Alternative, and compares the potential impacts of each alternative to impacts of implementing the proposed General Plan Update. Table 6-1 below provides a summary comparison of the environmental impacts of the proposed General Plan Update and each alternative.

| Table 6-1 Comparison of Impacts of the Alternatives to the Proposed Project | | | | |
|--|--|----------------------------|----------------------------|------------------------|
| Topic Area | Proposed General Plan Update | Infill Housing Alternative | Reduced Growth Alternative | No Project Alternative |
| Land Use and Agriculture | | | | |
| Physically Divide an Established Community | Less than Significant | Similar | Similar | Similar |
| Conflict with an Applicable Land Use Plan, Policy or Regulation | Less than Significant | Similar | Similar | Similar |
| Conflict with Existing Agricultural Operations | Less than Significant | Similar | Reduced | Similar |
| Population and Housing | | | | |
| Induce Substantial Unplanned Population Growth | Less than Significant | Similar | Similar | Similar |
| Displace a Substantial Number of Existing People or Housing | Less than Significant | Similar | Similar | Similar |
| Transportation | | | | |
| Vehicle Miles Traveled | Significant and Unavoidable | Similar | Reduced | Greater |
| Level of Service | Informational Only. Operations are consistent with City policy | Similar | Similar | Similar |
| Roadway Design Hazards | Less than Significant | Similar | Similar | Similar |
| Transit, Bicycles, and Pedestrians | Less than Significant | Reduced | Similar | Similar |
| Air Quality | | | | |
| Construction-related Emissions of Criteria Air Pollutants / Conflicts with Air Quality Plans | Significant and Unavoidable | Greater | Reduced | Similar |

| Table 6-1 Comparison of Impacts of the Alternatives to the Proposed Project | | | | |
|---|--|--|--|--|
| Topic Area | Proposed General Plan Update | Infill Housing Alternative | Reduced Growth Alternative | No Project Alternative |
| Operational Emissions of Criteria Air Pollutants / Conflicts with Air Quality Plans | Significant and Unavoidable | Greater | Reduced | Greater |
| Emissions of Toxic Air Contaminants | Construction: Less than Significant Operations: Significant and Unavoidable | Construction: Similar Operations: Greater | Construction: Similar Operations: Greater | Construction: Greater Operations: Greater |
| CO Hotspots | Less than Significant | Similar | Similar | Similar |
| Odorous Emissions | Significant and Unavoidable | Slightly Greater | Reduced | Greater |
| Greenhouse Gas Emissions | | | | |
| Generation of Greenhouse Gas Emissions | Significant and Unavoidable | Similar | Reduced | Greater |
| Noise and Vibration | | | | |
| Construction Noise | Significant and Unavoidable | Greater | Reduced | Similar |
| Operational Noise | Significant and Unavoidable | Greater | Reduced | Similar |
| Vibration | Less than Significant | Greater | Similar | Greater |
| Geology, Soils, and Paleontological Resources | | | | |
| Strong Seismic Ground Shaking | Less than Significant | Slightly Greater | Reduced | Similar |
| Soil Erosion | Less than Significant | Slightly Greater | Reduced | Similar |
| Unstable and Expansive Soils | Less than Significant | Slightly Greater | Reduced | Similar |
| Unique Paleontological Resources | Less than Significant with Mitigation Incorporated | Similar | Reduced | Greater; Significant |
| Biological Resources | | | | |
| Special-Status Plants | Less than Significant with Mitigation Incorporated | Similar | Reduced | Similar |
| Special-Status Wildlife | Less than Significant with Mitigation Incorporated | Similar | Reduced | Similar |
| Riparian Habitat/Sensitive Natural Communities | Less than Significant with Mitigation Incorporated | Similar | Reduced | Similar |
| Wetlands and Other Waters | Less than Significant with Mitigation Incorporated | Similar | Reduced | Similar |
| Wildlife Movement Corridor/Nursery Sites | Less than Significant with Mitigation Incorporated | Similar | Reduced | Similar |
| Local Biological Preservation Ordinances | Less than Significant | Slightly Greater | Reduced | Similar |
| Habitat Conservation Plans | Less than Significant | Similar | Similar | Similar |
| Cultural and Tribal Cultural Resources | | | | |
| Historic Resources | Significant and Unavoidable | Similar | Reduced | Similar |
| Archaeological Resources | Significant and Unavoidable | Similar | Reduced | Similar |
| Human Remains | Significant and Unavoidable | Similar | Similar | Similar |
| Tribal Cultural Resources | Significant and Unavoidable | Similar | Reduced | Similar |

| Table 6-1 Comparison of Impacts of the Alternatives to the Proposed Project | | | | |
|--|--|----------------------------|--------------------------------|------------------------|
| Topic Area | Proposed General Plan Update | Infill Housing Alternative | Reduced Growth Alternative | No Project Alternative |
| Hazards and Hazardous Materials | | | | |
| Use, Transport, Disposal, and Accidental Spills | Less than Significant | Slightly Greater | Reduced | Similar |
| Hazardous Materials Within One-Quarter Mile of a School | Less than Significant | Slightly Greater | Reduced | Similar |
| Hazardous Materials Sites | Less than Significant | Greater | Reduced | Similar |
| Emergency Response and Evacuation Plans | Less than Significant | Greater | Reduced | Similar |
| Urban and Wildland Fires | Less than Significant | Similar | Reduced | Similar |
| Public Services and Recreation | | | | |
| Police Protection | Less than Significant | Similar | Reduced | Similar |
| Fire Protection | Less than Significant | Similar | Reduced | Similar |
| Schools | Less than Significant | Greater | Reduced | Similar |
| Parks | Less than Significant | Greater | Reduced | Similar |
| Public Utilities | | | | |
| Water Supply | Less than Significant | Greater | Reduced | Similar |
| Wastewater | Less than Significant direct; Significant and Unavoidable indirect | Greater | Reduced | Similar |
| Solid Waste | Less than Significant | Greater | Reduced | Similar |
| Hydrology and Water Quality | | | | |
| Violation of Water Quality Standards or Waste Discharge Requirements or Conflict with a Water Quality Control Plan | Less than Significant | Greater | Reduced | Similar |
| Groundwater Recharge / Sustainable Groundwater Management Plan | Less than Significant | Similar | Reduced | Similar |
| Alteration of Drainages – Erosion | See “Geology, Soils, and Paleontological Resources – Soil Erosion” | | | |
| Alteration of Drainages – Runoff, Pollutants, and Flooding | Less than Significant | Greater | Reduced | Similar |
| Release of Pollutants in Flood Hazard Zones | Less than Significant | Greater | Reduced | Similar |
| Aesthetics | | | | |
| Scenic Vistas | Less than Significant | Similar | Similar | Similar |
| Visual Character and Quality | Significant and Unavoidable | Similar | Reduced: Less than Significant | Similar |
| Light and Glare | Significant and Unavoidable | Slightly Greater | Reduced | Greater |
| Energy | | | | |
| Energy Consumption | Less than Significant | Similar | Reduced | Greater |
| Conflict with Energy Plans | Less than Significant | Similar | Similar | Similar |
| Source: Data compiled by AECOM in 2020 | | | | |

6.5.1 LAND USE AND AGRICULTURE

6.5.1.1 PHYSICALLY DIVIDE AN ESTABLISHED COMMUNITY

Infill Housing Alternative

The Infill Housing Alternative would result in the construction of an additional 1,400 housing units, as compared to the proposed General Plan Update. The additional infill housing would be located along major urban corridors and would not physically divide an established community. Implementing existing General Plan Community Form – General Policy 6 and Growth Management – General Policy 3, as well as revised proposed General Plan Update Policies LU2.5, LU2.6, and LU 4.1 would require new development areas and associated community-wide facilities to be linked and oriented to existing developed areas of the community through road networks, public transit systems, open space systems, bikeway and pedestrian systems, and other physical connections and encourage a development pattern that is contiguous with existing developed areas of the City. The Infill Housing Alternative would implement the same goals and policies as identified in the General Plan Update. Similar to the proposed General Plan Update, the Infill Housing Alternative does not include new investment in infrastructure or development that would physically divide existing communities. The impact related to physically dividing an established community for the Infill Housing Alternative would be **similar to** that experienced under the proposed General Plan Update, and would remain **less than significant**.

Reduced Growth Alternative

Under the Reduced Growth Alternative, there would be 4,500 fewer housing units than proposed under the General Plan Update and most of this development would occur in the Center and Corridor and Established Communities. Implementing existing and revised proposed General Plan Update policies would require new development areas and associated community-wide facilities to be linked and oriented to existing developed areas of the community through road networks, public transit systems, open space systems, bikeway and pedestrian systems, and other physical connections and encourage a development pattern that is contiguous with existing developed areas of the City. The Reduced Growth Alternative would implement the same goals and policies as identified in the General Plan Update. Similar to the proposed General Plan Update, the Reduced Growth Alternative does not include new investment in infrastructure or development that would physically divide existing communities. The impact related to physically dividing an established community for the Reduced Growth Alternative would be **similar to** that experienced under the proposed General Plan Update, and would remain **less than significant**.

No Project Alternative

Under the No Project Alternative, the same level of development would occur as compared to the proposed General Plan Update. Similar to the General Plan Update, the No Project Alternative would not change land use designations. The City's land use designations and roadway locations were planned comprehensively and determined through the Specific Plan process to provide connected communities. The No Project Alternative would not physically divide an established community. Therefore, the impact related to physically dividing an established community for the No Project Alternative would be **similar to** that experienced under the proposed General Plan Update, and, for the same reasons described in the analysis of the proposed General Plan Update in Section 4.1, would remain **less than significant**.

6.5.1.2 CONFLICT WITH APPLICABLE LAND USE PLAN, POLICY, OR REGULATION

Infill Housing Alternative

The Infill Housing Alternative would result in the construction of an additional 1,400 housing units, as compared to the proposed General Plan Update. The intent of this alternative is to decrease the rate of GHG emissions and VMT and associated adverse physical environmental effects. The proposed General Plan Update new and revised goals, policies, and implementation measures would also occur under the Infill Housing Alternative. This alternative would amend the General Plan Land Use Map in the City's Infill area to allow up to 30 units per acre (a designation of High Density Residential 30) for underutilized multi-family areas which have existing multi-family zoning or land use designations but would maintain development assumptions in other locations within the Planning Area, including development assumptions identified in the City's 14 Specific Plan Areas. There would be no additional revisions or new goals, policies, or implementation measures under this alternative that are not identified as part of the proposed General Plan Update. The only exception to this would be that, under the Infill Housing Alternative, the General Plan allowable densities would be increased to allow for the introduction of proposed infill housing development and the City's Zoning Ordinance would be amended to ensure consistency between the General Plan Update and Zoning Ordinance. As with the proposed General Plan Update, the Infill Housing Alternative would be consistent with other relevant plans, programs, and regulations that were developed to reduce or avoid environmental impacts as discussed in Section 4.1. The impact related to conflicts with policies, plans, and regulations for the Infill Housing Alternative would be **similar to** that experienced under the proposed General Plan Update, and for the reasons described in Section 4.1, would be **less than significant**.

Reduced Growth Alternative

Under the Reduced Growth Alternative, there would be 4,500 fewer housing units than proposed under the General Plan Update and most of this development would occur in the Center and Corridor and Established Communities. The intent of this alternative is to decrease the rate of GHG emissions and VMT and associated adverse physical environmental effects, and biological resources and cultural resources impacts associated with conversion of open space to developed use. Focusing development in the Center and Corridor and Established Communities would support the 2020 MTP/SCS land use strategy to improve mobility and reduce travel demand from passenger vehicles by prioritizing compact and transit-oriented development. The Reduced Growth Alternative development assumptions would be more consistent with SACOG's 2020 MTP/SCS land use scenario, in terms of the total development forecast to occur in the Planning Area by 2035.

The proposed General Plan Update new and revised goals, policies, and implementation measures would also occur under the Reduced Growth Alternative. There would be no additional revisions or new goals, policies, or implementation measures under this alternative that are not identified as part of the proposed General Plan Update. As with the proposed General Plan Update, the Reduced Growth Alternative would be consistent with other relevant plans, programs, and regulations that were developed to reduce or avoid environmental impacts as discussed in Chapter 4.0 of this Draft EIR and throughout this chapter (for the Reduced Growth Alternative). The impact related to conflicts with policies, plans, and regulations for the Reduced Growth Alternative would be **similar to** the proposed General Plan Update, and for the reasons described in the analysis of the proposed General Plan Update in Section 4.1, would be **less than significant**.

No Project Alternative

The existing General Plan includes the same level of development as would occur under the proposed General Plan Update. Under the No Project Alternative, there would be no content revisions to the existing General Plan goals, policies and implementation measures, and no new General Plan goals, policies and implementation measures. However, the existing General Plan goals and policies would continue to be implemented. Similar to the General Plan Update, the No Project Alternative would not change land use designations. The adverse physical environmental effects of the No Project Alternative are similar to those described for the General Plan Update described throughout Chapter 4.0 of this EIR. New development under the No Project Alternative would be consistent with all plans, policies, and regulations identified in Section 4.1, including the SACOG MTP/SCS, SACOG Region Blueprint, and City/County Memorandum of Understanding. Because the No Project Alternative would not have policy updates to comply with recent changes to State law, the No Project Alternative could be viewed as having a greater impact – particularly with respect to the policy changes that encourage infill development and reduce VMT and environmental effects associated with VMT, such as air pollutant emissions, greenhouse gas emissions, and transportation noise. The impact related to conflicts with policies, plans, and regulations for the No Project Alternative would be **similar to** that experienced under the proposed General Plan Update, and for the same reasons described in the analysis of the proposed General Plan Update in Section 4.1, **less than significant**.

6.5.1.3 CONFLICT WITH EXISTING AGRICULTURAL OPERATIONS

Infill Housing Alternative

As described in Section 4.1 of this EIR, “Land Use Planning and Agricultural Resources,” buildout of the General Plan would locate urban land uses adjacent to existing off-site grazing lands along the northwestern, western, and southern boundaries of the Planning Area, which could potentially result in conflicts with adjacent grazing operations. Conflicts between proposed urban development with adjacent grazing activities were addressed in the West Roseville Specific Plan EIR, Sierra Vista Specific Plan EIR and the Amoruso Ranch Specific Plan EIR and the environmental impacts of locating urban development adjacent to grazing lands were analyzed in those CEQA documents (City of Roseville 2004, 2010, 2016). Consistent with the City’s General Plan policy to provide separation between City and County uses, proposed development would be separated by open space or road rights-of-way. While the Infill Housing Alternative would result in the development of 1,400 additional multi-family residential units when compared to the proposed General Plan Update, these would be located in areas identified in the General Plan for infill housing, which are not near agricultural operations. Therefore, the additional housing included in this Alternative does not increase impacts on agricultural operations when compared with the proposed General Plan Update. The impact related to conflicts with agricultural operations for the Infill Housing Alternative would be **similar to** that experienced under the proposed General Plan Update, and for the same reasons described in the analysis of the proposed General Plan Update in Section 4.1, would be **less than significant**.

Reduced Growth Alternative

As described in the Infill Housing Alternative discussion above, buildout of the General Plan would locate urban land uses adjacent to existing off-site grazing lands along the northwestern, western, and southern boundaries of the Planning Area, which could potentially result in conflicts with adjacent grazing operations. However, proposed development would be separated by open space or road rights-of-way. Under the Reduced Growth

Alternative, there would be 4,500 fewer housing units than proposed under the General Plan Update and most of this development would occur in the Center and Corridor and Established Communities. The Reduced Growth Alternative would reduce the amount of development on the western and northwestern side of the Planning Area, and focus development in areas where there is less interface with existing agricultural operations. Therefore, the impact related to conflicts with agricultural operations for the Reduced Growth Alternative would be **reduced** compared to that experienced under the proposed General Plan Update. The impact of this alternative would be the same as the proposed General Plan Update impact, and for the same reasons described in the analysis of the proposed General Plan Update in Section 4.1, would be **less than significant**.

No Project Alternative

The existing General Plan includes the same level of development as would occur under the proposed General Plan Update. Under the No Project Alternative, there would be no content revisions to the existing General Plan goals, policies and implementation measures, and no new General Plan goals, policies and implementation measures. However, the existing General Plan goals and policies would continue to be implemented. Under the No Project Alternative, there would be no updates to comply with State law changes, but none of these changes relate to agricultural buffers at the boundaries of the Planning Area. The impact related to conflicts agricultural operations for the No Project Alternative would be **similar to** that experienced under the proposed General Plan Update, and for the same reasons described in the analysis of the proposed General Plan Update in Section 4.1, impacts would be **less than significant**.

6.5.2 POPULATION AND HOUSING

6.5.2.1 INDUCE SUBSTANTIAL UNPLANNED POPULATION GROWTH

Infill Housing Alternative

The Infill Housing Alternative would result in development of 1,400 additional multi-family residential units in the City's Infill Area, in addition to the development of 20,000 to 25,000 new housing units assumed under the proposed General Plan Update. Similar to the General Plan Update, the Infill Housing Alternative would provide 120,000 to 150,000 local jobs. Buildout of this Alternative could generate a total population of 200,815 residents in the City compared to the estimate for the General Plan Update of 198,000 residents (2,815 more residents than the General Plan Update) (see Table 4.2-2 in Section 4.2, "Population and Housing"). However, the predicted jobs-housing balance would remain the same for this alternative as for the proposed General Plan Update: 1.6 to 2.0.

Similar to the General Plan Update, employees from outside of the Planning Area may come from existing communities which have more housing than available jobs ("housing rich"), but a jobs rich community can also be driver of growth in surrounding areas. However, in the cumulative context most of the land adjacent to the City's existing boundaries are already planned to be converted to urban uses as a result of approved development in the County. The Placer Ranch Specific Plan lies along the City's northern boundary, and abuts the City's Amoruso Ranch Specific Plan; Placer Vineyards is located along the City's southern boundary; and the Curry Creek and Regional University Specific Plans are located along the City's western boundary. The nearby areas where the City's higher jobs-housing balance has the greatest potential to induce growth are already planned for growth. While employees may come from outside of the Planning Area, they are most likely to be from existing communities or adopted planned development areas which will be built in the future; therefore, the Infill Housing

Alternative will not indirectly induce substantial unplanned growth. Therefore, impacts from substantial unplanned population growth under the Infill Housing Alternative would be **similar to the proposed General Plan Update**, and for the reasons described in Section 4.2, the impact would still be **less than significant**.

Reduced Growth Alternative

Under the Reduced Growth Alternative, less new development would occur as compared to the proposed General Plan Update. Under the Reduced Growth Alternative, approximately 4,500 fewer housing units would be constructed and 17,320–47,320 fewer jobs would be created, as compared General Plan Update. Buildout of this Alternative could generate a total population of 141,863 residents in the City compared to the estimate for the General Plan Update of 198,000 residents (56,137 fewer residents than the General Plan Update) (see Table 4.2-2 in Section 4.2). Approximately 92 percent of the new jobs would be in Center and Corridor and Established Communities and 60 percent of the new dwelling units added by 2035 would be in Center and Corridor and Established Communities. These reductions would result in a jobs-housing balance of 1.5 to 1.9 for the Reduced Growth Alternative. However, this remains similar to the predicted jobs-housing balance of the proposed General Plan Update of 1.6 to 2.0.

Similar to the General Plan Update, employees from outside of the Planning Area may come from existing communities which have more housing than available jobs (“housing rich”), but a jobs rich community can also be driver of growth in surrounding areas. However, in the cumulative context most of the land adjacent to the City’s existing boundaries are already planned to be converted to urban uses as a result of approved development in the County. The Placer Ranch Specific Plan lies along the City’s northern boundary, and abuts the City’s Amoruso Ranch Specific Plan; Placer Vineyards is located along the City’s southern boundary; and the Curry Creek and Regional University Specific Plans are located along the City’s western boundary. The nearby areas where the City’s higher jobs-housing balance has the greatest potential to induce growth are already planned for growth. While employees may come from outside of the Planning Area, they are most likely to be from existing communities or adopted planned development areas which will be built in the future; therefore, the Reduced Growth Alternative will not indirectly induce substantial unplanned growth. Impacts from substantial unplanned population growth under the Reduced Growth Alternative would be less than the proposed General Plan Update because there would be less population and employment growth, but would remain **similar**. For the reasons described in Section 4.2, the impact would still be **less than significant**.

No Project Alternative

Under the No Project Alternative, a similar amount of development would occur as compared to the proposed General Plan Update, and therefore a similar potential for substantial unplanned population growth would occur. Under the No Project Alternative, there would be no content revisions to the existing General Plan goals, policies, and implementation measures, and no new General Plan goals, policies and implementation measures. However, the existing General Plan goals and policies would continue to be implemented. The No Project Alternative would result in the same population and employment projections as the proposed General Plan Update. The impacts from substantial unplanned population growth under the No Project Alternative would be **similar to the proposed General Plan Update**, and for the reasons described in Section 4.2, the impact would still be **less than significant**.

6.5.2.2 DISPLACEMENT OF A SUBSTANTIAL NUMBER OF EXISTING PEOPLE OR HOUSING

Infill Housing Alternative

The Infill Housing Alternative would add approximately 1,400 multi-family dwelling units in the City's Infill Area, in addition to the development of 20,000 to 25,000 new housing units assumed under the proposed General Plan; this would result in approximately 21,400 to 26,400 total new housing units under this alternative, or approximately 5 to 7 percent more housing units under this alternative than under the proposed General Plan Update. Redevelopment under the Infill Housing Alternative could result in the removal of individual residences; however, the Infill Housing Alternative would not convert established residential areas to a nonresidential land use. Even if unanticipated displacement of people or housing were to occur, buildout of the Infill Housing Alternative would allow substantial opportunity for housing development that could provide housing for any displaced residents.

Implementation of existing General Plan Community Form Goal 4 and General Policy 4, Community Form – Downtown Neighborhoods Policies 4 and 7 as well as revised proposed General Plan Update Goals LU3.2, LU5.1, and Policies LU3.3 and LU3.4, and compliance with the 2013–2021 General Plan Housing Element polices would ensure that new development pursuant to the proposed General Plan Update would not displace substantial numbers of people. These polices encourage preservation of the existing housing stock and neighborhoods, along with revitalization of downtown, neighborhoods in the Infill Area, and mixed-use corridors. The Infill Housing Alternative would implement the same goals and policies as identified in the General Plan Update. Therefore, impacts from displacement of substantial numbers of housing or people under the Infill Housing Alternative would be **similar to** the proposed General Plan Update, and for the same reasons described in the analysis of the proposed General Plan Update in Section 4.2, would still be **less than significant**.

Reduced Growth Alternative

Under the Reduced Growth Alternative, approximately 4,500 fewer housing units would be constructed, as compared General Plan Update. Approximately 60 percent of the new dwelling units added by 2035 would be in Center and Corridor and Established Communities. Similar to the General Plan Update, the Reduced Growth Alternative does not convert established residential areas to a nonresidential land use, or redeveloping existing residential areas with new residences by removing existing dwelling units. If unanticipated displacement of people or housing were to occur, construction of 17,460 residential dwelling units under the Reduced Growth Alternative would provide housing for any displaced residents. Implementation of existing and revised proposed General Plan Update goals and policies and compliance with the 2013–2021 General Plan Housing Element polices would ensure that new development pursuant to the proposed General Plan Update would not displace substantial numbers of people. These polices encourage preservation of the existing housing stock and neighborhoods, along with revitalization of downtown, neighborhoods in the Infill Area, and mixed-use corridors. Therefore, impacts from displacement of substantial numbers of housing or people under the Reduced Growth Alternative would be **similar to** compared to the proposed General Plan Update, and for the same reasons described in the analysis of the proposed General Plan Update in Section 4.2, would still be **less than significant**.

No Project Alternative

The buildout assumptions for the No Project Alternative are the same as the assumptions for the proposed General Plan Update. Therefore, the No Project and the proposed General Plan Update project have the same potential for displacement of substantial numbers of housing or people. The impact analysis described in Draft EIR Section 4.2 for the proposed General Plan Update applies to the No Project Alternative. Neither the proposed General Plan Update nor the No Project Alternative would involve converting established residential areas to a nonresidential land use or redeveloping existing residential areas with new residences by removing existing dwelling units and would not displace substantial numbers of housing or people, necessitating the construction of replacement housing elsewhere. If unanticipated displacement of people or housing were to occur, construction of 20,000 to 25,000 residential dwelling units under the No Project Alternative would provide housing for any displaced residents. Implementation of existing General Plan Community Form Goal 4 and General Policy 4, Community Form – Downtown Neighborhoods Policies 4 and 7 and compliance with the 2013-2021 General Plan Housing Element and existing General Plan polices would ensure that new development would not displace substantial numbers of people. Therefore, impacts from substantial unplanned population growth under the No Project Alternative would be **similar to** the proposed General Plan Update, and for the reasons described in Section 4.2, would still be **less than significant**.

6.5.3 TRANSPORTATION

6.5.3.1 VEHICLE MILES TRAVELED (*VMT Per Capita Exceeds the Threshold of 15 Percent Below the City Baseline*)

Infill Housing Alternative

The Infill Housing Alternative would result in increased development of 1,400 additional residential units in the City’s Infill Area, in addition to the development of 20,000 to 25,000 new housing units assumed under the proposed General Plan Update; this would result in approximately 21,400 to 26,400 total new housing units under this alternative, or approximately 5 to 7 percent more housing units under this alternative than under the proposed General Plan Update. As described in Section 4.3 of this EIR, “Transportation,” modeling was conducted to determine the total VMT for the project. This modeling was also completed for the Infill Housing Alternative, and the analysis determined that total VMT, VMT per service population, and VMT per capita would be similar to the proposed General Plan Update (see Table 6.5-1 and 6.5-2).

| Table 6.5-1 Vehicle Miles Traveled by City of Roseville Land Uses: Total and Per Service Population Analysis | | | |
|--|-------------------------------------|---------------------------------------|---|
| Measure | Proposed General Plan (Constrained) | Proposed General Plan (Unconstrained) | General Plan Infill Housing Alternative (Constrained) |
| Total VMT | 10,289,700 | 10,125,800 | 10,306,500 |
| Service Population | 312,018 | 312,018 | 315,224 |
| Total VMT/ Service Population | 33.0 | 32.5 | 32.7 |
| Note: Includes full length of all trips with either an origin or destination with the City of Roseville limits. VMT = vehicle miles traveled Source: Fehr & Peers, 2020. | | | |

| Table 6.5-2 Home-Based Production Vehicle Miles Traveled: Per Capita Analysis | | | |
|--|-------------------------------------|---------------------------------------|---|
| Measure | Proposed General Plan (Constrained) | Proposed General Plan (Unconstrained) | General Plan Infill Housing Alternative (Constrained) |
| Home-Based Production VMT | 2,911,300 | 2,810,400 | 2,959,000 |
| Residents | 188,968 | 188,968 | 192,175 |
| Home-Based Production VMT/ Resident | 15.4 | 14.9 | 15.4 |
| Source: Fehr & Peers 2020 | | | |

A comparison of VMT in Specific Plan Areas, as shown in Table 6.5-3, shows that home-based production VMT per resident in the Infill area is less than the citywide value, while Specific Plan areas further from the existing development typically have home-based production VMT per resident that is greater than the citywide value. The Infill Alternative targets an additional 1,400 units within the City’s Infill area, which is in an area generated lower VMT than the Citywide average (13.9 VMT per capita, versus 15.4 VMT per capita). However, targeting additional development in an area of lower VMT production does not change the citywide average VMT per capita for multiple reasons.

The modeling used to forecast travel demand for the General Plan Update and this alternative may not fully account for VMT reductions associated with increased infill and density, particularly increases in density under the General Plan Update and this alternative in areas served by transit – both existing transit service and planned transit service. The analysis of VMT can be considered “conservative” in that it may overestimate travel demand relative to what actually may occur. In addition, the 1,400 units of this Alternative is—at most—seven percent of the overall growth, and therefore the lower VMT associated with this small number of units may not have a large enough influence to lower the citywide average.

| Table 6.5-3 Vehicle Miles Traveled: General Plan Constrained Scenario: Per Capita Analysis | | | | |
|--|------------|---------------------------|-----------|--------------------------------------|
| Specific Plan Area | Total VMT | Home-Based Production VMT | Residents | Home-Based Production VMT / Resident |
| City of Roseville | 10,289,735 | 2,911,262 | 188,968 | 15.4 |
| Amoruso Ranch | 283,015 | 163,065 | 7,756 | 21.0 |
| Creekview | 154,398 | 100,956 | 5,193 | 19.4 |
| Del Webb | 107,243 | 43,160 | 4,824 | 8.9 |
| Downtown | 259,312 | 27,230 | 2,386 | 11.4 |
| Highland Reserve North | 434,424 | 57,590 | 4,333 | 13.3 |
| Infill | 2,237,816 | 592,717 | 42,652 | 13.9 |
| North Central Roseville | 1,666,463 | 131,171 | 11,400 | 11.5 |
| North Industrial | 1,381,982 | 76,957 | 5,086 | 15.1 |
| North Roseville | 428,015 | 230,117 | 13,844 | 16.6 |
| Northeast Roseville | 1,428,255 | 43,928 | 3,804 | 11.5 |
| Northwest Roseville | 628,895 | 345,484 | 23,414 | 14.8 |
| Riverside Gateway | 66,383 | 3,478 | 290 | 12.0 |
| Sierra Vista | 932,236 | 412,300 | 22,345 | 18.5 |
| Southeast Roseville | 466,701 | 101,830 | 7,709 | 13.2 |
| Stoneridge | 235,630 | 101,556 | 7,104 | 14.3 |
| West Roseville | 811,396 | 479,721 | 26,828 | 17.9 |
| Note: The summation of VMT for all Specific Plan Areas is greater than for the city as a whole because VMT associated with a trip from one specific plan to another is counted separately for each specific plan, but only once for the city as a whole. | | | | |
| Source: Fehr & Peers 2020 | | | | |

As demonstrated by Table 6.5-3, VMT performance can vary greatly even within an individual city. The degree to which the Infill Housing Alternative produces VMT reductions depends on a number of factors, including the demographics and job locations of the households that occupy the additional multi-family dwellings, the extent to which funding is available to improve non-vehicular transportation options for these future households, the future cost of vehicular travel compared to other transportation options, the development of complementary land uses in close proximity to future multi-family development, whether the additional multi-family development can supplant housing demand that would otherwise be met in relatively higher VMT areas, such as the Amoruso Ranch, Creekview, Sierra Vista, and West Roseville Specific Plan Areas, and other factors. Demand for housing, in turn, will depend on demographic changes and emerging household preferences, and the way they express themselves in housing demand for different housing types and locations. However, there is evidence of preferences for housing locations close to work that enable short commutes; preferences for walkability and access to shopping, services, and transit; demand for a mix of housing types and attached products in suburbs; increasing numbers of small households, creating a market for smaller homes; and the need for greater market diversity.¹

VMT performance of the General Plan, whether under this alternative or the proposed General Plan Update, also depends on the extent to which development is allocated to the Placer High Frequency Transit Areas. These are areas of the region within one-half mile of a major transit stop (existing or planned light rail, streetcar, or train station) or an existing or planned high-quality transit corridor included in the SACOG MTP/SCS and would contribute to increased transit ridership, thereby reducing VMT. The Placer High Frequency Transit Areas include portions of the Downtown and Riverside Gateway Specific Plan Areas, as well as extensive portions of the Sierra Vista, Del Webb, West Roseville, North Roseville, Northeast Roseville, Stoneridge, and Southeast Roseville Specific Plan Areas, and portions of the Infill Area, although the locations where this concept could be implemented could shift.²

To the extent that the City can influence whether the Infill Housing Alternative (or the proposed General Plan Update) will reduce VMT, will depend on planning that reduces travel demand per capita and per employee by promoting increased density near transit, improving the quality of non-vehicular transportation options, providing incentives for non-vehicular travel, encouraging the mixing of complementary land uses in proximity to one another, and other feasible methods.

The Infill Housing Alternative includes all the same goals and policies as the proposed General Plan Update, including Goal CIRC4 and Policies CIRC4.1 through CIRC4.7, which would help to reduce VMT. Policy CIRC4.1 would specifically address several of the factors noted above which influence the degree to which the Infill Housing Alternative would produce VMT reductions. In addition, new Mitigation Measure 4.3-1 of the proposed General Plan Update would also be implemented under the Infill Housing Alternative, requiring a new implementation measure to achieve VMT reduction. The additional housing units that would be developed under this alternative would be built within the low-VMT areas of the city, and would presumably result in lower VMT per resident than the citywide average. However, as shown in Tables 6.5-1 and 6.5-2, total and per capita VMT under the Infill Development Alternative would be similar to that under the proposed General Plan Update and would exceed the significance threshold of 12.8 VMT per capita. While the proposed General Plan Update

¹ Sacramento Area Council of Governments (SACOG). 2018 White Paper on Future Housing Product Type Demand and Preference. Available: https://www.sacog.org/sites/main/files/file-attachments/14_white_paper_on_future_housing_product_type_demand.pdf

² Please see SACOG's MTP/SCS for more detail, particularly Appendix D, pages 26 and 27: https://www.sacog.org/sites/main/files/file-attachments/appendix_d_-_land_use_documentation_0.pdf?1573685694.

policies will help reduce VMT and could generate even greater reductions under this alternative, the City cannot demonstrate definitively at this time that implementation of these policies would achieve VMT reductions to meet the threshold. Therefore, this impact would be **similar to** that experienced under the proposed General Plan Update, and would be still be **significant and unavoidable**.

Reduced Growth Alternative

The Reduced Growth Alternative contemplates reduced levels of development that would result in approximately 4,500 fewer housing units and 17,320–47,320 fewer jobs, when compared to the proposed General Plan Update. Land use changes under this alternative would reduce 2035 buildout to the amounts identified by the SACOG for Roseville in the 2020 MTP/SCS. The focus for development between present and 2035 under this alternative would be areas that have access to existing infrastructure and the “Center and Corridor” and “Established” Community types identified in the MTP/SCS – for employment, 92 percent of the new jobs would be in Center and Corridor and Established Communities and 60 percent of the new dwelling units added by 2035 would be in Center and Corridor and Established Communities. As shown in Table 6.5-3, these areas tend to have lower rates of VMT than the citywide average and the more outlying and undeveloped areas of the city. For example, the lowest per-capita, home-based VMT production areas are the Downtown, Riverside Gateway, North Central Roseville, and Northeast Roseville Specific Plan Areas, and areas with relatively high VMT include outer areas not anticipated to develop as extensively under this alternative, including the Amoruso Ranch, Creekview, Sierra Vista, and West Roseville Specific Plan Areas.³

By reducing housing development by approximately 21 percent and new jobs by 46 to 70 percent compared to the proposed General Plan Update, and focusing development within low-VMT areas, there would be reduced overall travel demand. In addition, the Reduced Growth Alternative includes all the same goals and policies as the proposed General Plan Update, including Goal CIRC4 and Policies CIRC4.1 through CIRC4.7, which would help to reduce VMT. Policy CIRC4.1 would specifically address several of the factors noted above which influence the degree to which the Reduce Growth Alternative would produce VMT reductions. In addition, new Mitigation Measure 4.3-1 of the proposed General Plan Update would also be implemented under the Reduced Growth Alternative, requiring a new implementation measure to achieve VMT reduction. However, the City cannot demonstrate definitively at this time that implementation of these policies would achieve VMT reductions to meet the threshold of 12.8 VMT per capita. Therefore, VMT impacts would be **reduced** under this alternative compared to the proposed General Plan Update, but would still be **significant and unavoidable**.

No Project Alternative

Under the No Project Alternative, the same amount of development would occur as compared to the proposed General Plan Update. In addition, there would be no content revisions to the existing General Plan goals, and policies, and no new General Plan goals, policies and implementation measures. However, the existing General Plan goals and policies would continue to be implemented. While the existing General Plan includes Travel Demand Management Goals 1 and 2 to reduce travel demand on the City’s roadway systems and reduce total vehicle emissions in the City of Roseville and the South Placer County region, these goals and related policies would be revised under the proposed General Plan Update to more specifically identify measures that would result in reduced VMT and to require that Specific Plan Amendments and land use development projects not

³ Not including the Dell Webb Specific Plan Area, where it is demographics, rather than location or design that holds down vehicular travel demand.

included in an adopted Specific Plan shall demonstrate consistency with the VMT rate included in the SACOG SCS for the SCS planning horizon year (for example, proposed General Plan Update Goal CIRC4 and Policies CIRC4.1, CIRC4.2, CIRC4.3, CIRC4.4, CIRC4.5, CIRC4.6, and CIRC4.7). Without these goal and policy revisions, the No Project Alternative may not achieve the same level of increased VMT efficiency that would be achieved by future development under the proposed General Plan. Therefore, VMT impacts would be **greater** under this alternative compared to the proposed General Plan Update, and still **significant and unavoidable**.

6.5.3.2 LEVEL OF SERVICE (*Informational Only*)

Level of Service (LOS), which describes roadway-operating conditions and can be used to represent whether traffic volumes in a roadway segment or intersection are less than, equal, to or greater than roadway capacity. LOS was analyzed for signalized intersections within the Planning Area for roadway conditions with implementation of the proposed General Plan Update. As described in Section 4.3 of this EIR, “Transportation,” under Impact 4.3-2, more than 70 percent of intersections would perform at LOS C or better with implementation of the proposed General Plan Update, which is consistent with the City’s policy of at least 70 percent of signalized intersections operating at LOS C or better during the AM and PM peak hours.

Infill Housing Alternative

While the Infill Housing Alternative would result in the development of additional multi-family residential units when compared to the proposed General Plan Update, these would be in areas identified in the General Plan for infill housing, as shown in Exhibit 6-1. As explained in Section 6.5.2.1 above regarding VMT, although the additional housing would lead to slightly increased total VMT, the proposed infill housing areas are typically low-VMT areas (see Table 6.5-3 above) and VMT per resident under this alternative would be the same as under the proposed General Plan Update constrained transportation scenario (see Table 6.5-2 above).

The Infill Housing Alternative includes all of the same goals and policies as the proposed General Plan Update, existing General Plan Growth Management Goal 7, Functional Classification Goal 1, Level of Service Policies 2, 3, 4, and Bikeways/Trails Goal 2 (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Goal LU8.1, Policies CIRC1.1 and CIRC1.3, Goal CIRC2 and Policy CIRC2.1, and Goal CIRC4 and Policies CIRC4.1, CIRC4.6, and CIRC4.7, listed above, are designed to reduce congestion and accommodate existing and new travel demand by appropriately planning for new growth, establishing appropriate design standards for City roadways, providing adequate facilities and services to maintain LOS, and promoting infill development and alternative modes of travel. Therefore, the additional housing included in this alternative does not result in an increased degradation of LOS when compared with the proposed General Plan Update. Therefore the growth proposed in the Infill Housing Alternative would result in **similar** LOS operations to the proposed General Plan Update

Reduced Growth Alternative

Under the Reduced Growth Alternative, less new development would occur as compared to the proposed General Plan Update, and the development that would occur would be in the areas of existing development that have access to existing infrastructure and the “Center and Corridor” and “Established” Community Types identified in the MTP/SCS. As explained in the SACOG MTP/SCS 2020 EIR, housing developed within the Center and Corridor Community type takes advantage of existing transportation infrastructure and provides more opportunities for shorter trips by non-automobile modes of travel. In addition, improvement projects in these areas

would be encouraged to concentrate on alleviating major bottlenecks and congestion points (SACOG 2019). The Center and Corridor Community Type, as shown in Exhibit 6-1, would also overlap with the Pedestrian Districts developed under the proposed General Plan Update (see III Circulation Element, Figure III-3, of the proposed General Plan Update). In Pedestrian Districts, special design consideration will be given to sidewalk widths, planter strips, street furniture, automobile travel lane widths, curb radii, and other enhancements that improve the pedestrian experience. It is understood that the establishment of a Pedestrian District and the implementation of these design features may reduce vehicle LOS, though the City's LOS policy does not apply to projects proposed within these areas.

However, it should also be noted, that most intersections operating worse than LOS C under the proposed General Plan Update are located in established areas of the City, versus new growth areas. Therefore, although the focus of development within the Center and Corridor areas and Pedestrian Districts would likely reduce VMT, this trend in LOS in the established areas of the City indicates that focusing development in these areas under the Reduced Growth Alternative as opposed to the new growth areas of the City could lead to a decrease (worsening) of LOS or no tangible change compared to the proposed General Plan Update.

The Reduced Growth Alternative includes all the same goals and policies as the proposed General Plan Update, including existing General Plan Growth Management Goal 7, Functional Classification Goal 1, Level of Service Policies 2, 3, 4, and Bikeways/Trails Goal 2 (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Goal LU8.1, Policies CIRC1.1 and CIRC1.3, Goal CIRC2 and Policy CIRC2.1, and Goal CIRC4 and Policies CIRC4.1, CIRC4.6, and CIRC4.7, listed above, are designed to reduce congestion and accommodate existing and new travel demand by appropriately planning for new growth, establishing appropriate design standards for City roadways, providing adequate facilities and services to maintain LOS, and promoting infill development and alternative modes of travel. Therefore, the reduced growth between present and 2035 as proposed under this alternative would result in **similar** LOS operations to the proposed General Plan Update.

No Project Alternative

The existing General Plan includes the same level of development as would occur under the proposed General Plan Update. Under the No Project Alternative, there would be no content revisions to the existing General Plan goals, and policies, and no new General Plan goals, policies and implementation measures. However, the existing General Plan goals and policies would continue to be implemented. The existing General Plan and proposed General Plan Update both contain the policy to provide a LOS of C or better at a minimum of 70 percent of the signalized intersections during the AM and PM peak hours and use of the City's Intelligent Transportation System, which provide improved level of service, would occur under the No Project Alternative as well as the proposed General Plan Update. Therefore, LOS operations would be **similar** under this alternative compared to the proposed General Plan Update.

6.5.3.3 ROADWAY DESIGN HAZARDS (*Increase Hazards Due to a Design Feature, Incompatible Uses, or Inadequate Emergency Access*)

Infill Housing Alternative

The Infill Housing Alternative would involve development of additional housing units as compared to the proposed General Plan Update. As discussed in Section 4.3 of this EIR, all new facilities and facility

improvements contained in the Circulation Diagram of the proposed General Plan Update would be constructed to applicable design standards that have been created to minimize the potential for conflicts or collisions, and these same requirements would apply to this alternative. The land uses and transportation networks have been comprehensively planned through the Specific Plan process to conform to the City's Improvement Standards, which establish appropriate and safe designs, including minimum signal and driveway spacing, sidewalk and pedestrian crossing designs, bicycle lane designs, and other features which ensure a safe and reliable network. The City also maintains, and reviews projects for consistency with, its *Design and Construction Standards* requiring minimum roadways widths, turnaround areas, and turning radii to ensure that emergency vehicle access is maintained. These standards and the City's review process would be maintained and enforced in the same manner under the Infill Housing Alternative as would be experienced under the proposed General Plan Update. Furthermore, all the goals and policies in the proposed General Plan Update are designed to provide for a safe and efficient transportation network, and this alternative would include all these goals and policies as in the proposed General Plan Update. The additional multi-family housing development proposed under this alternative compared to development under the proposed General Plan Update would have no bearing on the potential hazards due to a design feature, incompatible uses, or inadequate emergency access. Therefore, impacts from increases in hazards due to a design feature or incompatible uses under the Infill Housing Alternative would be **similar to the** proposed General Plan Update, and would be still be **less than significant**.

Reduced Growth Alternative

Under the Reduced Growth Alternative, less new development would occur as compared to the proposed General Plan Update. As discussed in Section 4.3 of this EIR, "Transportation," all new facilities and facility improvements contained in the Circulation Diagram of the proposed General Plan Update would be constructed to applicable design standards that have been created to minimize the potential for conflicts or collisions, and these same standards would apply to this alternative. The land uses and transportation networks have been comprehensively planned through the Specific Plan process to conform to the City's Improvement Standards, which establish appropriate and safe designs, including minimum signal and driveway spacing, sidewalk and pedestrian crossing designs, bicycle lane designs, and other features which ensure a safe and reliable network. The City also maintains, and reviews projects for consistency with, its *Design and Construction Standards* requiring minimum roadways widths, turnaround areas, and turning radii to ensure that emergency vehicle access is maintained. These standards and the City's review process would be maintained and enforced in the same manner under the Reduced Growth Alternative as under the proposed General Plan Update. Furthermore, the goals and policies in the proposed General Plan Update are designed to provide for a safe and efficient transportation network, and this alternative would include these same goals and policies. In addition, as described in the Circulation Element of the proposed General Plan Update and detailed in Pedestrian Access Goal CIRC6.1 and Policies 6.1 through 6.5, within Pedestrian Districts, one area in which development under this alternative would be focused (as shown in Exhibit 6-2), the City places a particular emphasis on pedestrian activity and safety, and special design considerations will be given to sidewalk widths, planter strips, street furniture, automobile travel lane widths, curb radii, and other enhancements that improve the pedestrian experience. The phased development proposed under this alternative compared to development under the proposed General Plan Update would have no bearing on the potential hazards due to a design feature, incompatible uses, or inadequate emergency access. Therefore, impacts from increases in hazards due to a design feature or incompatible uses under the Reduced Growth Alternative would be **similar to the** proposed General Plan Update, and would be still be **less than significant**.

No Project Alternative

Under the No Project Alternative, the same amount of development would occur as compared to the proposed General Plan Update, and therefore a similar potential for roadway design hazards would occur. Under the No Project Alternative, there would be no content revisions to the existing General Plan goals and policies, and no new General Plan goals and policies. However, the policy revisions included as part of the proposed General Plan Update do not focus specifically on traffic hazards, and all new facilities and facility improvements contained in the circulation diagram of the existing General Plan would be constructed to applicable design standards that have been created to minimize the potential for conflicts or collisions. Furthermore, all the goals and policies in the proposed General Plan Update are designed to provide for a safe and efficient transportation network. Site-specific development projects would be reviewed by the City at the permitting stage for compliance with the City's (2019) *Design and Construction Standards*, which require proper street design and ingress and egress for emergency vehicles. Therefore, impacts from increases in hazards due to a design feature or incompatible uses under the No Project Alternative would be **similar to** the proposed General Plan Update, and, for the same reasons described in the analysis of the proposed General Plan Update in Section 4.3, would be also be **less than significant**.

6.5.3.4 TRANSIT, BICYCLES, AND PEDESTRIANS (*Conflict with Adopted Policies, Plans, or Programs Regarding Public Transit, Bicycles, or PEDESTRIAN Facilities, or Create or Exacerbate Disruptions to the Performance or Safety of These Systems*)

Infill Housing Alternative

The Infill Housing Alternative would involve development of additional housing units as compared to the proposed General Plan Update. The Infill Housing Alternative includes all the same goals and policies as the proposed General Plan Update, including existing General Plan Functional Classification Goal 1 and Policies 2 and 4, and Bikeways/Trails Goal 2 and Policy 4 (which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Policies CIRC1.1, CIRC1.3, CIRC1.5, Goal CIRC3, and Policy CIRC5.1. As discussed in Section 4.3 of this EIR, "Transportation," the proposed General Plan Update these goals and policies, in addition to required compliance with the City's Design and Construction Standards are designed to accommodate new travel demand by providing adequate public transit, bicycle, and pedestrian facilities and services including complete streets. Placing the additional infill housing under this alternative in existing developed neighborhoods, as shown in Exhibit 6-1, helps to place residents closer to destination uses and offers greater opportunity for implementation of the aforementioned proposed General Plan Update goals and policies, thereby reducing VMT because new residents have greater opportunities to use public transport and to walk or bicycle to and from work. The impacts of the Infill Housing Alternative related to conflicts with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities would be **reduced** as compared to the proposed General Plan Update, and would be **less than significant**.

Reduced Growth Alternative

Under the Reduced Growth Alternative, less new development would occur as compared to the proposed General Plan Update. The Reduced Growth Alternative includes all the same goals and policies as the proposed General Plan Update, including existing General Plan Functional Classification Goal 1 and Policies 2 and 4, and Bikeways/Trails Goal 2 and Policy 4 (which have been renumbered for the proposed General Plan Update), as

well as revised proposed General Plan Update Policies CIRC1.1, CIRC1.3, CIRC1.5, Goal CIRC3, and Policy CIRC5.1. As discussed on in Section 4.3 of this EIR, the proposed these goals and policies, in addition to required compliance with the City’s Design and Construction Standards, are designed to accommodate new travel demand by providing adequate public transit, bicycle, and pedestrian facilities and services including complete streets. These same goals and policies would apply to this alternative. Therefore, the impacts of the Reduced Development Alternative related to conflicts with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities would be **similar to** the proposed General Plan Update, and would be **less than significant**.

No Project Alternative

The existing General Plan includes the same level of development as would occur under the proposed General Plan Update, and therefore a similar potential for conflicts with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities would occur. Under the No Project Alternative, there would be no content revisions to the existing General Plan goals, policies and implementation measures, and no new General Plan goals, policies and implementation measures that can reduce potential impacts, and no updates to comply with State law changes, would occur. However, the existing General Plan goals and policies would continue to be implemented, including those that are designed to accommodate new travel demand by providing adequate public transit, bicycle, and pedestrian facilities and services including complete streets. Therefore, the impacts of the No Project Alternative related to conflicts with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities would be **similar to** the proposed General Plan Update, and, for the same reasons described in the analysis of the proposed General Plan Update in Section 4.3, would be also be **less than significant**.

6.5.4 AIR QUALITY

6.5.4.1 CONSTRUCTION-RELATED EMISSIONS OF CRITERIA AIR POLLUTANTS/CONFLICTS WITH AIR QUALITY PLANS (*Generation of Short-Term Construction-Related Emissions of Criteria Air Pollutants and Precursors That Would Result in a Cumulatively Considerable Net Increase of Any Criteria Pollutant for which the Project Region is in Nonattainment, and Conflict with or Obstruct an Air Quality Plan*)

Infill Housing Alternative

The Infill Housing Alternative would result in increased development for additional residential units, as compared to the proposed General Plan Update. As described in Impact 4.4-1 of Section 4.4 of this EIR, “Air Quality,” this would result in an increased generation of short-term construction-related emissions of criteria air pollutants (e.g., particulate matter [PM₁₀, PM_{2.5}] and carbon monoxide [CO]) and ozone precursors (e.g., reactive organic gasses [ROG] and nitrogen oxides [NO_x]) from ground disturbing activities; exhaust emissions from use of off-road equipment, material delivery, and construction worker commutes; building construction; asphalt paving; and application of architectural coatings.

Modeling performed for the proposed General Plan Update determined that maximum daily construction-related emission of ROG, NO_x and PM₁₀ would exceed Placer County Air Pollution Control District (PCAPCD) thresholds of significance. Because the Infill Development Alternative includes slightly more construction than under the proposed General Plan Update, additional emissions over the PCAPCD thresholds would be generated.

The Infill Housing Alternative includes all the same goals and policies as the proposed General Plan Update, including Air Quality Goal AQ1.1 and Policy AQ1.3. Proposed General Plan Update Policy AQ1.3 requires new development to implement applicable emissions control measures recommended by the PCAPCD to reduce the emission of criteria air pollutants and ozone precursors. The PCAPCD provides recommended construction mitigation measures as guidance for the types of measures that could potentially be implemented for development projects. Selection of the appropriate measures is based on the site-specific and project-specific aspects of any given project. The effectiveness of these measures would depend on the number and extent of strategies feasible to incorporate in any given project.

As discussed in Impact 4.4-1 of Section 4.4, existing laws and regulations, including PCAPCD rules and regulations, combined with existing and proposed General Plan policies, would reduce these impacts. However, because the exact buildout schedule of the proposed land uses cannot be determined, identifying which of the PCAPCD potential mitigation measures would be applicable and the level of effectiveness is not possible at this time. Construction-related emissions could still exceed significance thresholds. Such emissions could exceed or contribute substantially to an existing or projected air quality violation and/or expose sensitive receptors to substantial pollutant concentrations. In addition, for the same reasons described in the analysis of the proposed General Plan Update in Section 4.4, these emissions could conflict with or obstruct implementation of the applicable air quality plan. Since development would be increased, impacts from construction-related emissions of criteria air pollutants and conflicts with an applicable air quality plan under the Infill Housing Alternative would be **greater than** under the proposed General Plan Update, and remain **significant and unavoidable**.

Reduced Growth Alternative

Under the Reduced Growth Alternative, less development would occur as compared to the proposed General Plan Update, and therefore a lower level of criteria air pollutant and ozone precursor emissions from short-term construction-related activities would be generated.

The Reduced Growth Alternative includes all the same goals and policies as the proposed General Plan Update, including Air Quality Goal AQ1.1 and Policy AQ1.3, which requires new development to minimize air pollutant emissions and implement applicable construction emissions control measures recommended by the PCAPCD to reduce the emission of criteria air pollutants and ozone precursors. As with development under the proposed General Plan Update, the effectiveness of these measures would depend on the number and extent of strategies feasible to incorporate in any given project. As discussed in Impact 4.4-1 of Section 4.4, existing laws and regulations, including PCAPCD rules and regulations, combined with existing and proposed General Plan policies, would help reduce construction-related air pollutant emissions. However, because the exact buildout schedule of the proposed land uses cannot be determined, identifying which of the PCAPCD potential mitigation measures would be applicable and the level of effectiveness is not possible at this time. Construction-related emissions could still exceed significance thresholds. Such emissions could exceed or contribute substantially to an existing or projected air quality violation and/or expose sensitive receptors to substantial pollutant concentrations. In addition, for the same reasons described in the analysis of the proposed General Plan Update in Section 4.4, these emissions could conflict with or obstruct implementation of the applicable air quality plan. Therefore, impacts from construction-related emissions of criteria air pollutants and conflicts with an applicable air quality plan under the Reduced Growth Alternative would be **reduced** compared to the proposed General Plan Update, but would still be **significant and unavoidable**.

No Project Alternative

Under the No Project Alternative, the same amount of development would occur as compared to the proposed General Plan Update, and therefore a similar level of construction-related criteria air pollutant and ozone precursor emissions would be generated. However, under the No Project Alternative, the goal and policy revisions and additions under the proposed General Plan Update would not be implemented. Therefore, under the No Project Alternative, no updates to the General Plan to provide more detailed and updated implementation measures that can reduce potential impacts, and no updates to comply with State law changes, would occur. However, the existing General Plan does contain policies that are designed to reduce the emissions of criteria air pollutants and ozone precursors, and these policies would continue to be implemented. For example, the existing General Plan does include Air Quality General Policy 2 to requiring coordination with PCAPCD to monitor air pollutants of concern on a continuous basis. However, this is less specific with regard to minimizing air pollutant emissions than the revised goals and policies within the proposed General Plan Update. Proposed Goal AQ1.1 and Policy 1.3, which more specifically require the reduction of local air pollutant emissions to assist with meeting and maintaining ambient air quality standards and implementing applicable emission control measures such as the PCAPCD recommended construction mitigation measures to reduce air pollutant emissions and avoid significant air quality impacts, would not be implemented under the No Project Alternative. However, existing laws and regulations, including PCAPCD rules and regulations, as well as review of proposed development projects by PCAPCD, would apply to the No Project Alternative in the same manner as under the proposed General Plan Update. Therefore, the level of construction-related emissions under the No Project Alternative would be similar to that under the proposed General Plan Update and could still exceed significance thresholds. Such emissions could exceed or contribute substantially to an existing or projected air quality violation and/or expose sensitive receptors to substantial pollutant concentrations. In addition, for the same reasons described in the analysis of the proposed General Plan Update in Section 4.4, these emissions could conflict with or obstruct implementation of the applicable air quality plan. Therefore, impacts from construction-related emissions of criteria air pollutants and conflicts with an applicable air quality plan under the No Project Alternative would be **similar to the proposed General Plan Update**, and would still be **significant and unavoidable**.

6.5.4.2 OPERATIONAL EMISSIONS OF CRITERIA AIR POLLUTANTS/CONFLICTS WITH AIR QUALITY PLANS (*Generation of Long-Term Operational Emissions of Criteria Air Pollutants and Precursors That Would Result in a Cumulatively Considerable Net Increase of Any Criteria Pollutant for Which the Project Region is in Nonattainment, and Conflict With or Obstruct an Air Quality Plan*)

Infill Housing Alternative

The Infill Housing Alternative would result in increased development for additional residential units, as compared to the proposed General Plan Update. As described in Impact 4.4-1 of Section 4.4, “Air Quality,” of this EIR, this would result in an increased generation of long-term criteria air pollutant and precursor emissions from mobile, energy, and area sources such as vehicle trips, natural gas combustion for water and space heating, landscape maintenance equipment, hearth (fireplace) operation, and periodic application of architectural coatings for building maintenance. Operational emissions have greater potential to affect the attainment status of an air basin, particularly as a result of increased traffic and energy demands from additional development.

Modeling performed for the proposed General Plan Update determined that maximum daily operation-related emission of ROG, NO_x and PM₁₀ would exceed PCAPCD thresholds of significance. Because the Infill Housing

Alternative includes more development than the proposed General Plan Update, additional emissions over the PCAPCD thresholds would be generated.

The rules and regulations described in Impact 4.4-2 in Section 4.4 would apply to the Infill Housing Alternative in the same manner as the proposed General Plan Update. In addition, the Infill Housing Alternative includes all the same goals and policies as the proposed General Plan Update, including Goals AQ1.1-1.7 and Policies AQ1.1-1.3, AQ1.12-1.18, AQ1.22; Goal CIRC4 and Policies CIRC3.6, CIRC4.1–4.6, CIRC5.1, CIRC6.1-6.3; Policies LU2.1-2.6 and LU3.4, which would help to reduce emissions by promoting energy-efficient building design, and reducing emissions from vehicle miles traveled (VMT), and would be applied to this alternative. Mitigation Measure 4.4-2a would require a new proposed General Plan Update Implementation Measure that requires future projects to implement applicable PCAPCD standard operational mitigation measures or those design features determined to be as effective. New proposed General Plan Update Mitigation Measure 4.4-2b would require a new General Plan Implementation Measure such that if operational emissions would still exceed PCAPCD-recommended thresholds of significance after implementation of applicable PCAPCD standard operational mitigation measures and other feasible design features, the site-specific project would be required to offset remaining project emissions in excess of thresholds by establishing off-site mitigation or participation in PCAPCD's Offsite Mitigation Program. However, because all the specific development projects within the Planning Area cannot be defined at the time of this analysis, identifying which of the PCAPCD potential mitigation measures would be applicable and the level of effectiveness is not possible at this time.

Operational emissions could still exceed significance thresholds. Such emissions could exceed or contribute substantially to an existing or projected air quality violation and/or expose sensitive receptors to substantial pollutant concentrations. In addition, for the same reasons described in the analysis of the proposed General Plan Update in Section 4.4, these emissions could conflict with or obstruct implementation of the applicable air quality plan. Because development would be increased under this alternative, impacts from operation-related emissions of criteria air pollutants and conflicts with an applicable air quality plan under the Infill Housing Alternative would be **greater than** the proposed General Plan Update, and remain **significant and unavoidable**.

Reduced Growth Alternative

Under the Reduced Growth Alternative, less new development would occur as compared to the proposed General Plan Update, and therefore a lower level of criteria air pollutant and ozone precursor emissions from long-term operational activities would be generated. Operational emissions have greater potential to affect the attainment status of an air basin, particularly as a result of increased traffic and energy demands from additional development.

As discussed in Impact 4.4-2 of Section 4.4 of this EIR, PCAPCD enforcement of rules and regulations that would reduce the long-term operational impacts would apply to the Reduced Growth Alternative in the same manner as under the proposed General Plan Update. In addition, the Reduced Growth Alternative includes all the same goals and policies as the proposed General Plan Update, including Goals AQ1.1-1.7 and Policies AQ1.1-1.3, AQ1.12-1.18, AQ1.22; Goal CIRC4 and Policies CIRC3.6, CIRC4.1–4.6, CIRC5.1, CIRC6.1-6.3; Policies LU2.1-2.6 and LU3.4, which would help to reduce operational air pollutant emissions. The proposed General Plan Update Mitigation Measure 4.4-2a would require a new General Plan Implementation Measure that requires future projects to implement applicable PCAPCD standard operational mitigation measures or those design features determined to be as effective. New proposed General Plan Update Mitigation Measure 4.4-2b would

require a new General Plan Implementation Measure such that if operational emissions would still exceed PCAPCD-recommended thresholds of significance after implementation of applicable PCAPCD standard operational mitigation measures and other feasible design features, the site-specific project would be required to offset remaining project emissions in excess of thresholds by establishing off-site mitigation or participation in PCAPCD's Offsite Mitigation Program. However, because all the specific future development projects cannot be determined, identifying which of the PCAPCD potential mitigation measures would be applicable and the level of effectiveness is not possible at this time.

Operational emissions could still exceed significance thresholds. Such emissions could exceed or contribute substantially to an existing or projected air quality violation and/or expose sensitive receptors to substantial pollutant concentrations. In addition, for the same reasons described in the analysis of the proposed General Plan Update in Section 4.4, these emissions could conflict with or obstruct implementation of the applicable air quality plan. Therefore, impacts from operational emissions of criteria air pollutants and conflicts with an applicable air quality plan under the Reduced Growth Alternative would be **reduced** compared to the proposed General Plan Update, but would still be **significant and unavoidable**.

No Project Alternative

Under the No Project Alternative, the same amount of development would occur as compared to the proposed General Plan Update, and therefore a similar sources of operational criteria air pollutant and ozone precursor emissions. Under the No Project Alternative, there would be no content revisions to the existing General Plan goals and policies, and no new General Plan goals, policies and implementation measures. However, the existing General Plan contains goals and policies would continue to be implemented. Therefore, under the No Project Alternative, no updates to the General Plan to provide more detailed and updated implementation measures that can reduce potential impacts, and no updates to comply with State law changes, would occur. For example, Mitigation Measures 4.4-2a and 4.4-2b requiring new General Plan Implementation Measures that require projects to implement PCAPCD standard operational measures to reduce emissions, and to offset remaining project emissions in excess of thresholds by establishing off-site mitigation or participation in PCAPCD's Offsite Mitigation Program, would not be implemented. In addition, , the existing General Plan does contain policies that are designed to reduce the emissions of criteria air pollutants and ozone precursors, and these policies would continue to be implemented, the existing policies are not as specific as those included as part of the proposed General Plan Update. The proposed General Plan Update Goals AQ1.1-1.7 and Policies AQ1.1-1.3, AQ1.12-1.18, AQ1.22; Goal CIRC4 and Policies CIRC3.6, CIRC4.1-4.6, CIRC5.1, CIRC6.1-6.3; Policies LU2.1-2.6 and LU3.4 include revisions from the existing General Plan that would help further reduce emissions of criteria air pollutants and ozone precursors. Without the goal and policy revisions of the proposed General Plan Update, the No Project Alternative may not achieve the same reduction of criteria air pollutant and ozone precursor emission reductions. Modeling performed for the proposed General Plan Update determined that maximum daily operation-related emission of ROG, NO_x and PM₁₀ would exceed PCAPCD thresholds of significance. Because the No Project Alternative would not likely achieve the same level of emissions reductions as would be achieved due to goal and policy revisions in the proposed General Plan Update, additional emissions would be generated and operational emissions could still exceed significance thresholds. Such emissions could exceed or contribute substantially to an existing or projected air quality violation and/or expose sensitive receptors to substantial pollutant concentrations. In addition, for the same reasons described in the analysis of the proposed General Plan Update in Section 4.4, these emissions could conflict with or obstruct implementation of the applicable air quality plan. Without the additional and revised policies and implementation measures included in the proposed General Plan Update,

impacts from operation-related emissions of criteria air pollutants and conflicts with an applicable air quality plan under the No Project Alternative would be **greater than** the proposed General Plan Update, and would remain **significant and unavoidable**.

6.5.4.3 EMISSIONS OF TOXIC AIR CONTAMINANTS (*Expose Sensitive Receptors to Substantial Pollutant Concentrations*)

Infill Housing Alternative

Construction

The Infill Housing Alternative would result in increased development for additional residential units, and therefore would result in increased generation of short-term construction-related air pollutant emissions, including diesel PM (DPM) from heavy-duty construction equipment, haul trucks, on-site generator, and construction worker vehicle exhaust. The additional development would be focused in infill areas, as shown in Exhibit 6-1. These areas are in closer proximity to existing development, including sensitive land uses. The increased DPM emissions and proximity to existing development could expose more sensitive receptors to substantial pollutant concentrations, as compared to the proposed General Plan Update. Residential areas are considered sensitive to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to pollutants that may be present. As described in Impact 4.4-3 of Section 4.4. of this EIR, because the use of off-road heavy-duty diesel equipment would be temporary and intermittent, and because of the highly dispersive properties of diesel PM (concentrations lower extremely quickly over distance; Zhu et al. 2002), construction-related TAC emissions associated with typical construction activities are not expected to expose sensitive receptors to substantial concentrations of TACs, and implementation of existing rules and regulations aimed at reducing emissions standards for heavy-duty diesel engines over time will continue to reduce total emissions from operation of construction equipment and vehicles throughout the buildout period of the General Plan.

The Infill Housing Alternative would implement the same proposed General Plan Update new and revised goals, policies, and implementation measures, including Goal AQ1.1, which aims to minimize public exposure to toxic or hazardous air pollutants, and Policy AQ3.1, which requires projects that could generate or expose sensitive uses to substantial pollutant concentrations to incorporate strategies to reduce exposure to such emissions. All future development within the Planning Area that could generate substantial emissions will incorporate strategies to reduce emissions, pursuant to General Plan policy. In addition, adherence to all applicable laws, rules and regulations, including California state law to limit idling and PCAPCD rules to limit construction-related DPM and ROG emissions would further reduce potential TAC emissions from the additional construction-related activities that would occur under the Infill Housing Alternative. With implementation of these emissions reduction measures, and because the City does not anticipate the scale of infill development adjacent to sensitive receptors that would result in any potentially significant impact. Therefore, for the same reasons described in the analysis of the proposed General Plan Update in Section 4.4, impacts from exposure of sensitive receptors to substantial pollutant concentrations from construction-related activities under the Infill Housing Alternative would be **similar to** that which be experienced under the proposed General Plan Update, and would remain **less than significant**.

Operations

Within or adjacent to the Planning Area, there are two freeways (Interstate 80 and Highway 65), several distribution centers, a rail yard, dry cleaning operations, and gas stations, but there are no existing chrome platers. Areas with a land use designation of General Industrial on the City's General Plan Land Use Map allow heavy industrial uses such as chrome platers, so there is the potential for such a use to be proposed in the future. The Infill Housing Alternative includes additional infill housing in proximity to the Roseville Rail Yard, where increased emissions of TACs are present due to the operation of locomotive engines. ARB implements several statewide diesel-related programs and strategies designed to reduce diesel PM and TAC emissions and subsequent exposure. The U.S. Environmental Protection Agency (EPA) has adopted regulations to improve emissions standards for existing and remanufactured locomotives, and sets higher exhaust emission standards for newly built locomotives. Existing General Plan Air Quality Policy 4 and 8 (listed previously in the Regulatory Framework section, and which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Policies AQ1.2, 1.3, AQ1.12, AQ1.13, AQ1.14, AQ1.16, and AQ1.22, would help to reduce operational TAC emissions. The proposed General Plan Update Mitigation Measure 4.4-2a would reduce air pollutant emissions during short-term construction and long-term operational activities that could occur in proximity to sensitive receptors. General Plan Update Mitigation Measure 4.4-3 would further reduce potential risk of exposure by sensitive receptors to remaining toxic air contaminant (TAC) emissions by establishing a buffer distance between construction-related emission sources of TACs and potential sensitive receptors. If the recommended buffer distances cannot be achieved, proposed General Plan Update Mitigation Measures 4.4-3a would reduce exposure to TACs by future sensitive receptors along high-volume roadways within the Planning Area by requiring the implementation of feasible design features identified by ARB as potential strategies to reduce exposure to TACs along high-volume roadways, such as Interstation 80 and State Route 65, as well as near the Roseville Rail Yard. While these measures would reduce potential likelihood of exposure of sensitive receptors to substantial pollutant concentrations, because all of the specific development projects under this alternative cannot be defined at the time of this analysis, the precise effectiveness of these measures cannot be determined and the potential for sensitive receptors to be exposed to TACs is still considered significant. Therefore, because the Infill Housing Alternative includes more residential development in areas more likely to result in exposure of sensitive receptors to TAC emissions than under the proposed General Plan Update, impacts from exposure of sensitive receptors to substantial pollutant concentrations under the Infill Housing Alternative would be **greater than** the proposed General Plan Update, and would remain **significant and unavoidable**.

Reduced Growth Alternative

Construction

Under the Reduced Growth Alternative, less new development would occur as compared to the proposed General Plan Update, and therefore would result in reduced generation of short-term construction-related air pollutant emissions, including DPM from heavy-duty construction equipment, haul trucks, on-site generator, and construction worker vehicle exhaust. However, the development that does occur would be focused in existing developed areas, which tend to be those that are closer to existing and future sources of substantial pollutant concentrations than new development on the edges of the city. While there would be less development under the Reduced Growth Alternative, because the development that would occur would be in areas more likely to be in proximity to existing and future sources of substantial pollutant concentrations, the potential for exposure to substantial pollutant concentrations associated with the Reduced Growth Alternative would be comparable to that described under the Infill Housing Alternative above.

As described in Impact 4.4-3 of Section 4.4. of this EIR, because the use of off-road heavy-duty diesel equipment would be temporary and intermittent, and because of the highly dispersive properties of diesel PM (concentrations lower extremely quickly over distance; Zhu et al. 2002), construction-related TAC emissions associated with typical construction activities are not expected to expose sensitive receptors to substantial concentrations of TACs, and implementation of existing rules and regulations aimed at reducing emissions standards for heavy-duty diesel engines over time will continue to reduce total emissions from operation of construction equipment and vehicles throughout the buildout period of the General Plan. In addition, the Reduced Growth Alternative would implement the same proposed General Plan Update new and revised goals, policies, and implementation measures, including Goal AQ1.1, which aims to minimize public exposure to toxic or hazardous air pollutants, and Policy AQ3.1, which requires projects that could generate or expose sensitive uses to substantial pollutant concentrations to incorporate strategies to reduce exposure to such emissions.

All future development within the Planning Area that could generate substantial emissions will incorporate strategies to reduce emissions, per General Plan policy. In addition, adherence to all applicable laws, rules and regulations, including California state law to limit idling and PCAPCD rules to limit construction-related DPM and ROG emissions would further reduce potential TAC emissions from the additional construction-related activities that would occur under the Infill Housing Alternative. With implementation of these emissions reduction measures, and because the City does not anticipate the scale of development adjacent to sensitive receptors that would result in any potentially significant impact. Therefore, impacts from exposure of sensitive receptors to substantial pollutant concentrations from construction-related activities under the Reduced Growth Alternative would be **similar to the proposed General Plan Update**, and would remain **less than significant**.

Operations

Within or adjacent to the Planning Area, there are two freeways (Interstate 80 and Highway 65), several distribution centers, a rail yard, dry cleaning operations, and gas stations, but there are no existing chrome platers. Areas with a land use designation of General Industrial on the City's General Plan Land Use Map allow heavy industrial uses such as chrome platers, so there is the potential for such a use to be proposed in the future. While there would be less development under the Reduced Growth Alternative, because the development that would occur would be in areas more likely to be in proximity to existing and future sources of substantial pollutant concentrations, such as commercial and industrial land uses, the potential for exposure to substantial pollutant concentrations associated with the Reduced Growth Alternative would be comparable to that described under the Infill Housing Alternative, above.

As discussed in Impact 4.4-3 in Section 4.4 of this EIR, ARB implements several statewide diesel-related programs and strategies designed to reduce diesel PM and TAC emissions and subsequent exposure. USEPA has also adopted regulations to improve emissions standards for existing and remanufactured locomotives, and sets higher exhaust emission standards for newly built locomotives. The proposed General Plan Update Mitigation Measures 4.4-2a and 4.4-3 would require proposed General Plan Update Implementation Measures that would reduce potential likelihood of exposure of sensitive receptors to substantial pollutant concentrations. However, because all the specific development projects under the Reduced Growth Alternative cannot be defined at the time of this analysis, the precise effectiveness of these measures cannot be determined and the potential for sensitive receptors to be exposed to TACs is still considered significant. Therefore, because the Reduced Growth Alternative includes more focused development in areas more likely to result in exposure of sensitive receptors to TAC emissions than under the proposed General Plan Update, impacts from exposure of sensitive receptors to

substantial pollutant concentrations under the Reduced Growth Alternative would be **slightly greater than** the proposed General Plan Update, and would remain **significant and unavoidable**.

No Project Alternative

Construction

The existing General Plan includes the same level of development as would occur under the proposed General Plan Update. Under the No Project Alternative, there would be no content revisions to the existing General Plan goals, policies and implementation measures, and no new General Plan goals, policies and implementation measures. However, the existing General Plan goals and policies would continue to be implemented. For example, revisions to Goal AQ1.1 and new Policy AQ1.3 under the proposed General Plan Update would not be implemented under the No Project Alternative. Goal AQ1.1 includes clarifying language to focus on the reduction of local air pollutant emissions. Policy AQ1.3 calls for implementation of strategies to reduce exposure of sensitive uses to substantial pollutant concentrations to avoid significant air quality impacts. Similarly, new Mitigation Measure 4.4-3 under the proposed General Plan Update, which requires new General Plan Implementation Measure that would reduce potential likelihood of exposure of sensitive receptors to substantial pollutant concentrations from construction-related activities, would not be implemented under the No Project Alternative. However, compliance with California state laws that limit the idling of heavy-duty vehicles and equipment and with PCAPCD Rules and Regulations that limit construction-related emissions would apply to the No Project Alternative in the same manner as would be experienced under the proposed General Plan Update. In addition, the City does not anticipate the scale of infill development adjacent to sensitive receptors that would result in any potentially significant impact. Therefore, impacts from exposure of sensitive receptors to substantial pollutant concentrations from construction-related activities under the No Project Alternative would be **slightly greater than** the proposed General Plan Update, but would still be **less than significant**.

Operations

Land uses under the No Project Alternative that may potentially include stationary sources of TACs, and potential exposure of sensitive receptors to substantial pollutant concentrations, would be similar to those under the proposed General Plan Update. However, revisions to Policy AQ1.2 and new Policies AQ1.3, and 1.22 under the Proposed General Plan Update are specifically focused on minimizing emissions from stationary sources, reducing potential exposure of sensitive uses to substantial air pollutant concentrations, and reducing harmful emissions at the Rail Yard, all of which would reduce TAC emissions; these policy revisions would not be implemented under the No Project Alternative. In addition, new Mitigation Measures 4.4-2a and 4.4-3, which require new General Plan Implementation Measures that would reduce potential likelihood of exposure of sensitive receptors to substantial pollutant concentrations, would not be implemented. The existing General Plan does contain policies that are designed to reduce the emissions of criteria air pollutants and ozone precursors, and these policies would continue to be implemented, but they do not provide the specific guidance that the new proposed Implementation Measures would. Therefore, impacts from exposure of sensitive receptors to long-term substantial pollutant concentrations under the No Project Alternative would be **greater than** the proposed General Plan Update, and would remain **significant and unavoidable**.

6.5.4.4 CO HOTSPOTS (*Result in Concentrated Carbon Monoxide Levels [“hotspots”]*)

Infill Housing Alternative

The Infill Housing Alternative would result in additional development of residential units, as compared to the proposed General Plan Update. Because CO hotspots are typically associated with high-volume roadway segments and intersections, particularly those operating at an unacceptable LOS, increasing residential density in a focused area of development could have the potential to increase congestion in and around that area as well. However, as described above in Section 6.5.3.2, “Conflict with Adopted Policies, Plans, or Programs Regarding Congestion,” the areas proposed under this alternative for additional residential development are areas of typically low VMT per resident and the additional housing included in this alternative does not increase impacts on LOS when compared to the proposed General Plan Update. In addition, the Infill Housing Alternative includes all of the same goals and policies as the proposed General Plan Update, including Level of Service Goal CIRC2 and Policies CIRC 2.1 through 2.4, all of which would facilitate a balanced transportation system, travel-demand-reducing strategies, and securing funding to all components of the City’s transportation system, including automobile, transit, bicycle, and pedestrian modes of transportation, in order to ensure the City’s level of service policy is maintained. Revised Policy LU3.4 under the proposed General Plan Update also specifically encourages infill development that is accomplished in a manner that enhances the mix of land uses in proximity to one another so that more households can access services, recreation, and jobs without the use of a car, and facilitates pedestrian activity and public transit use, thereby allowing for increased residential density without having an equivalent impact on roadway travel demand. The City of Roseville ITS also serves to improve traffic flow, avoid excessive congestion and improves the operational performance of the City’s roadway system, thereby reducing the likelihood for and extent of delays at intersections.

Analysis of Impact 4.4-4 in Section 4.4 of this EIR found that the level of traffic on the roadways within the Planning Area would not reach a level that would generate a quantity of CO emissions from local mobile sources that would result in or substantially contribute to a CO hotspot. As explained above, the Infill Housing Alternative would not increase impacts on LOS when compared to the General Plan Update and proposed General Plan Update policies would specifically address travel demand reducing strategies within infill areas. Therefore, the impact related to CO hotspots for the Infill Housing Alternative would be **similar to** the proposed General Plan Update, and for the same reasons as described in the analysis of the proposed General Plan Update in Section 4.4, would remain **less than significant**.

Reduced Growth Alternative

Under the Reduced Growth Alternative, less new development would occur as compared to the proposed General Plan Update, and therefore fewer people would be exposed to emissions. Specifically, new development would be focused in existing developed areas and the “Center and Corridor” and “Established” Community Types, as shown in Exhibit 6-2. Reduced development, and thereby reduced total VMT (as explained in Section 6.5.3.2) could reduce congestion on the roadways. Likewise, focusing development in existing developed as opposed to undeveloped areas could have the potential to increase congestion as well. However, as explained above in Section 6.5.3.2, “Conflict with Adopted Policies, Plans, or Programs Regarding Congestion,” focusing development in these areas under the Reduced Growth Alternative as opposed to the undeveloped areas of the City could lead to a decrease (worsening) of LOS or no tangible change compared to the proposed General Plan Update.

The Reduced Growth Alternative includes all of the same goals and policies as the proposed General Plan Update, including Level of Service Goal CIRC2 and Policies CIRC 2.1 through 2.4, all of which would facilitate a balanced transportation system, travel-demand-reducing strategies, and securing funding to all components of the City's transportation system, including automobile, transit, bicycle, and pedestrian modes of transportation, in order to ensure the City's level of service policy is maintained. Proposed General Plan Update Policies AQ1.12 through 1.16 and CIRC2.5 and 2.6 would also help to reduce CO hotspots throughout the Planning Area. The City of Roseville ITS also serves to improve traffic flow, avoid excessive congestion and improves the operational performance of the City's roadway system, thereby reducing the likelihood for and extent of delays at intersections.

Analysis of Impact 4.4-4 in Section 4.4 of this EIR found that the level of traffic on the roadways within the Planning Area would not reach a level that would generate a quantity of CO emissions from local mobile sources that would result in or substantially contribute to a CO hotspot. As explained above, the Reduced Growth Alternative would reduce overall VMT in the Planning Area, but also result in more focused areas of development. Therefore, the impact related to CO hotspots for the Reduced Growth Alternative would be **similar to** the proposed General Plan Update, and for the same reasons as described in the analysis of the proposed General Plan Update in Section 4.4, would remain **less than significant**.

No Project Alternative

Under the No Project Alternative, the same level of development would occur as compared to the proposed General Plan Update, and therefore a similar level of travel demand on the roadways would occur. Analysis of Impact 4.4-4 in Section 4.4 of this EIR found that the level of traffic on the roadways within the Planning Area would not reach a level that would generate a quantity of CO emissions from local mobile sources that would result in or substantially contribute to a CO hotspot. Under the No Project Alternative, there would be no content revisions to the existing General Plan goals and policies and no new General Plan goals, policies and implementation measures. However, the existing General Plan goals and policies would continue to be implemented. As described above within Section 6.5.3.2, the existing General Plan and proposed General Plan Update both contain the policy to provide a LOS of C or better at a minimum of 70 percent of the signalized intersections during the AM and PM peak hours and use of the City's Intelligent Transportation System, which provide improved level of service, would occur under the No Project Alternative as well as the proposed General Plan Update. As LOS is a key indicator for CO hotspots, and the level of development would be equivalent under the No Project Alternative as under the proposed General Plan Alternative, the impacts related to CO hotspots for the No Project Alternative would be **similar to** the proposed General Plan Update, and for the same reasons as described in the analysis of the proposed General Plan Update in Section 4.4, would remain **less than significant**.

6.5.4.5 ODOROUS EMISSIONS (*Result in Other Emissions [such as those leading to odors] Adversely Affecting a Substantial Number of People*)

Infill Housing Alternative

The Infill Housing Alternative would result in additional development of residential units, as compared to the proposed General Plan Update. As described in Impact 4.4-5 in Section 4.4 of this EIR, proposed development of the Planning Area would include multiple land use types and could result in the siting of sensitive receptors that would be exposed to potential odor sources. New development under the Infill Housing Alternative would include infill development that is located toward the center of the city, as shown in Exhibit 6-1. This development would

be farther from most of the potential odor sources described in Section 4.4, including industrial sources such as the Western Regional Sanitary Landfill (WRSL), Materials Recovery Facility (MRF), City of Roseville Pleasant Grove Wastewater Treatment Plant (PGWWTP), the Rio Bravo Rocklin biomass power facility, Mallard Creek composting facility, Dry Creek Wastewater Treatment Plant; dairy and chicken farms (dispersed throughout the region surrounding the western and northern boundaries of the Planning Area); and other agricultural uses in each direction that can generate odors from a variety of processes, such as agricultural burning, livestock pens, fertilization, and composting, among others. However, the additional infill development would be in the vicinity of Interstate 80 and the Roseville Rail Yard, which represent sources of substantial diesel exhaust emissions that can also result in odorous emissions. It cannot be known at this time what specific development would be implemented and if any development would generate objectionable odors. In addition, unless the additional development under the Infill Housing Alternative would supplant development in the outskirts of the Planning Area, the potential impacts associated with the proposed General Plan Update, as described in Impact 4.4-5 in Section 4.4 of this EIR, would still occur under the Infill Housing Alternative.

The Infill Housing Alternative includes all of the same goals and policies as the proposed General Plan Update. The proposed General Plan Update Air Quality Goal AQ1.1 aims to reduce future exposure to odors emitted by facilities, such as chemical manufacturing facilities, sanitary landfills, fiberglass manufacturing facilities, transfer stations, painting/coating operations (e.g., auto body shops), composting facilities, food processing facilities, restaurants, confined animal facilities, asphalt batch plants, rendering plants, metal smelting plants, and coffee roasters. The proposed General Plan Update Policy AQ1.22 could reduce potential exposure by nearby sensitive receptors to odor emissions from the Roseville Rail Yard. With proper disposal containers and regular trash collection services, odors from residential and commercial dumpsters are typically minimized. Construction-related activities would generate odors from the use of diesel-powered equipment and from paving and architectural coating activities. However, these odorous emissions would be temporary and disperse rapidly with distance from the source.

The proposed General Plan Update Mitigation Measure 4.4-5 requires a new Implementation Measure that requires future site-specific projects to implement a variety of strategies to avoid exposure of sensitive receptors to odorous emissions, including a buffer distance depending on the type of land use and the odor source. In addition, proposed General Plan Update Mitigation Measure 4.4-3a to reduce indoor exposure to TACs would also result in a reduction in the intensity of offensive odors from surrounding odor sources. However, because the Infill Development Alternative would include the siting of additional sensitive receptors within proximity to potential odor sources as compared to the proposed General Plan Update, and because buffer distances and implementation of specific technology- and design-based measures cannot be known at this time, it is conservatively assumed that sensitive receptors could experience some increased exposure to substantial odor-generating emissions. Therefore, impacts from exposure to odorous emissions under the Infill Housing Alternative would be **slightly greater** than the proposed General Plan Update, and would remain **significant and unavoidable**.

Reduced Growth Alternative

Under the Reduced Growth Alternative, less new development would occur by 2035 as compared to the proposed General Plan Update, and therefore fewer people would be exposed to odorous emissions. Specifically, new development would be focused in existing developed areas and the “Center and Corridor” and “Established” Community Types, as shown in Exhibit 6-2. This development would be farther from potential odor sources

described in Section 4.4, including the WRSL, MRF, City of Roseville PGWWTP, the Rio Bravo Rocklin biomass power facility, Mallard Creek composting facility, Dry Creek Wastewater Treatment Plant, dairy and chicken farms, and other agricultural uses. While development under this alternative would include development in proximity to Interstate 80 and the Rail Yard, which represent sources of substantial diesel exhaust emissions that can also result in odorous emissions, this development would also occur under the proposed General Plan Update. In addition, it cannot be known at this time what specific development would be implemented and if any development would generate objectionable odors.

The Reduced Growth Alternative includes all the same goals and policies as the proposed General Plan Update. The proposed General Plan Update Air Quality Goal AQ1.1, Policy AQ1.22, and Mitigation Measures 4.4-3a and 4.4-5 would reduce exposure to TACs that could generate odors, and would require future site-specific projects to implement a variety of strategies to avoid exposure of sensitive receptors to odorous emissions, including a buffer distance depending on the type of land use and the odor source. However, while the Reduced Growth Alternative would include less new development as compared to the proposed General Plan Update, because buffer distances and implementation of specific technology- and design-based measures cannot be known at this time, it is conservatively assumed that sensitive receptors could be exposed to substantial odor-generating emissions. Therefore, impacts from exposure to odorous emissions under the Reduced Growth Alternative would be **reduced** as compared to the proposed General Plan Update, but would remain **significant and unavoidable**.

No Project Alternative

Under the No Project Alternative, the same level of development would occur as compared to the proposed General Plan Update, and therefore a similar number of sensitive receptors would be exposed to odorous emissions. Under the No Project Alternative, there would be no content revisions to the existing General Plan goals, policies and implementation measures, and no new General Plan goals, policies and implementation measures. However, the existing General Plan goals and policies would continue to be implemented. For example, proposed General Plan Update Goal AQ1.1 and Policy AQ1.22, which would reduce potential operational exposure to odor sources, and new Mitigation Measures 4.4-3a and 4.4-5, which require new General Plan Implementation Measures that would reduce potential likelihood of exposure of sensitive receptors to substantial pollutant concentrations, would not be implemented under the No Project Alternative. Therefore, impacts from exposure to odorous emissions under the No Project Alternative would be **greater than** the proposed General Plan Update, and would remain **significant and unavoidable**.

6.5.5 GREENHOUSE GAS EMISSIONS

6.5.5.1 GENERATION OF GREENHOUSE GAS EMISSIONS

Infill Housing Alternative

The Infill Housing Alternative would result in additional development of multi-family residential units, as compared to the proposed General Plan Update. This would result in an increased short-term generation of GHG emissions from construction-related activities and long-term operations of mobile, energy, water, and waste GHG emissions sources, as compared to under the proposed General Plan Update. Modeling performed for the proposed General Plan Update determined that GHG emissions associated with implementation of the proposed General Plan Update would exceed the GHG emissions efficiency thresholds of significance. However, since multi-family residential development is relatively more efficient in GHG emissions for mobile and energy sources

compared to lower-density development, and because this alternative would be expected to include the renovation and redevelopment of older, energy-inefficient housing stock, the rate of GHG emissions under this alternative would be somewhat lower than under the proposed General Plan Update.

The degree to which the Infill Housing Alternative could further reduce GHG emissions or improves GHG emissions efficiency compared to the proposed General Plan Update depends on whether the additional multi-family development can supplant housing demand that would otherwise be met in relatively higher VMT areas, such as the Amoruso Ranch, Creekview, Sierra Vista, and West Roseville Specific Plan Areas, and other factors. Demand for housing, in turn, will depend on demographic changes and emerging household preferences and the way they express themselves in housing demand for different housing types and locations. However, there is evidence of preferences for housing locations close to work that enable short commutes; preferences for walkability and access to shopping, services, and transit; demand for a mix of housing types and attached products in suburbs; increasing numbers of small households, creating a market for smaller homes; and the need for greater market diversity.⁴ Therefore, while the degree to which this demand is realized in the Planning Area is dependent upon many factors, including some outside the City's direct influence, the Infill Housing Alternative has the potential to direct more of the City's growth toward more efficient infill areas of the City compared to the proposed General Plan Update.

The Infill Housing Alternative includes all the same goals and policies as the proposed General Plan Update, many of which, as identified in Section 4.5, "Greenhouse Gas Emissions," focus on land use and transportation planning that promotes access to alternative modes of transportation, services, recreation, and jobs without the use of a car or with reduced travel distances, as well as promotes efficiency in building energy use and resource conservation. Many of these policies would be directly applicable to the additional development under this alternative and generate GHG efficiencies specific to this alternative. However, while these policies would likely reduce per capita GHG emissions under the Infill Housing Alternative compared to the proposed General Plan Update, emissions from implementation of the Infill Housing Alternative could still result in a net increase of GHG emissions that could exceed the local GHG emissions efficiency threshold. Therefore, the generation of GHG emissions resulting from implementation of the Infill Housing Alternative and the potential to conflict with applicable State plans, policies, and regulations adopted for the purposes of reducing the emissions of GHGs would be **similar to** the proposed General Plan Update, and would remain **significant and unavoidable**.

Reduced Growth Alternative

Under the Reduced Growth Alternative, less new development would occur as compared to the proposed General Plan Update, and therefore a lower level of emissions would be generated by construction and operational activities. Land use changes under this alternative would reduce 2035 development to the amounts identified by SACOG for Roseville in the 2020 MTP/SCS. The focus for development between present and 2035 under this alternative would be areas that have access to existing infrastructure and the "Center and Corridor" and "Established" Community Types identified in the MTP/SCS. In general, these areas tend to have lower rates of VMT. For example, as shown in Table 6-3 above, in Section 6.5.3, "Transportation," the lowest per-capita, home-based VMT production areas are the Downtown, Riverside Gateway, North Central Roseville, and Northeast Roseville Specific Plan Areas, and areas with relatively high VMT include outer areas of the Planning Area,

⁴ Sacramento Area Council of Governments (SACOG). 2018 White Paper on Future Housing Product Type Demand and Preference. Available: https://www.sacog.org/sites/main/files/file-attachments/14_white_paper_on_future_housing_product_type_demand.pdf

which are not anticipated to develop as extensively under this alternative, including the Amoruso Ranch, Creekview, Sierra Vista, and West Roseville Specific Plan Areas.⁵ In addition the Reduced Growth Alternative includes all the same goals and policies as the proposed General Plan Update, many of which, as identified in Section 4.5, “Greenhouse Gas Emissions,” promote land use and transportation strategies that would reduce total and the rate of VMT. Since mobile source emissions are the biggest overall source of GHG emissions, placing more development in lower-VMT areas under the Reduced Growth Alternative would reduce GHG emissions overall and improve the efficiency of GHG emissions compared to the proposed General Plan Update. Impacts would be **reduced** compared to the proposed General Plan Update, but would still be **significant and unavoidable**.

No Project Alternative

Under the No Project Alternative, a similar amount of development would occur as compared to the proposed General Plan Update, and therefore a similar level of construction-related and operational emissions would occur as under the proposed General Plan Update. However, under the No Project Alternative, the goal and policy revisions and additions under the proposed General Plan Update would not be implemented. Therefore, under the No Project Alternative, no updates to the General Plan to provide more detailed and updated implementation measures that can reduce potential impacts, and no updates to comply with State law changes, would occur. While, the existing General Plan contains policies that are designed to accommodate new travel demand by providing adequate public transit, bicycle, and pedestrian facilities and services including complete streets, they are not as specific as those included as a part of the proposed General Plan Update. The proposed General Plan Update Goals AQ1.3–1.8 and Policies AQ1.1, 1.3, 1.6, 1.7, 1.9–1.19 and 1.22; Goal CIRC3 and Policies 3.1, and 3.6; Goal CIRC4 and Policies CIRC4.1–4.6; Goal CIRC5.1 and Policy CIRC5.1; Goal CIRC6.1 and Policies CIRC6.1 and 6.2; Policies LU2.1–2.6, 3.4, 7.2, and 8.10; Policy PF4.6; Goals PF9.1 and 9.2 and Policies PF9.1, 9.4, 9.5, 9.8, and 9.9, listed in Section 4.5, “Greenhouse Gas Emissions,” include revisions from the existing General Plan that would reduce GHG emissions. For example, Policies AQ1.11 and 1.15 are new proposed policies that would provide focused policy language promotes the increase of electric vehicles within the Planning Area and, therefore, would result in reduced GHG emissions associated with VMT. Similarly, while the existing General Plan includes Travel Demand Management Goals 1 and 2 to reduce travel demand on the City’s roadway systems and reduce total vehicle emissions in the City of Roseville and the South Placer County region, these goals and related policies would be revised under the proposed General Plan Update to more specifically identify measures that would result in reduced VMT and to require that Specific Plan Amendments and land use development projects not included in an adopted Specific Plan shall demonstrate consistency with the VMT rate included in the SACOG SCS for the SCS planning horizon year. Without the goal and policy revisions of the proposed General Plan Update, the No Project Alternative may not achieve the same level of increased GHG efficiency that would be achieved by future development under the proposed General Plan Update. Therefore, the impacts of the No Project Alternative would be **greater than** the proposed General Plan Update, and would be still be **significant and unavoidable**.

⁵ Not including the Dell Webb Specific Plan Area, where it is demographics, rather than location or design that holds down vehicular travel demand.

6.5.6 NOISE AND VIBRATION

6.5.6.1 CONSTRUCTION NOISE (*Potential for Substantial Temporary, Short-Term Exposure to Construction Noise*)

Infill Housing Alternative

The additional housing units planned under the Infill Housing Alternative would result in increased noise generated by construction equipment such as bulldozers, excavators, compactors, and, potentially pile-driving equipment, as compared to the proposed General Plan Update. As discussed in Impact 4.6-1 of Section 4.6 of this EIR, “Noise and Vibration,” most of the new development under the General Plan Update would occur on vacant land in the western and northwestern portions of the Planning Area. However, some infill development opportunities would involve properties that are near existing noise-sensitive uses, such as residences and schools, as well as properties that may be developed in phases, with noise-sensitive residential uses included in earlier phases. It is possible, depending on the specifics of how this alternative is implemented, that this alternative could place more sensitive receptors in areas with relatively high levels of noise, and could generate additional noise in areas with existing or future noise-sensitive uses.

The Infill Housing Alternative would implement the same proposed General Plan Update new and revised goals, policies, and implementation measures. The proposed General Plan Update revised Policy N1.9 regulates noise from new development consistent with the City’s noise ordinance. The noise ordinance states that noise associated with construction between the hours of 7:00 a.m. and 7:00 p.m. Monday–Friday, and between 8:00 a.m. and 8:00 p.m. on Saturdays and Sundays, is exempt from noise standards during daytime hours, provided that all construction equipment is fitted with factory installed muffling devices and maintained in good working order. Required compliance with the City’s Zoning Ordinance, Chapter 35 of the Uniform Building Code, State Noise Insulation Standards (Title 24), Community Design Guidelines, the adopted Specific Plans and their design guidelines, and the California Vehicle Code would all serve to help reduce the level of noise generated by construction equipment.

There could be a noticeable temporary increase in noise levels for noise-sensitive uses that are adjacent to construction sites, and no feasible mitigation measures are available. Nonetheless, impacts under the Infill Housing Alternative from generation of a substantial temporary increase in ambient noise levels in excess of standards established in the noise ordinance would be **greater than** the proposed General Plan Update, and would remain **significant and unavoidable**.

Reduced Growth Alternative

Under the Reduced Growth Alternative, less development would occur as compared to the proposed General Plan Update, and therefore less overall construction noise would be generated. However, most new development that would occur under the Reduced Growth Alternative would occur in existing developed areas, when compared to the General Plan Update. It is possible, depending on the specifics of how this alternative is implemented, that this alternative could place more sensitive receptors in areas with relatively high levels of noise, and could generate additional noise in areas with existing or future noise-sensitive uses. The Reduced Growth Alternative would implement the same proposed General Plan Update new and revised goals, policies, and implementation measures, including proposed General Plan Update revised Policy N1.9, which regulates noise from new development consistent with the City’s noise ordinance. For the same reasons discussed in Impact 4.6-1 of

Section 4.6 of this EIR, the City's Zoning Ordinance, Chapter 35 of the Uniform Building Code, State Noise Insulation Standards (Title 24), Community Design Guidelines, the adopted Specific Plans and their design guidelines, and the California Vehicle Code would all serve to help reduce the level of noise generated by construction equipment, including that experienced under this alternative. There could still be a noticeable temporary increase in noise levels for noise-sensitive uses that are adjacent to construction sites. Therefore, impacts from 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 under the Reduced Growth Alternative would be **reduced** as compared to the proposed General Plan Update, but would still be **significant and unavoidable**.

No Project Alternative

Under the No Project Alternative, a similar amount of development would occur as compared to the proposed General Plan Update, and therefore a similar number of people would be exposed to construction-generated noise. Under the No Project Alternative, there would be no content revisions to the existing General Plan goals, policies and implementation measures, and no new General Plan goals, policies and implementation measures. However, the existing General Plan goals and policies would continue to be implemented, including Policy N1.9, as currently written in the existing General Plan, which does require construction-related noise to be consistent with the City's Noise Ordinance. In addition, compliance with the City's Zoning Ordinance, Chapter 35 of the Uniform Building Code, State Noise Insulation Standards (Title 24), Community Design Guidelines, and the California Vehicle Code would all serve to help reduce the level of noise generated by construction equipment. Furthermore, new development in the western portion of the Planning Area would be subject to mitigation measures designed to reduce construction and operational source noise in the previously adopted Sierra Vista, Amoruso Ranch, Creekview, and West Roseville Specific Plans. There could still be a noticeable temporary increase in noise levels for noise-sensitive uses that are adjacent to construction sites. Therefore, impacts from generation of a substantial temporary increase in ambient noise levels in excess of standards established in the local general plan or noise ordinance under the No Project Alternative would be **similar to** the proposed General Plan Update, and would still be **significant and unavoidable**.

6.5.6.2 OPERATIONAL NOISE (*Potential for Long-Term Noise Exposure*)

Infill Housing Alternative

The Infill Housing Alternative includes development of additional housing units as compared to the proposed General Plan Update, and these would be focused within the infill areas of the Planning Area, as shown in Exhibit 6-1. Therefore, future development of noise-sensitive residential uses would occur in areas that either are currently exposed to or would be exposed to future traffic or railroad noise levels, or other stationary-source noise levels from maintenance activities, music, mechanical equipment, loading docks, parking lots, and garbage collection, and other operational activities.

As discussed in Impact 4.6-2 of Section 4.6 of this EIR, noise from these and other sources could exceed the City's noise standards. The City's Zoning Ordinance, Chapter 35 of the Uniform Building Code, State Noise Insulation Standards (Title 24), Community Design Guidelines, the adopted specific plans and their design guidelines, and the California Vehicle Code would all serve to help reduce the level of noise generated by operational noise sources. The Infill Housing Alternative would implement the same proposed General Plan Update new and revised goals, policies, and implementation measures. The proposed General Plan Update Goal

N1.1 and Policies N1.1–1.8 are designed to help reduce operational noise levels, and to ensure compliance of future noise-generating sources in proximity to noise-sensitive land uses. Despite noise reductions that would be achieved by proposed General Play Policies N1.1– N1.9, noise-sensitive uses could be still exposed to operational noise in exceedance of the City’s standards. In addition, it is possible, depending on the specifics of how this alternative is implemented, that this alternative could place more sensitive receptors in areas with relatively high levels of noise, and could generate additional noise in areas with existing or future noise-sensitive uses. Therefore, impacts from generation of a substantial permanent increase in ambient noise levels in excess of standards established in the City’s noise ordinance under the Infill Housing Alternative would be **greater than** the proposed General Plan Update, and would still be **significant and unavoidable**.

Reduced Growth Alternative

Under the Reduced Growth Alternative, less new development would occur as compared to the proposed General Plan Update, and therefore less overall operational noise would be generated. However, most new development that would occur under the Reduced Growth Alternative would occur in existing developed areas, when compared to the General Plan Update. Therefore, noise-sensitive receptors would still be subject to operation-related noise from new and infill development, including an increase in vehicular traffic noise.

For the same reasons discussed in Impact 4.6-2 in Section 4.6 of this EIR, the City’s Zoning Ordinance, Chapter 35 of the Uniform Building Code, State Noise Insulation Standards (Title 24), Community Design Guidelines, the adopted Specific Plans and their design guidelines, and the California Vehicle Code would all serve to help reduce the level of noise generated by operational sources. The Reduced Growth Alternative would implement the same proposed General Plan Update new and revised goals, policies, and implementation measures. The proposed General Plan Update Goal N1.1 and Policies N1.1–1.8 are designed to help reduce operational noise levels, and to ensure compliance of future noise-generating sources in proximity to noise-sensitive land uses. Despite reduced development under this alternative and noise reductions that would be achieved by proposed General Plan Policies N1.1–N1.9, there could still be a noticeable permanent increase in noise levels for noise-sensitive uses that are adjacent to operational noise sources, noise-sensitive uses could be still exposed to operational noise in exceedance of the City’s standards. Therefore, impacts from generation of a substantial permanent increase in ambient noise levels in excess of standards established in the local general plan or noise ordinance under the Reduced Growth Alternative would be **reduced** as compared to the proposed General Plan Update, but would still be **significant and unavoidable**.

No Project Alternative

Under the No Project Alternative, the same amount of development would occur as compared to the proposed General Plan Update, and therefore a similar number of people would have the potential to be exposed to operation-related noise. Under the No Project Alternative, there would be no content revisions to the existing General Plan goals, policies and implementation measures, and no new General Plan goals, policies and implementation measures. However, the existing General Plan goals and policies would continue to be implemented. In addition, compliance with the City’s Zoning Ordinance, Chapter 35 of the Uniform Building Code, State Noise Insulation Standards (Title 24), Community Design Guidelines, and the California Vehicle Code would all serve to help reduce the level of noise generated by construction equipment. Furthermore, new development in the western portion of the Planning Area would be subject to mitigation measures designed to reduce construction and operational source noise in the previously adopted Sierra Vista, Amoruso Ranch, Creekview, and West Roseville Specific Plans. Finally, all new development would still be subject to compliance

with the existing General Plan Noise Level Performance Standards. There could still be a noticeable permanent increase in noise levels for noise-sensitive uses that are adjacent to operational noise sources.

The proposed General Plan Update policy changes, which provide protection for Roseville citizens from operational-source noise, are intended to clarify and provide additional specificity for the City's noise policies. Overall, the proposed changes to the City's noise standards will result in less community exposure to noise, because standards are being established for uses which previously had no exterior standard, a maximum allowable noise standard is being applied where previously no maximum was stated, and in some cases the maximum standard is a lower volume than the existing standard. Under the No Project Alternative these changes will not be made. Furthermore, acknowledging the importance of encouraging development in infill development opportunities, the proposed General Plan Update provides additional guiding policy language to allow for case-by-case determinations that can factor in other economic, environmental, and social goals of the City. Part of the City's intent is to promote infill development, and recognize that, while exterior noise levels may be somewhat higher, development in infill development areas has the potential to provide more pedestrian, bicycle, and transit use opportunities, to reduce air pollutant and greenhouse gas emissions, to focus development in areas already served with existing infrastructure, to promote economic development and affordable housing objectives, and provide other benefits.

The noise impacts of the No Project could be increased compared to the proposed project, because certain uses would not have applicable noise standards, or the maximum allowable noise standards would be higher. Therefore, impacts from generation of a substantial permanent increase in ambient noise levels in excess of standards established in the local general plan or noise ordinance under the No Project Alternative would be **similar to** the proposed General Plan Update, and would still be **significant and unavoidable**.

6.5.6.3 VIBRATION (*Increases in Vibration Levels*)

Infill Housing Alternative

The Infill Housing Alternative includes development of additional housing units as compared to the proposed General Plan Update, which would subject more people to potential sleep disruption and annoyance from vibration. New or infill development close to high-volume roadways and rail lines could expose new sensitive receptors to higher levels of vibration generated by these sources. In a similar manner as would be experienced under the proposed General Plan Update, the generation of construction vibration under the Infill Housing Alternative could expose existing and planned vibration-sensitive uses to adverse, temporary construction-related vibration. However, this vibration would be temporary, and the City does not anticipate very large-scale projects with extensive excavation and pile driving that would occur directly adjacent vibration-sensitive uses that would result in substantial disturbance or damage to adjacent structures. The Infill Housing Alternative would implement the same proposed General Plan Update new and revised goals, policies, and implementation measures, including Policy N1.10, which requires all feasible measures necessary, as a part of proposed development and public infrastructure projects to avoid structural damage to adjacent structures and avoid substantial annoyance for adjacent vibration-sensitive uses, consistent with California Department of Transportation and Federal Transit Agency guidance – guidance that is specifically designed to avoid annoyance to vibration-sensitive uses and structure damage. In addition, it is possible, depending on the specifics of how this alternative is implemented, that this alternative could place more sensitive receptors in areas with relatively high levels of vibration (such as the Rail Yard). Because more vibration-sensitive development could potentially occur in areas with sources of

vibration, the impacts from exposure to increases in vibration levels under the Infill Housing Alternative would be **greater than** the proposed General Plan Update, but would still be **less than significant**.

Reduced Growth Alternative

Under the Reduced Growth Alternative, less new development would occur as compared to the proposed General Plan Update, and therefore less exposure to construction-related vibration would occur. However, vibration-sensitive receptors would still be subject to construction and operation-related vibration, particularly where infill development would be located in proximity to high-volume roadways and rail lines. In a similar manner as would be experienced under the proposed General Plan Update, the generation of construction vibration under the Reduced Growth Alternative could expose existing and planned vibration-sensitive uses to adverse, temporary construction-related vibration. However, this vibration would be temporary, and the City does not anticipate very large-scale projects with extensive excavation and pile driving that would occur directly adjacent vibration-sensitive uses that would result in substantial disturbance or damage to adjacent structures. The Reduced Growth Alternative would implement the same proposed General Plan Update new and revised goals, policies, and implementation measures, including Policy N1.10, which requires all feasible measures necessary, as a part of proposed development and public infrastructure projects to avoid structural damage to adjacent structures and avoid substantial annoyance for adjacent vibration-sensitive uses, consistent with California Department of Transportation and Federal Transit Agency guidance – guidance that is specifically designed to avoid annoyance to vibration-sensitive uses and structure damage. Therefore, the impacts from exposure to increases in vibration levels under the Reduced Growth Alternative. Therefore, the impacts from exposure to excessive increases in vibration levels under the Reduced Growth Alternative would be **similar to** the proposed General Plan Update, and would still be **less than significant**.

No Project Alternative

Under the No Project Alternative, the same amount of development would occur as compared to the proposed General Plan Update, and therefore a similar number of people would be exposed to construction- and operation-related vibration. Under the No Project Alternative, there would be no content revisions to the existing General Plan goals, policies and implementation measures, and no new General Plan goals and policies. The No Project Alternative would not include proposed General Plan Update Policy N1.10, which is a new policy under the proposed General Plan Update. This policy requires all feasible measures necessary, as a part of proposed development and public infrastructure projects to avoid structural damage to adjacent structures and avoid substantial annoyance for adjacent vibration-sensitive uses, consistent with California Department of Transportation and Federal Transit Agency guidance. New development in the western portion of the Planning Area would be subject to mitigation measures designed to reduce vibration in the previously adopted Sierra Vista, Amoruso Ranch, Creekview, and West Roseville Specific Plans. However, new and infill development in other portions of the Planning Area may not receive protection from vibration-caused disturbance because the existing General Plan does not contain goals or policies that would require evaluation or mitigation of impacts from vibration that are caused by future development projects in the City. Therefore, the No Project Alternative could result in **greater** impacts from increases in vibration levels as compared to the proposed General Plan Update, and those impacts would be **significant and unavoidable**.

6.5.7 GEOLOGY, SOILS, AND PALEONTOLOGICAL RESOURCES

6.5.7.1 SUBSTANTIAL ADVERSE IMPACTS RELATED TO STRONG SEISMIC GROUND SHAKING

Infill Housing Alternative

The additional housing units planned under the Infill Housing Alternative could lead to an increased number of people and structures exposed to hazards associated with seismic ground shaking from regional faults, as compared to the proposed General Plan Update. As discussed in detail in Draft EIR Impact 4.7-1 (Section 4.7, “Geology, Soils, and Paleontological Resources”), given the distance of the Planning Area from active faults, the estimated peak ground acceleration is very low (0.14–0.16) indicating that strong seismic ground shaking is unlikely to occur. There are no existing General Plan goals or policies related to risks from seismic ground shaking that are proposed for revision as part of the proposed General Plan Update. However, existing General Plan Seismic and Geologic Hazards Goal 1 and Policies 1, 2, and 4 would reduce the potential for adverse impacts to people or structures related to seismic shaking. Implementation of these existing General Plan goals and policies, in combination with compliance with the geologic and seismic regulations and policies contained in the CBC (which the City has adopted), and the City’s site-specific Design Review process (as set forth in the City’s [2019] *Design and Construction Standards* Section 2, “General Requirements”), would reduce the potential for adverse impacts to people or structures related to seismic shaking because building plans would be reviewed by City engineers to ensure that structures are consistent with standard engineering practices and requirements contained in the CBC, which are specifically designed to prevent the collapse of structures to the maximum extent practicable during seismic ground shaking. Therefore, impacts related to strong seismic ground shaking under the Infill Housing Alternative would be **slightly greater than** the proposed General Plan Update, but would still be **less than significant**.

Reduced Growth Alternative

Under the Reduced Growth Alternative, less new development would occur as compared to the proposed General Plan Update, and therefore fewer people and structures would be subject to hazards from strong seismic ground shaking. However, as noted above, given the distance of the Planning Area from active faults and low projected peak ground acceleration, strong seismic ground shaking is unlikely. There are no existing General Plan goals or policies related to risks from seismic ground shaking that are proposed for revision as part of the proposed General Plan Update. However, existing General Plan Seismic and Geologic Hazards Goal 1 and Policies 1, 2, and 4 would reduce the potential for adverse impacts to people or structures related to seismic shaking. For the same reasons discussed in Draft EIR Impact 4.7-1 (Section 4.7, “Geology, Soils, and Paleontological Resources”), compliance with existing General Plan policies, the requirements of the CBC, and the City’s (2019) *Design and Construction Standards* would still result in **less-than-significant** impacts related to strong seismic ground shaking under the Reduced Growth Alternative, and a **reduced** level of impact would occur compared to the proposed General Plan Update.

No Project Alternative

The existing General Plan includes the same level of development as would occur under the proposed General Plan Update, and therefore a similar number of people and structures would be subject to hazards from strong seismic ground shaking. As noted above, given the distance of the Planning Area from active faults and the low projected peak ground acceleration, strong seismic ground shaking is unlikely. The existing General Plan contains

policies that are designed to reduce hazards from strong seismic ground shaking, and these policies would continue to be implemented. Furthermore, as discussed in Draft EIR Impact 4.7-1 (Section 4.7, “Geology, Soils, and Paleontological Resources”), all construction in the City would still be required by law to comply with the requirements of the CBC, which are specifically designed to prevent the collapse of structures to the maximum extent practicable during seismic ground shaking. Therefore, impacts related to strong seismic ground shaking under the No Project Alternative would be **similar to** the proposed General Plan Update, and would still be **less than significant**.

6.5.7.2 SUBSTANTIAL ADVERSE IMPACTS RELATED TO SOIL EROSION

Infill Housing Alternative

The additional housing units planned under the Infill Housing Alternative (along with construction of public facilities required to support this development, such as road improvements), would involve additional grading, excavation, and earth-moving activities associated with construction of infrastructure and building and road foundations, all of which would result in increased potential for erosion and on-site and off-site sediment transport, as compared to the proposed General Plan Update. As discussed in detail in Draft EIR Impact 4.7-2 (Section 4.7, “Geology, Soils, and Paleontological Resources”), compliance with existing stormwater, grading, and erosion control regulations would reduce the impact by requiring applicants to develop and implement a Stormwater Pollution Prevention Plan (SWPPP) as required by the State Water Resources Control Board’s (SWRCB 2012) Construction General Permit, implement Best Management Practices (BMPs) based on the City’s *Stormwater Quality BMP Guidance Manual for Construction* (City of Roseville 2011a), comply with the City’s Grading Ordinance, comply with the City’s (2019) *Design and Construction Standards*, and comply with the avoidance and minimization measures contained in the *Open Space Preserve Overarching Management Plan* (OSPOMP) (City of Roseville 2011b), all of which are specifically designed to minimize construction-related soil erosion and degradation of water quality to the maximum extent feasible. The Infill Housing Alternative includes all of the same goals and policies as the proposed General Plan Update, including Policy SAFE1.3 (which is proposed for modification to clarify that the compatibility of adjacent land uses does not relate to soil erosion). In addition, existing General Plan Seismic and Geologic Hazards Goal 1 and Policies 3, 5, and 6, Vegetation and Wildlife Policy 4, and Groundwater Recharge and Water Quality Goal 1 and Policy 2 would still be implemented, which would reduce soil erosion by requiring preservation of creek corridors and streambeds, consideration of appropriate land uses on slopes, use of the appropriate construction techniques to stabilize slopes, and the use of contour grading. With the additional development anticipated under this alternative, impacts related to soil erosion under the Infill Housing Alternative would be **slightly greater** than the proposed General Plan Update, but would still be **less than significant**.

Reduced Growth Alternative

Under the Reduced Growth Alternative, less new development would occur as compared to the proposed General Plan Update, and therefore a reduced level of soil erosion would occur. However, the same types of impacts would still occur. The Reduced Growth Alternative includes all of the same goals and policies as the proposed General Plan Update, including Policy SAFE1.3, along with existing General Plan Seismic and Geologic Hazards Goal 1 and Policies 3, 5, and 6, Vegetation and Wildlife Policy 4, and Groundwater Recharge and Water Quality Goal 1 and Policy 2, and these existing goals and policies would continue to be implemented. For the same reasons discussed in Draft EIR Impact 4.7-2 (Section 4.7, “Geology, Soils, and Paleontological Resources”), compliance with existing and proposed General Plan Update policies, the City’s Grading Ordinance, the

SWRCB's (2012) Construction General Permit (including the requirements to prepare and implement a SWPPP and associated BMPs), the City's (2019) *Design and Construction Standards*, and the OSPOMP (City of Roseville 2011b), would still result in **less-than-significant** impacts related to soil erosion under the Reduced Growth Alternative, and a **reduced** level of impact would occur as compared to the proposed General Plan Update.

No Project Alternative

The existing General Plan includes the same level of development as would occur under the proposed General Plan Update, and therefore a similar level of soil erosion would occur. Existing General Plan Seismic and Geologic Hazards Goal 1 and Policies 3, 5, and 6, Vegetation and Wildlife Policy 4, and Groundwater Recharge and Water Quality Goal 1 and Policy 2 are designed to reduce soil erosion, and these policies would continue to be implemented. Furthermore, as discussed in Draft EIR Impact 4.7-2 (Section 4.7, "Geology, Soils, and Paleontological Resources"), all construction in the City would still be required by law to comply with the SWRCB's (2012) Construction General Permit (including the requirements to prepare and implement a SWPPP and associated BMPs), to comply with the City's Grading Ordinance, and to implement requirements in the City's (2019) *Design and Construction Standards* and the measures included in the OSPOMP (City of Roseville 2011b). Therefore, impacts related to soil erosion under the No Project Alternative would be **similar to** the proposed General Plan Update, and would still be **less than significant**.

6.5.7.3 GEOLOGIC HAZARDS RELATED TO UNSTABLE AND EXPANSIVE SOILS

Infill Housing Alternative

The additional housing units planned under the Infill Housing Alternative would result in the placement of additional buildings and infrastructure in areas of unstable soils, and soils with high a shrink-swell potential, as compared to the proposed General Plan Update. As discussed in Draft EIR Impact 4.7-3 (Section 4.7, "Geology, Soils, and Paleontological Resources"), there are no existing General Plan goals or policies related to construction in unstable or expansive soils that are proposed for revision. However, existing General Plan Seismic and Geologic Hazards Goal 1 and Policies 2, 5, and 6 would still be implemented, which require compliance with current laws and regulations, including the CBC and Section 111 (Grading) of the City's Construction Standards related to soil testing for earthwork and backfill, would address issues related to unstable and expansive soils by requiring new construction to prepare site-specific geotechnical reports to identify areas of unstable soil and shrink-swell potential, and to follow design specifications contained in the CBC and standard engineering practices to prevent adverse impacts associated with these limitations. With the additional development anticipated under this alternative, impacts related to unstable and expansive soil under the Infill Housing Alternative would **slightly greater** than the proposed General Plan Update, but would still be **less than significant**.

Reduced Growth Alternative

Under the Reduced Growth Alternative, less new development would occur as compared to the proposed General Plan Update, and therefore a reduced level of hazards from placement of buildings and infrastructure in areas of unstable soils, and soils with high a shrink-swell potential, would occur. However, the same types of impacts would still occur. There are no existing General Plan goals or policies related to construction in unstable or expansive soils that are proposed for revision. However, existing General Plan Seismic and Geologic Hazards

Goal 1 and Policies 2, 5, and 6 would still be implemented, and these goals and policies would help to reduce impacts related to construction in unstable and expansive soils. For the same reasons discussed in Draft EIR Impact 4.7-3 (Section 4.7, “Geology, Soils, and Paleontological Resources”), all development is required to comply with the CBC and the City’s Design and Construction Standards, and therefore impacts related to unstable and expansive soil under the Reduced Growth Alternative would be **reduced** compared to the proposed General Plan Update, but would still be **less than significant**.

No Project Alternative

The existing General Plan includes the same level of development as would occur under the proposed General Plan Update, and therefore a similar level of hazards from placement of buildings and infrastructure in areas of unstable soils, and soils with high a shrink-swell potential, would occur. Existing General Plan Seismic and Geologic Hazards Goal 1 and Policies 2, 5, and 6 are designed to reduce hazards from unstable and expansive soils, and these policies would continue to be implemented. Furthermore, as discussed in Draft EIR Impact 4.7-3 (Section 4.7, “Geology, Soils, and Paleontological Resources”), all construction in the City would still be required to comply with the requirements of the CBC and to implement the City’s Design and Construction Standards. Therefore, impacts related to unstable and expansive soil under the No Project Alternative would be **similar to** the proposed General Plan Update, and would still be **less than significant**.

6.5.7.4 UNIQUE PALEONTOLOGICAL RESOURCES (*DAMAGE OR DESTRUCTION OF PALEONTOLOGICAL RESOURCES DURING EARTHMOVING ACTIVITIES*)

Infill Housing Alternative

The Infill Housing Alternative would result in increased earthmoving activities in paleontologically sensitive rock formations, as compared to the proposed General Plan Update. However, the additional housing units would be constructed in areas that have been previously disturbed for existing development and supporting infrastructure. Therefore, assuming that excavation for redevelopment activities occurred at the same depth as the existing development, the potential to encounter unique paleontological resources from the additional housing units would be lower as compared to new development on vacant land. However, the Infill Housing Alternative also includes all of the new development envisioned under the proposed General Plan update throughout the Planning Area. New development in the western portion of the Planning Area would be subject to mitigation measures designed to protect paleontological resources in the previously adopted Sierra Vista, Amoruso Ranch, Creekview, and West Roseville Specific Plans. The Infill Housing Alternative includes all of the same goals and policies as the proposed General Plan Update, including Goal OS4.1, which is proposed for modification to clarify that it includes protection for paleontological resources. Furthermore, for the same reasons discussed in Draft EIR Impact 4.7-4 (Section 4.7, “Geology, Soils, and Paleontological Resources”), the Infill Housing Alternative would implement Mitigation Measure 4.7-4 contained in the proposed General Plan Update, which requires the addition of new Policy OS4.11 that would implement construction worker personnel education related to fossils prior to the start of site-specific earthmoving activities, and would require obtaining the services of a qualified paleontologist and implementing the paleontologist’s site-specific recommendations if fossils were encountered. Therefore, impacts related to unique paleontological resources under the Infill Housing Alternative would be **similar to** the proposed General Plan Update, and would still be **less than significant with mitigation**.

Reduced Growth Alternative

Under the Reduced Growth Alternative, a lesser amount of new construction would occur compared to the proposed General Plan Update, and thus there would be a reduced potential to encounter and potentially damage or destroy unique paleontological resources. The Reduced Growth Alternative includes all of the same goals and policies as the proposed General Plan Update, including Goal OS4.1, which is proposed for modification to clarify that it includes protection for paleontological resources. Furthermore, for the reasons as discussed in Draft EIR Impact 4.7-4 (Section 4.7, “Geology, Soils, and Paleontological Resources”), the Reduced Growth Alternative would implement Mitigation Measure 4.7-4 contained in the proposed General Plan Update, which requires the addition of new Policy OS4.11 that would implement construction worker personnel education related to fossils prior to the start of site-specific earthmoving activities, and would require obtaining the services of a qualified paleontologist and implementing the paleontologist’s site-specific recommendations if fossils were encountered. Therefore, impacts related to unique paleontological resources under the Reduced Growth Alternative would be **reduced** as compared to the proposed General Plan Update, and would still be **less than significant with mitigation**.

No Project Alternative

The existing General Plan includes the same level of development as would occur under the proposed General Plan Update, and therefore a similar level of potential damage to unique paleontological resources could occur. New development in the western portion of the Planning Area would be subject to mitigation measures designed to protect paleontological resources in the previously adopted Sierra Vista, Amoruso Ranch, Creekview, and West Roseville Specific Plans. However, new and infill development in other portions of the Planning Area would not receive such protection because the existing General Plan does not contain goals or policies that would require evaluation or mitigation of impacts to unique paleontological resources from future development projects in the City. Under the No Project Alternative, existing General Plan goals and policies would not be updated to include protection for paleontological resources. Furthermore, there are no state or federal laws or regulations that require evaluation or protection of paleontological resources on private land, except as part of discretionary projects subject to CEQA or NEPA review. Therefore, the No Project Alternative could result in **greater, and significant** impacts to unique paleontological resources as compared to the proposed General Plan Update.

6.5.8 BIOLOGICAL RESOURCES

6.5.8.1 SPECIAL-STATUS PLANTS (*LOSS AND DEGRADATION OF SPECIAL-STATUS PLANT HABITAT AND POTENTIAL LOSS OF SPECIAL-STATUS PLANTS*)

Infill Housing Alternative

The Infill Housing Alternative would result in increased earthmoving activities and development of additional residential units, as compared to the proposed General Plan Update. However, the additional units would be constructed in previously disturbed areas that are already developed (see Exhibit 6-1). As discussed in Draft EIR Impact 4.8-1 (Section 4.8, “Biological Resources”), over 4,800 acres of habitat that may be suitable for special-status plant species would be lost from proposed development in the Planning Area, including annual grassland, oak woodland/savannah, riparian woodland/wetlands, vernal pool complexes, and open water, which could result in loss of special-status plants either through direct removal or through habitat degradation. Boggs Lake hedgehyssop and dwarf downingia are known to occur in the Planning Area in vernal pool habitats, and along the edges

of marshes within riparian woodland/wetland habitat. In addition, other special-status plants, including Sanford's arrowhead, big-scale balsamroot, Ahart's dwarf rush, legenere, and pincushion navaretia, could be present at previously undiscovered locations in annual grassland, vernal pool, and wetland habitat in the Planning Area that may be developed. As noted above, the additional housing units that would be implemented under the Infill Housing Alternative would be located in existing developed areas, and therefore no vernal pool or wetland habitat would be lost for the additional housing units, and it unlikely that annual grassland habitat would be lost for the additional housing units. Furthermore, compliance with the California Endangered Species Act (CESA) would reduce impacts on Boggs Lake hedge-hyssop because this would require that this species be avoided or that any loss of this species be fully mitigated as a condition of permit approvals, including take authorization from the California Department of Fish and Wildlife (CDFW). The City and the U.S. Fish and Wildlife Service (USFWS) have already entered into Memoranda of Understanding (MOUs) for the previously adopted Sierra Vista, West Roseville, Creekview, and Amoruso Ranch Specific Plans, which include land use plans and mitigation strategies for ESA compliance. Consistent with the USFWS Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon (USFWS 2005), the City of Roseville has set aside numerous vernal pool preservation areas within the Planning Area. New development in the western portion of the Planning Area would be subject to mitigation measures designed to protect special-status species in the previously adopted Sierra Vista, Amoruso Ranch, Creekview, and West Roseville Specific Plans. Much of the sensitive habitat in the Planning Area is designated as Open Space that would be maintained as part of the proposed General Plan Update.

The Infill Housing Alternative includes all of the same goals and policies as the proposed General Plan Update, including Policy OS1.6; and Goal OS2.2 and Policies OS2.2, OS2.7, OS2.9, OS2.10, and OS1.12. In addition, existing General Plan Open Space System Goal 1 and Policy 7; Vegetation and Wildlife Goals 1 and 3 and Policies 4, 5, 11; and Groundwater Recharge and Water Quality Policy 3 would still be implemented. These goals and policies require consistency with the City of Roseville Open Space Preserve Overarching Management Plan for dedication and management of on-site wetlands, preservation and restoration of riparian habitat and streambed corridors, considering the use of City property for habitat preservation and mitigation requirements, and limiting access to wetlands to preserve species. The Infill Housing Alternative would implement Mitigation Measure 4.8-1 contained in the proposed General Plan Update, which requires the addition of a new General Plan Implementation Measure that requires site-specific field surveys for special-status plants and habitats, along with mitigation measures designed to protect them (such as habitat preservation). Therefore, impacts to special-status plant species and habitat under the Infill Housing Alternative would **similar to** the proposed General Plan Update, and would still be **less than significant with mitigation**.

Reduced Growth Alternative

Under the Reduced Growth Alternative, a lesser amount of new construction and development would occur as compared to the proposed General Plan Update, and thus there would be a reduced potential to destroy special-status plants and their habitat. As discussed in Draft EIR Impact 4.8-1 (Section 4.8, "Biological Resources"), consistent with the USFWS Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon (USFWS 2005), the City of Roseville has set aside numerous vernal pool preservation areas within the Planning Area. Much of the Planning Area is designated as Open Space that would be maintained as part of the proposed General Plan Update. The Reduced Growth Alternative includes all of the same goals and policies as the proposed General Plan Update, including Policy OS1.6; and Goal OS2.2 and Policies OS2.2, OS2.7, OS2.9, OS2.10, and OS1.12. In addition, existing General Plan Open Space System Goal 1 and Policy 7; Vegetation and Wildlife Goals 1 and 3 and Policies 4, 5, 11; and Groundwater Recharge and Water Quality Policy 3 would still be

implemented. These goals and policies require consistency with the City of Roseville Open Space Preserve Overarching Management Plan for dedication and management of on-site wetlands, preservation and restoration of riparian habitat and streambed corridors, considering the use of City property for habitat preservation and mitigation requirements, and limiting access to wetlands to preserve species. The Reduced Growth Alternative would also implement Mitigation Measure 4.8-1 contained in the 2035 General Plan Update, which requires a new General Plan Implementation Measure that requires site-specific field surveys for special-status plants and habitats, along with mitigation measures designed to protect them (such as habitat preservation), for all future CEQA projects. Furthermore, most of the habitat that would be disturbed under the proposed General Plan Update consists of undeveloped land in the western portion of the Planning Area, which would not be developed under the Reduced Growth Alternative. Therefore, impacts related to special-status plants and habitat under the Reduced Growth Alternative would be **reduced** compared to the proposed General Plan Update, and would still be **less than significant with mitigation**.

No Project Alternative

The existing General Plan includes the same level of development as would occur under the proposed General Plan Update, and therefore a similar level of potential direct and indirect losses of special-status plants and their habitat could occur. Under the No Project Alternative, Policy OS1.6; and Goal OS2.2 and Policies OS2.2, OS2.7, OS2.9, OS2.10, and OS1.12 would not be updated to provide more detailed protection for special-status plants and habitat. Furthermore, Mitigation Measure 4.8-1 requiring a new General Plan Implementation Measure to further protect special-status plants and their habitat, would not be implemented. However, the existing General Plan Open Space System Goal 1 and Policy 7; Vegetation and Wildlife Goals 1 and 3 and Policies 4, 5, 11; and Groundwater Recharge and Water Quality Policy 3 would still be implemented, and these goals and policies are designed to reduce the loss of special-status plants and habitat. The City and USFWS have already entered into MOUs for the previously adopted Sierra Vista, West Roseville, Creekview, and Amoruso Ranch Specific Plans, which include land use plans and mitigation strategies for ESA compliance. Consistent with the USFWS Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon (USFWS 2005), the City of Roseville has set aside numerous vernal pool preservation areas within the Planning Area. New development in the western portion of the Planning Area would be subject to mitigation measures designed to protect special-status species in the previously adopted Sierra Vista, Amoruso Ranch, Creekview, and West Roseville Specific Plans. Much of the sensitive habitat in the Planning Area is designated as Open Space that would be maintained as part of the proposed General Plan Update. Finally, impacts to ESA and CESA-listed species must be avoided or fully mitigated as a condition of permit approvals, including take authorizations from USFWS and CDFW. Therefore, impacts related to special-status plants and habitat under the No Project Alternative would be **similar** to the proposed General Plan Update, and would still be **less than significant**.

6.5.8.2 SPECIAL-STATUS WILDLIFE (*LOSS AND DEGRADATION OF HABITAT FOR SPECIAL-STATUS WILDLIFE SPECIES AND POTENTIAL DIRECT TAKE OF INDIVIDUALS*)

Infill Housing Alternative

The Infill Housing Alternative would result in increased earthmoving activities and development of additional residential units, as compared to the proposed General Plan Update. However, the additional units would be constructed in previously disturbed areas that are already developed (see Exhibit 6-1). As discussed in Draft EIR Impact 4.8-2 (Section 4.8, “Biological Resources”), over 6,300 acres of habitat that may be suitable for special-status wildlife species would be lost from proposed development in the Planning Area, including annual

grassland, oak woodland/savannah, riparian woodland/wetlands, vernal pool complexes, and open water, which could result in loss of special-status wildlife either through direct mortality or through habitat degradation. These species, which are known to be present in the Planning Area, include vernal pool fairy shrimp, vernal pool tadpole shrimp, valley elderberry longhorn beetle, steelhead, tricolored blackbird, Swainson's hawk, California black rail, white-tailed kite, along with 12 additional special-status wildlife species that are not officially listed under ESA or CESA. Pallid bat and Townsend's big-eared bat habitat could be removed. Additional special-status and/or migratory bird species in the Planning Area include Cooper's hawk, ferruginous hawk, loggerhead shrike, burrowing owl, tricolored blackbird, northern harrier, long-billed curlew, grasshopper sparrow, and purple martin. Most of the new development would occur in the western portions of the Planning Area that surround Pleasant Grove Creek and Curry Creek, neither of which are part of the Dry Creek stream system and do not support populations of special-status fish (PCCP 2018). However, the Infill Housing Alternative would allow for some new development in the vicinity of Dry Creek, Antelope Creek, Linda Creek, Secret Ravine, and Miners Ravine. This would increase the density of development surrounding the Dry Creek stream system that could degrade water quality and negatively affect habitat for special-status fish (i.e., Central Valley DPS of steelhead and the fall/late fall run ESU of chinook salmon). Compliance with ESA and CESA would reduce some of the potential impacts because it would require that State and/or federally listed species be avoided or that any loss of these species be fully mitigated as a condition of take authorization. New development in the western portion of the Planning Area would be subject to mitigation measures designed to protect special-status species in the previously adopted Sierra Vista, Amoruso Ranch, Creekview, and West Roseville Specific Plans. The City and USFWS have already entered into MOUs for the previously adopted Sierra Vista, West Roseville, Creekview, and Amoruso Ranch Specific Plans, which include land use plans and mitigation strategies for ESA compliance. Consistent with the USFWS Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon (USFWS 2005), the City of Roseville has set aside numerous vernal pool preservation areas within the Planning Area. Much of the sensitive habitat in the Planning Area is designated as Open Space that would be maintained as part of the proposed General Plan Update.

The Infill Housing Alternative includes all of the same goals and policies as the proposed General Plan Update, including Policy OS1.6; and Goal OS2.2 and Policies OS2.1, OS2.2, OS2.7, OS2.9, OS2.10, and OS1.12. In addition, existing General Plan Open Space System Goal 1 and Policy 7; Vegetation and Wildlife Goals 1 and 3 and Policies 3, 4, 5, 11, and 13; and Groundwater Recharge and Water Quality Policy 3, which would still be implemented. These goals and policies require consistency with the City of Roseville Open Space Preserve Overarching Management Plan for dedication and management of on-site wetland mitigation, provide for protection and enhancement of native fishery resources, take into account natural habitat areas when designating access to and preserving open space areas, and incorporate existing trees into development projects. These goals and policies would help to protect special-status species and habitats. The Infill Housing Alternative would also implement Mitigation Measure 4.8-2, which requires a new proposed General Plan Update Implementation Measure that requires site-specific field surveys for special-status wildlife and habitats, along with mitigation measures designed to protect them (such as habitat preservation), for all future CEQA projects. Therefore, impacts to special-status wildlife species under the Infill Housing Alternative would be **similar to** the proposed General Plan Update, and would still be **less than significant with mitigation**.

Reduced Growth Alternative

Under the Reduced Growth Alternative, a lesser amount of new construction and development would occur compared to the proposed General Plan Update, and thus there would be a reduced potential for direct mortality of

special-status wildlife and indirect loss or degradation of habitat. As discussed in Draft EIR Impact 4.8-2 (Section 4.8, “Biological Resources”), consistent with the USFWS Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon (USFWS 2005), the City of Roseville has set aside numerous vernal pool preservation areas within the Planning Area. Much of the Planning Area is designated as Open Space that would be maintained as part of the proposed General Plan Update. Compliance with ESA and CESA would reduce some of the potential impacts because it would require that State and/or federally listed species be avoided or that any loss of these species be fully mitigated as a condition of take authorization. The Reduced Growth Alternative includes all of the same goals and policies as the proposed General Plan Update, including Policy OS1.6; and Goal OS2.2 and Policies OS2.1, OS2.2, OS2.7, OS2.9, OS2.10, and OS1.12. In addition, existing General Plan Open Space System Goal 1 and Policy 7; Vegetation and Wildlife Goals 1 and 3 and Policies 3, 4, 5, 11, and 13; and Groundwater Recharge and Water Quality Policy 3 would still be implemented. These goals and policies require consistency with the City of Roseville Open Space Preserve Overarching Management Plan for dedication and management of on-site wetland mitigation, provide for protection and enhancement of native fishery resources, take into account natural habitat areas when designating access to and preserving open space areas, and incorporate existing trees into development projects. These goals and policies would help to protect special-status species and habitats. The Reduced Growth Alternative would also implement Mitigation Measure 4.8-2 contained in the proposed General Plan Update, which requires a new General Plan Implementation Measure that requires site-specific field surveys for special-status wildlife and habitats, along with mitigation measures designed to protect them (such as habitat preservation), for all future CEQA projects. Furthermore, most of the habitat that would be disturbed under the proposed General Plan Update consists of undeveloped land in the western portion of the Planning Area, which would not be developed under the Reduced Growth Alternative. Therefore, impacts related to special-status wildlife and associated habitat under the Reduced Growth Alternative would be **reduced** as compared to the proposed General Plan Update, and would still be **less than significant with mitigation**.

No Project Alternative

The existing General Plan includes the same level of development as would occur under the proposed General Plan Update, and therefore a similar level of potential direct and indirect losses of special-status wildlife and associated habitat could occur. Under the No Project Alternative, Policy OS1.6; and Goal OS2.2 and Policies OS2.2, OS2.7, OS2.9, OS2.10, and OS1.12 would not be updated to provide more detailed protection for special-status wildlife and habitat. Furthermore, Mitigation Measure 4.8-2 requiring a new General Plan Implementation Measure to further protect special-status wildlife and associated habitat, would not be implemented. However, the existing General Plan Open Space System Goal 1 and Policy 7; Vegetation and Wildlife Goals 1 and 3 and Policies 3, 4, 5, 11, and 13; and Groundwater Recharge and Water Quality Policy 3 are designed to reduce the loss of special-status wildlife and habitat, and these goals and policies would continue to be implemented. The City and USFWS have already entered into MOUs for the previously adopted Sierra Vista, West Roseville, Creekview, and Amoruso Ranch Specific Plans, which include land use plans and mitigation strategies for ESA compliance. Consistent with the USFWS Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon (USFWS 2005), the City of Roseville has set aside numerous vernal pool preservation areas within the Planning Area. New development in the western portion of the Planning Area would be subject to mitigation measures designed to protect special-status species in the previously adopted Sierra Vista, Amoruso Ranch, Creekview, and West Roseville Specific Plans. Much of the sensitive habitat in the Planning Area is designated as Open Space that would be maintained as part of the proposed General Plan Update. Finally, impacts to ESA and CESA-listed species must be avoided or fully mitigated as a condition of permit approvals, including take authorizations from USFWS and CDFW. Therefore, impacts related to special-status wildlife and loss or

degradation of habitat under the No Project Alternative would be **similar to** the proposed General Plan Update, and would still be **less than significant**.

6.5.8.3 RIPARIAN HABITAT/SENSITIVE NATURAL COMMUNITIES (LOSS AND DEGRADATION OF RIPARIAN HABITAT OR OTHER SENSITIVE NATURAL COMMUNITIES)

Infill Housing Alternative

The Infill Housing Alternative would result in increased earthmoving activities and development of additional residential units, as compared to the proposed General Plan Update. However, the additional housing units would be constructed in previously disturbed areas that are already developed and are surrounded by existing urban development (see Exhibit 6-1). Therefore, although the proposed General Plan Update could potentially result in the conversion of up to 251 acres of riparian woodland/wetlands and 141 acres of oak woodland/savannah to urban development, it is unlikely that the Infill Housing Alternative would result conversion of additional substantial areas of riparian habitat or other sensitive natural communities. As discussed in Draft EIR Impact 4.8-3 (Section 4.8, “Biological Resources”), compliance with Section 1602 of the California Fish and Game Code would reduce potential impacts on riparian habitat because it would require project applicants to obtain a Lake and Streambed Alteration Agreement (if applicable) that includes measures to avoid, minimize, or compensate for adverse effects to riparian habitat that must be implemented as a condition of the agreement. Furthermore, City floodplain development regulations limit the type of activities that could occur within the riparian zone and the Roseville Creek and Riparian Management and Restoration Plan provides standards for riparian area management and enhancement. The City’s Tree Ordinance protects oak trees, and BMPs associated with NPDES permits would protect riparian zones by prohibiting fill or degradation to vegetation that could impede water quality and vegetation. New development in the western portion of the Planning Area would be subject to mitigation measures designed to protect riparian habitat and other sensitive natural communities in the previously adopted Sierra Vista, Amoruso Ranch, Creekview, and West Roseville Specific Plans.

The Infill Housing Alternative includes all of the same goals and policies as the proposed General Plan Update, including Policy OS1.6; and Goal OS2.2 and Policies OS2.1, OS2.2, OS2.7, OS2.9, OS2.10, and OS1.12. In addition, existing General Plan Open Space System Goal 1 and Policy 7; Vegetation and Wildlife Goals 1 and 3 and Policies 3, 4, 5, 11, and 13; and Groundwater Recharge and Water Quality Policies 2 and 3 would still be implemented. These goals and policies require consistency with the City of Roseville Open Space Preserve Overarching Management Plan for dedication and management of on-site wetland mitigation, provide for protection and enhancement of native fishery resources, take into account natural habitat areas when designating access to and preserving open space areas, and incorporate existing trees into development projects. These goals and policies would help to protect riparian habitat and other sensitive natural communities. The Infill Housing Alternative would also implement Mitigation Measure 4.8-3, which requires a new proposed General Plan Update Implementation Measure that requires project applicants to obtain a Lake and Streambed Alteration Agreement from CDFW if projects would result in fill or alteration of a waterway or any body of water supporting riparian forest habitat, and to implement measures for riparian habitat and sensitive natural communities protection such as establishing a buffer zone between adjacent land uses and riparian habitat and sensitive natural communities; protecting and preserving riparian habitat and sensitive natural communities to the extent feasible; and compensating for loss of riparian habitat and sensitive natural communities by creating, restoring, or preserving off-site habitat in coordination with the applicable resource agencies. Mitigation Measures 4.8-1 and 4.8-2 described previously above would also be implemented, and would also help to reduce impacts to riparian habitat

and other sensitive natural communities. Therefore, impacts related to loss or conversion of riparian habitat or other sensitive natural communities under the Infill Housing Alternative would be **similar to** the proposed General Plan Update, and would still be **less than significant with mitigation**.

Reduced Growth Alternative

Under the Reduced Growth Alternative, a lesser amount of new construction and development would occur compared to the proposed General Plan Update, and thus there would be a reduced potential for loss or conversion of riparian habitat or other sensitive natural communities. As discussed in Draft EIR Impact 4.8-3 (Section 4.8, “Biological Resources”), much of the Planning Area is designated as Open Space that would be maintained as part of the proposed General Plan Update. The Reduced Growth Alternative includes all of the same goals and policies as the proposed General Plan Update, including Policy OS1.6; and Goal OS2.2 and Policies OS2.1, OS2.2, OS2.7, OS2.9, OS2.10, and OS1.12. In addition, existing General Plan Open Space System Goal 1 and Policy 7; Vegetation and Wildlife Goals 1 and 3 and Policies 3, 4, 5, 11, and 13; and Groundwater Recharge and Water Quality Policies 2 and 3 would still be implemented. These goals and policies require consistency with the City of Roseville Open Space Preserve Overarching Management Plan for dedication and management of on-site wetland mitigation, provide for protection and enhancement of native fishery resources, take into account natural habitat areas when designating access to and preserving open space areas, and incorporate existing trees into development projects. These goals and policies would help to protect riparian habitat and other sensitive natural communities. The Reduced Growth Alternative would also implement Mitigation Measure 4.8-3 from the proposed General Plan Update, which requires a new proposed General Plan Update Implementation Measure that requires project applicants to obtain a Lake and Streambed Alteration Agreement from CDFW if projects would result in fill or alteration of a waterway or any body of water supporting riparian forest habitat, and to implement measures for riparian habitat and sensitive natural communities protection contained in the agreement. Mitigation Measures 4.8-1 and 4.8-2 described previously above would also be implemented under the Reduced Growth Alternative, and would also help to reduce impacts to riparian habitat and other sensitive natural communities. Furthermore, most of the habitat that would be disturbed under the proposed General Plan Update consists of undeveloped land in the western portion of the Planning Area, which would not be developed under the Reduced Growth Alternative. Therefore, impacts related to loss or conversion of riparian habitat or other sensitive natural communities under the Reduced Growth Alternative would be **reduced** compared to the proposed General Plan Update, and would still be **less than significant with mitigation**.

No Project Alternative

The existing General Plan includes the same level of development that would occur as under the proposed General Plan Update, and therefore a similar level of potential for loss or conversion of riparian habitat or other sensitive natural communities could occur. Under the No Project Alternative, Policy OS1.6; and Goal OS2.2 and Policies OS2.1, OS2.2, OS2.7, OS2.9, OS2.10, and OS1.12 would not be updated to provide addition protection for riparian habitat and other sensitive natural communities. Furthermore, Mitigation Measure 4.8-3 requiring a new General Plan Implementation Measure to further protect riparian habitat and other sensitive natural communities, would not be implemented. However, the existing General Plan Open Space System Goal 1 and Policy 7; Vegetation and Wildlife Goals 1 and 3 and Policies 3, 4, 5, 11, and 13; and Groundwater Recharge and Water Quality Policies 2 and 3 are designed to reduce the loss of riparian habitat and sensitive natural communities, and these policies would continue to be implemented. Furthermore, future project applicants are required by law to consult with CDFW and obtain a Lake and Streambed Alteration Agreement from CDFW if

projects would result in fill or alteration of a waterway or any body of water supporting riparian forest habitat, and to implement measures for riparian habitat and sensitive natural communities protection contained in the agreement. New development in the western portion of the Planning Area would be subject to mitigation measures designed to protect special-status species in the previously adopted Sierra Vista, Amoruso Ranch, Creekview, and West Roseville Specific Plans. Much of the Planning Area is designated as Open Space that would be maintained as part of the proposed General Plan Update. Therefore, impacts related to loss or conversion of riparian habitat or other sensitive natural communities under the No Project Alternative would be **similar to** the proposed General Plan Update, and would still be **less than significant**.

6.5.8.4 LOSS AND DEGRADATION OF WETLANDS AND OTHER WATERS

Infill Housing Alternative

The Infill Housing Alternative would result in increased earthmoving activities and development of additional residential units, as compared to the proposed General Plan Update. However, the additional housing units would be constructed in previously disturbed areas that are already developed and are surrounded by existing urban development (see Exhibit 6-1). As discussed in Draft EIR Impact 4.8-4 (Section 4.8, “Biological Resources”), land conversion could result in direct fill of wetlands and other waters of the United States and/or waters of the state. Indirect impacts could result from adjacent development that leads to habitat modifications, such as changes in hydrology and reduction in water quality caused by urban runoff, erosion, and siltation. Project applicants must obtain a Clean Water Act Section 404 permit from the U.S. Army Corps of Engineers (USACE) for any activity resulting in fill of wetlands and other waters of the United States, and a wetland mitigation plan that satisfies USACE requirements is required as part of the permit application. Any wetlands or other waters disclaimed by the USACE would still be subject to regulation by Central Valley RWQCB as waters of the state and impacts on waters of the state would require mitigation. However, as shown in Exhibit 4.8-4, much of the open water/creeks and vernal pool complexes in the Planning Area is designated for Open Space and would therefore be protected from direct removal, reducing the potential impact. The City and USFWS have already entered into MOUs for the previously adopted Sierra Vista, West Roseville, Creekview, and Amoruso Ranch Specific Plans, which include land use plans and mitigation strategies for ESA compliance, including avoidance, minimization, and preservation of wetland resources, specifically vernal pools, riparian areas, and other sensitive wetland habitat.

The Infill Housing Alternative includes all of the same goals and policies as the proposed General Plan Update, including Policy OS1.6; and Goal OS2.2 and Policies OS2.2, OS2.6, OS2.7, OS2.8, OS2.9, OS2.10, and OS2.12. In addition, existing General Plan Open Space System Goal 1 and Policy 7; Vegetation and Wildlife Goals 1 and 3 and Policies 3, 4, 5, 11, and 13; and Groundwater Recharge and Water Quality Policies 2 and 3 would still be implemented. These goals and policies provide for preservation of natural habitat, creeks, riparian and seasonal wetland areas, and water quality. The Infill Housing Alternative would also implement Mitigation Measure 4.8-4 from the proposed General Plan Update, which would require a new proposed General Plan Update Implementation Measure that requires project applicants to complete a delineation of waters of the United States according to USACE methods, and to submit the completed delineation to the USACE for jurisdictional determination. If the project would result in fill of wetlands or other waters of the United States, the City will require project proponent/s to obtain a Section 404 Clean Water Act permit and a water quality certification from the Central Valley RWQCB pursuant to Section 401 of the Clean Water Act. Mitigation Measures 4.8-1, 4.8-2, and 4.8-3 described previously above would also be implemented under this alternative, and would also help to reduce impacts to wetlands and other waters. Because the additional housing units would be constructed in

previously disturbed areas that are already developed and are surrounded by existing urban development, impacts related to fill of wetlands and other waters of the United States under the Infill Housing Alternative would be **similar to** the proposed General Plan Update, and would still be **less than significant with mitigation**.

Reduced Growth Alternative

Under the Reduced Growth Alternative, a lesser amount of new construction and development would occur as compared to the proposed General Plan Update, and thus there would be a reduced potential for fill of wetlands and other waters of the United States. As discussed in Draft EIR Impact 4.8-4 (Section 4.8, “Biological Resources”), much of the Planning Area is designated as Open Space that would be maintained as part of the proposed General Plan Update. The Reduced Growth Alternative includes all of the same goals and policies as the proposed General Plan Update, including Policy OS1.6; and Goal OS2.2 and Policies OS2.2, OS2.6, OS2.7, OS2.8, OS2.9, OS2.10, and OS2.12. In addition, existing General Plan Open Space System Goal 1 and Policy 7; Vegetation and Wildlife Goals 1 and 3 and Policies 3, 4, 5, 11, and 13; and Groundwater Recharge and Water Quality Policies 2 and 3 would still be implemented. The Reduced Growth Alternative would also implement Mitigation Measure 4.8-4 contained in the proposed General Plan Update, which requires a new proposed General Plan Update Implementation Measure that requires project applicants to complete a delineation of waters of the United States, obtain all appropriate permits, and implement the terms and conditions of the permits in order to mitigate for fill of wetlands. Furthermore, most of the wetlands that could be filled or indirectly affected under the proposed General Plan Update are located within undeveloped land in the western portion of the Planning Area, which would not be developed under the Reduced Growth Alternative. Mitigation Measures 4.8-1, 4.8-2, and 4.8-3 described previously above would also be implemented under the Reduced Growth Alternative, and would also help to reduce impacts to wetlands and other waters. Therefore, impacts related to fill of wetlands and other waters of the United States under the Reduced Growth Alternative would be **reduced** compared to the proposed General Plan Update, and would still be **less than significant with mitigation**.

No Project Alternative

The existing General Plan includes the same level of development as would occur as under the proposed General Plan Update, and therefore a similar level of potential for fill of wetlands and other waters of the United States could occur. Under the No Project Alternative, Policy OS1.6; and Goal OS2.2 and Policies OS2.2, OS2.6, OS2.7, OS2.8, OS2.9, OS2.10, and OS2.12 would not be updated to provide improved protection for wetlands and other waters. Furthermore, Mitigation Measure 4.8-4 requiring a new General Plan Implementation Measure to that requires project applicants to complete a delineation of waters of the United States, obtain all appropriate permits, and implement the terms and conditions of the permits in order to mitigate for fill of wetlands, would not be implemented. However, the existing General Plan Open Space System Goal 1 and Policy 7; Vegetation and Wildlife Goals 1 and 3 and Policies 3, 4, 5, 11, and 13; and Groundwater Recharge and Water Quality Policies 2 and 3 are designed to reduce the loss of wetlands and other waters and to preserve habitat, and these goals and policies would continue to be implemented. Furthermore, future project applicants are required by law to consult with USACE and prepare a wetland delineation that includes a mitigation plan if projects would result in fill of water of the United States. New development in the western portion of the Planning Area would be subject to mitigation measures designed to protect waters of the United States in the previously adopted Sierra Vista, Amoruso Ranch, Creekview, and West Roseville Specific Plans. Much of the Planning Area is designated as Open Space that would be maintained as part of the proposed General Plan Update. Therefore, impacts related to

fill of wetlands and other waters of the United States under the No Project Alternative would be **similar** to the proposed General Plan Update, and would still be **less than significant**.

6.5.8.5 SUBSTANTIAL INTERFERENCE WITH WILDLIFE MOVEMENT CORRIDORS AND NURSERY SITES

Infill Housing Alternative

The Infill Housing Alternative would result in increased earthmoving activities and development of additional residential units, as compared to the proposed General Plan Update. However, the additional housing units would be constructed in previously disturbed areas that are already developed and are surrounded by existing urban development (see Exhibit 6-1). As discussed in Draft EIR Impact 4.8-5 (Section 4.8, “Biological Resources”), the Planning Area does not currently provide an important connection between any areas of natural habitat that would otherwise be isolated. The Planning Area is not located within any of the ecological corridors identified in the draft *Western Placer County Habitat Conservation Plan/Natural Community Conservation Plan* (PCCP 2018) as important to maintaining connectivity between communities, habitat patches, species populations, or the proposed conservation plant reserve system. The only wildlife nursery site identified in the Planning Area is a nesting colony of purple martin in the State Route 65 overpass. No change to the State Route 65 overpass is proposed as part of the proposed General Plan Update. The City’s Floodplain Development Regulations and NPDES permit requirements would reduce impacts associated with floodplains, stream channels, and natural protective barriers. Most of the stream channels in the Planning Area would remain as open space, which would preserve movement corridors in the Planning Area. Also, much of the vernal pool complexes in the Planning Area would be preserved and provide linkages for movement of animals. In addition, if there are activities in the Planning Area that could affect stream corridors, this would require a Section 1600 Streambed Alteration Agreement from CDFW. Specific measures would be developed during discussions with CDFW, but may include avoidance and minimization measures, use of erosion control and bank stabilization measures, and restoration of stream corridor habitat that has been damaged during the construction of the proposed General Plan Update. The Infill Housing Alternative would increase the density of development surrounding the Dry Creek stream system, which serves as habitat for migratory salmonids. However, implementation of BMPs associated with NPDES permits for construction activities, and compliance with the City’s MS4 permit, would reduce the potential for additional pollutants to be transported in stormwater into Dry Creek, Antelope Creek, Linda Creek, Secret Ravine, and Miners Ravine. The City and USFWS have already entered into MOUs for the previously adopted Sierra Vista, West Roseville, Creekview, and Amoruso Ranch Specific Plans, which include land use plans and mitigation strategies for ESA compliance.

The Infill Housing Alternative includes all of the same goals and policies as the proposed General Plan Update, including Policy OS1.6; and Goal OS2.2 and Policies OS2.1, OS2.2, OS2.6, OS2.7, OS2.8, OS2.9 and OS2.12. In addition, existing General Plan Open Space System Goal 1 and Policy 7; Vegetation and Wildlife Goals 1 and 3 and Policies 3, 4, 5, and 11; and Groundwater Recharge and Water Quality Policies 2 and 3 would still be implemented. These goals and policies provide for preservation and restoration of continuous riparian corridors and adjacent habitat along the City’s creeks and waterways, protection and enhancement of native fishery resources, and implementation of erosion control and topsoil conservation measures to limit sediments within watercourses. Existing and proposed General Plan Update policies that require protection of special-status species and their habitats also protect riparian areas, wetlands, and drainages that can be used as wildlife corridors. The Infill Housing Alternative would also implement Mitigation Measures 4.8-1, 4.8-2, 4.8-3, and 4.8-4 contained in

the proposed General Plan Update, which would require new proposed General Plan Update Implementation Measures that requires site-specific field surveys for special-status plants, wildlife and habitats, riparian and sensitive natural communities, and wetlands, along with mitigation measures designed to protect them (such as preservation). Therefore, impacts related to interference with wildlife movement corridors and nursery sites under the Infill Housing Alternative would be **similar to** the proposed General Plan Update, and would still be **less than significant with mitigation**.

Reduced Growth Alternative

Under the Reduced Growth Alternative, a lesser amount of new construction and development would occur as compared to the proposed General Plan Update, and thus there would be a reduced potential interference with wildlife movement corridors and nursery sites. As discussed in Draft EIR Impact 4.8-5 (Section 4.8, “Biological Resources”), compliance with the City’s Floodplain Development Regulations and NPDES permit requirements would reduce impacts associated with floodplains, stream channels, and natural protective barriers. Most of the stream channels in the Planning Area would remain as open space, which would preserve movement corridors in the Planning Area. Also, much of the vernal pool complexes in the Planning Area would be preserved and provide linkages for movement of animals. In addition, if there are activities in the Planning Area that could affect stream corridors, this would require a Section 1600 Streambed Alteration Agreement from CDFW. Implementation of BMPs associated with NPDES permits for construction activities, and compliance with the City’s MS4 permit, would reduce the potential for additional pollutants to be transported in stormwater into the Dry Creek System, which would in turn reduce potential impacts on migratory salmonids. The Reduced Growth Alternative includes all of the same goals and policies as the proposed General Plan Update, including Policy OS1.6; and Goal OS2.2 and Policies OS2.1, OS2.2, OS2.6, OS2.7, OS2.8, OS2.9 and OS2.12. In addition, existing General Plan Open Space System Goal 1 and Policy 7; Vegetation and Wildlife Goals 1 and 3 and Policies 3, 4, 5, and 11; and Groundwater Recharge and Water Quality Policies 2 and 3 would still be implemented. These goals and policies provide for preservation and restoration of continuous riparian corridors and adjacent habitat along the City’s creeks and waterways, protection and enhancement of native fishery resources, and implementation of erosion control and topsoil conservation measures to limit sediments within watercourses. Existing and proposed General Plan Update policies that require protection of special-status species and their habitats also protect riparian areas, wetlands, and drainages that can be used as wildlife corridors. The Reduced Growth Alternative would also implement Mitigation Measures 4.8-1, 4.8-2, 4.8-3, and 4.8-4 contained in the proposed General Plan Update, which would require new proposed General Plan Update Implementation Measures that requires site-specific field surveys for special-status plants, wildlife and habitats, riparian and sensitive natural communities, and wetlands, along with mitigation measures designed to protect them (such as preservation). Therefore, impacts related to interference with wildlife movement corridors and nursery sites under the Reduced Growth Alternative would be **reduced** compared to the proposed General Plan Update, and would still be **less than significant with mitigation**.

No Project Alternative

The existing General Plan includes the same level of development as would occur under the proposed General Plan Update, and therefore a similar level of interference with wildlife movement corridors and nursery sites would occur. As discussed in Draft EIR Impact 4.8-5 (Section 4.8, “Biological Resources”), the Planning Area does not currently provide an important connection between any areas of natural habitat that would otherwise be isolated. The Planning Area is not located within any of the ecological corridors identified in the draft *Western*

Placer County Habitat Conservation Plan/Natural Community Conservation Plan (PCCP 2018) as important to maintaining connectivity between communities, habitat patches, species populations, or the proposed conservation plant reserve system. The only wildlife nursery site identified in the Planning Area is a nesting colony of purple martin in the State Route 65 overpass. No change to the State Route 65 overpass is proposed as part of the proposed General Plan Update. Under the No Project Alternative, Policy OS1.6; and Goal OS2.2 and Policies OS2.1, OS2.2, OS2.6, OS2.7, OS2.8, OS2.9 and OS2.12 would not be updated to provide additional protection for wildlife migration corridors and nursery sites. Furthermore, Mitigation Measures 4.8-1, 4.8-2, 4.8-3, and 4.8-4 requiring new General Plan Update Implementation Measures to further protect special-status wildlife, habitat, riparian communities, and wetlands, which would in turn protect wildlife migration corridors and nursery sites, would not be implemented. However, existing General Plan Open Space System Goal 1 and Policy 7; Vegetation and Wildlife Goals 1 and 3 and Policies 3, 4, 5, and 11; and Groundwater Recharge and Water Quality Policies 2 and 3 would still be implemented, and these goals and policies would help to protect wildlife migration corridors. Furthermore, the City's Floodplain Development Regulations and NPDES permit requirements would reduce impacts associated with floodplains, stream channels, and natural protective barriers. Most of the stream channels in the Planning Area would remain as open space, which would preserve movement corridors in the Planning Area. Also, much of the vernal pool complexes in the Planning Area would be preserved and provide linkages for movement of animals. In addition, if there are activities in the Planning Area that could affect stream corridors, this would require a Section 1600 Streambed Alteration Agreement from CDFW. Specific measures would be developed during discussions with CDFW, but may include avoidance and minimization measures, use of erosion control and bank stabilization measures, and restoration of stream corridor habitat that has been damaged during the construction of the proposed General Plan Update. Implementation of BMPs associated with NPDES permits for construction activities, and compliance with the City's MS4 permit, would reduce the potential for additional pollutants to be transported in stormwater into the Dry Creek System, which would in turn reduce potential impacts on migratory salmonids. The City and USFWS have already entered into MOUs for the previously adopted Sierra Vista, West Roseville, Creekview, and Amoruso Ranch Specific Plans, which include land use plans and mitigation strategies for ESA compliance. Therefore, interference with wildlife movement corridors and nursery sites under the No Project Alternative would be **similar to** the proposed General Plan Update, and would still be **less than significant**.

6.5.8.6 CONFLICT WITH LOCAL ORDINANCES PROTECTING BIOLOGICAL RESOURCES

Infill Housing Alternative

The Infill Housing Alternative would result in increased earthmoving activities and development of additional residential units, as compared to the proposed General Plan Update, and therefore an increased potential for conflicts with the City's Tree Preservation Ordinance (Municipal Code Chapter 19.66) could occur. However, as discussed in Draft EIR Impact 4.8-6 (Section 4.8, "Biological Resources"), applications for Tree Permits for regulated activities associated with a discretionary project must be included as part of the land use permit and/or subdivision application for each discretionary project. The Tree Preservation Ordinance requires individual project applicants inventory all trees on their project sites, prepare a program for the preservation of protected trees during and after completion of the project, and replace any protected trees that must be removed.

The Infill Housing Alternative includes all of the same goals and policies as the proposed General Plan Update, including Policies OS2.1 and OS2.2, as well as existing General Plan Vegetation and Wildlife Goal 1 and Policy 11. These goals and policies require that existing trees be incorporated into development projects, and where

preservation is not feasible, mitigation for the loss of removed trees must be provided by individual project applicants. These policies also require the preservation and restoration of continuous riparian corridors and adjacent habitat along the City's creeks, which would also preserve trees. With the additional development anticipated, impacts related to conflicts with local biological preservation ordinances under the Infill Housing Alternative would be **slightly greater than** the proposed General Plan Update, but would still be **less than significant**.

Reduced Growth Alternative

Under the Reduced Growth Alternative, a lesser amount of new construction and development would occur as compared to the proposed General Plan Update, and thus there would be a reduced potential for conflicts with the City's Tree Preservation Ordinance. As discussed in Draft EIR Impact 4.8-6 (Section 4.8, "Biological Resources"), applications for Tree Permits (which must include a program for tree preservation and/or tree replacement) for regulated activities associated with a discretionary project must be included as part of the land use permit and/or subdivision application for each discretionary project. The Reduced Growth Alternative includes all of the same goals and policies as the proposed General Plan Update, including Policies OS2.1 and OS2.2, as well as existing General Plan Vegetation and Wildlife Goal 1 and Policy 11. These goals and policies require that existing trees be incorporated into development projects, and where preservation is not feasible, mitigation for the loss of removed trees must be provided by individual project applicants. These policies also require the preservation and restoration of continuous riparian corridors and adjacent habitat along the City's creeks, which would also preserve trees. Impacts related to conflicts with local biological preservation ordinances under the Reduced Growth Alternative would be **reduced** compared to the proposed General Plan Update, and would still be **less than significant**.

No Project Alternative

The existing General Plan includes the same level of development as would occur under the proposed General Plan Update, and therefore a similar level of potential conflicts with the City's Tree Preservation Ordinance could occur. Under the No Project Alternative, Policies OS2.1 and OS2.2 would not be updated. However, the existing General Plan Vegetation and Wildlife Policy 1 requires that existing trees be incorporated into development projects, and where preservation is not feasible, mitigation for the loss of removed trees must be provided by individual project applicants. Furthermore, existing General Plan Vegetation and Wildlife Policy 2 also requires the preservation of continuous riparian corridors and adjacent habitat along the City's creeks, which would also preserve trees. Therefore, impacts related to conflicts with local biological preservation ordinances under the No Project Alternative would be **similar** to the proposed General Plan Update, and would still be **less than significant**.

6.5.8.7 HABITAT CONSERVATION PLANS (CONFLICT WITH PROVISIONS OF AN ADOPTED HABITAT CONSERVATION PLAN, NATURAL CONSERVATION COMMUNITY PLAN, OR OTHER APPROVED CONSERVATION PLAN)

Infill Housing Alternative

The Infill Housing Alternative would result in increased earthmoving activities and development of additional residential units, as compared to the proposed General Plan Update. However, the additional units would be constructed in previously disturbed areas that are already developed (see Exhibit 6-1). As discussed in Draft EIR

Impact 4.8-7 (Section 4.8, “Biological Resources”), there is no adopted habitat conservation plan (HCP), natural community conservation plan (NCCP), or other approved local, regional, or State HCP that applies to the Planning Area. The County is currently preparing the *Western Placer County Habitat Conservation Plan/Natural Community Conservation Plan* (PCCP 2018); however, this plan is in draft form and has not been adopted. For the Sierra Vista, West Roseville, Creekview, and Amoruso Ranch Specific Plans, the City entered into MOUs with USFWS to prepare an HCP or equivalent. The City worked with the USFWS to assess the status of remaining vernal pool resources within the City. This included several mapping efforts to identify current development trends and remaining vernal pool resources. The USFWS concurred that nearly all remaining undeveloped land containing vernal pools had received federal permits for development through the Clean Water Act 404 process and, therefore, preparation of an HCP or equivalent to address remaining development would not be necessary. The USFWS further determined that the conservation strategy could be developed and approved through Section 7 consultation process in the context of permitting pursuant to Section 404 of the Clean Water Act.

The Infill Housing Alternative includes all of the same goals and policies as the proposed General Plan Update, including Goal OS2.2 and Policies OS2.2, OS2.6, OS2.7, OS2.8, OS2.9, OS2.10, and OS2.12. In addition, existing General Plan Open Space System Policy 7; Vegetation and Wildlife Goals 1 and 3 and Policies 3, 4, 5, 11, and 13; and Groundwater Recharge and Water Quality Policies 2 and 3 would still be implemented. These goals and policies provide for the preservation of natural habitat and the protection of special-status species habitat and water quality, including biological resources associated with the proposed Western Placer County HCP/NCCP, if and when it is adopted. Therefore, impacts related to potential conflicts with HCPs under the Infill Development Alternative would be **similar to** the proposed General Plan Update, and would still be **less than significant**.

Reduced Growth Alternative

Under the Reduced Growth Alternative, a lesser amount of new construction and development would occur as compared to the proposed General Plan Update, and thus there would be a reduced potential for conflicts with an adopted HCP. However, as discussed in Draft EIR Impact 4.8-7 (Section 4.8, “Biological Resources”), there is no adopted HCP, NCCP, or other approved local, regional, or State HCP that applies to the Planning Area. The *Western Placer County Habitat Conservation Plan/Natural Community Conservation Plan* (PCCP 2018) is in draft form and has not been adopted. Furthermore, most of the habitat that would be lost under the proposed General Plan Update consists of undeveloped land in the western portion of the Planning Area, which would not be developed under the Reduced Growth Alternative. The Reduced Growth Alternative includes all of the same goals and policies as the proposed General Plan Update, including Goal OS2.2 and Policies OS2.2, OS2.6, OS2.7, OS2.8, OS2.9, OS2.10, and OS2.12. In addition, existing General Plan Open Space System Policy 7; Vegetation and Wildlife Goals 1 and 3 and Policies 3, 4, 5, 11, and 13; and Groundwater Recharge and Water Quality Policies 2 and 3 would still be implemented. These goals and policies provide for the preservation of natural habitat and the protection of special-status species habitat and water quality, including biological resources associated with the proposed Western Placer County HCP/NCCP, if and when it is adopted. Therefore, impacts related to potential conflicts with HCPs under the Reduced Growth Alternative would be **similar to** the proposed General Plan Update, and would still be **less than significant**.

No Project Alternative

The existing General Plan includes the same level of development as would occur under the proposed General Plan Update, and therefore a similar level potential for conflicts with adopted HCPs could occur. However, as discussed in Draft EIR Impact 4.8-7 (Section 4.8, “Biological Resources”), there is no adopted HCP, NCCP, or other approved local, regional, or State HCP that applies to the Planning Area. The *Western Placer County Habitat Conservation Plan/Natural Community Conservation Plan* (PCCP 2018) is in draft form and has not been adopted. For the Sierra Vista, West Roseville, Creekview, and Amoruso Ranch Specific Plans, the City entered into MOUs with USFWS to prepare an HCP or equivalent. The USFWS concurred that nearly all remaining undeveloped land containing vernal pools had received federal permits for development through the Clean Water Act 404 process and, therefore, preparation of an HCP or equivalent to address remaining development would not be necessary. The USFWS further determined that the conservation strategy could be developed and approved through Section 7 consultation process in the context of permitting pursuant to Section 404 of the Clean Water Act. Under the No Project Alternative, revisions to Goal OS2.2 and Policies OS2.2, OS2.6, OS2.7, OS2.8, OS2.9, OS2.10, and OS2.12 would not be implemented to provide improved protection to biological resources. However, the existing General Plan Open Space System Policy 7; Vegetation and Wildlife Goals 1 and 3 and Policies 3, 4, 5, 11, and 13; and Groundwater Recharge and Water Quality Policies 2 and 3 would still be implemented. These goals and policies provide for the preservation of natural habitat and the protection of special-status species habitat and water quality, including biological resources associated with the proposed Western Placer County HCP/NCCP, if and when it is adopted. Therefore, impacts related to potential conflicts with HCPs under the No Project Alternative would be **similar to** the proposed General Plan Update, and would still be **less than significant**.

6.5.9 CULTURAL AND TRIBAL CULTURAL RESOURCES

6.5.9.1 HISTORIC RESOURCES

Infill Housing Alternative

Similar to the proposed General Plan Update, the Infill Housing Alternative would have significant impacts related to substantial adverse changes in the significance of a historical resource. The Infill Housing Alternative would add approximately 1,400 multi-family dwelling units in the City’s Infill Area that could result in demolition, destruction, relocation, or alteration of historical resources. As discussed in Draft EIR Section 4.9, “Cultural and Tribal Cultural Resources,” a total of 25 historical resources have been specifically identified in the Planning Area and numerous historic-era sites have been identified as part of investigations conducted for specific plans. Existing General Plan Archaeological, Historic, and Cultural Resources Policies 1, 2, 4, 7, and 8, as well as revised proposed General Plan Update Goal OS4.1 and Policies OS4.1, OS4.6, OS4.7, and OS4.10 would protect historical resources. In addition, Chapter 19.61 of the City’s Zoning Ordinance protects “Significant Buildings” that have historic, cultural, or aesthetic interest, which may have significant value to the community, and Chapter 19.12 of the City’s Zoning Ordinance protects the designated Old Town Historic District. The City of Roseville’s 2009 Downtown Specific Plan, where additional housing under the Infill Housing Alternative could occur, includes policies and strategies for identification and treatment of historic buildings within the Downtown Specific Plan Area. In addition, all future projects subject to CEQA are required to evaluate and provide appropriate mitigation for historic resources as part of future CEQA documents. Finally, new development in the western portion of the Planning Area would be subject to mitigation measures designed to protect historic resources in the previously adopted Sierra Vista, Amoruso Ranch, Creekview, and West Roseville Specific Plans.

The Infill Housing Alternative would implement the same proposed General Plan Update new and revised goals, policies, and implementation measures; comply with the City's Zoning Ordinance; and implement Mitigation Measure 4.9-1a presented in Section 4.9 for the proposed General Plan Update. Although implementation of the existing General Plan and proposed General Plan Update goals, policies, implementation measures and Mitigation Measure 4.9-1a would reduce the potential impacts on historic resources associated with development in the General Plan Planning Area, significant impacts may still occur. The impact would be **similar to** the proposed General Plan Update, and for the same reasons described in the analysis of the proposed General Plan Update in Section 4.9, would be **significant and unavoidable**.

Reduced Growth Alternative

Under the Reduced Growth Alternative, there would be 4,500 fewer housing units than proposed under the General Plan Update and most of this development would occur in the Center and Corridor and Established Communities. Because a lesser amount of new construction would occur as compared to the proposed General Plan Update, there would be a reduced potential to encounter and potentially damage or destroy historic resources. For the same reasons as discussed in Draft EIR Section 4.9, project under the Reduced Growth Alternative would implement the same proposed General Plan Update new and revised goals, policies, and implementation measures; comply with the City's Zoning Ordinance; comply with 2009 Downtown Specific Plan policies and strategies; and implement Mitigation Measure 4.9-1a. Despite implementation of the existing General Plan and proposed General Plan Update goals, policies, implementation measures and Mitigation Measure 4.9-1a, it may not be possible to entirely avoid impacts related to demolition, destruction, relocation, or alteration of historical resources during buildout of the projects in the Planning Area. The impact to historic resources under the Reduced Growth Alternative would be **reduced** compared to the proposed General Plan Update, but for the same reasons described in the analysis of the proposed General Plan Update in Section 4.9, would still be **significant and unavoidable**.

No Project Alternative

The existing General Plan includes the same level of development as would occur under the proposed General Plan Update, and therefore a similar level of potential damage to historic resources could occur. Under the No Project Alternative, there would be no content revisions to the existing General Plan goals, policies, and implementation measures, and no new General Plan goals, policies, and implementation measures. The existing General Plan contains goals and policies designed to reduce impacts to historic resources would continue to be implemented. However, Mitigation Measures 4.9-1a requiring new General Plan implementation measures that would protect historic resources would not be implemented.

All construction under the No Project Alternative in the City would still be required to comply with Chapter 19.61 of the City of Roseville's Zoning Ordinance. Furthermore, a variety of state laws require consultation with the State Historic Preservation Officer and proper evaluation and treatment of historic resources. In addition, all future projects subject to CEQA are required to evaluate and provide appropriate mitigation for historic resources as part of future CEQA documents.

Finally, new development in the western portion of the Planning Area would be subject to mitigation measures designed to protect historic resources in the previously adopted Sierra Vista, Amoruso Ranch, Creekview, and West Roseville Specific Plans. Impacts to historic resources under the No Project Alternative would be **similar to** the proposed General Plan Update because a similar level of development would occur, and for the same reasons

described in the analysis of the proposed General Plan Update in Section 4.9, would be **significant and unavoidable**.

6.5.9.2 ARCHAEOLOGICAL RESOURCES

Infill Housing Alternative

Similar to the proposed General Plan Update, the Infill Housing Alternative would have significant impacts related to substantial adverse changes in the significance of an archeological resource. The Infill Housing Alternative would add approximately 1,400 multi-family dwelling units in the City's Infill Area and require additional ground-disturbing activities, as compared to the proposed General Plan Update. However, the additional 1,400 housing units would be constructed in already developed areas that have been previously disturbed for existing residential development and supporting infrastructure. Therefore, assuming that excavation for redevelopment activities occurred at the same depth as the existing development, the potential to encounter archaeological resources from development of an additional 1,400 housing units would be less as compared to new development on vacant land.

As discussed in Section 4.9, numerous historic-era and prehistoric archaeological sites have been identified as part of investigations conducted for the City's Specific Plans. Existing General Plan Archaeological, Historic, and Cultural Resources Policies 1, 2, 4, 7, and 8, as well as revised proposed General Plan Update Goal OS4.1 and Policies OS4.1, OS4.4, OS4.6, OS4.7, OS4.9, and OS4.10 would protect archaeological resources. In addition, the existing General Plan contains implementation measures to protect and preserve archaeological resources. The Infill Housing Alternative would implement the same proposed General Plan Update new and revised goals, policies, and implementation measures and implement Mitigation Measures 4.9-2a and 4.9-2b presented in Section 4.9 for the proposed General Plan Update. Finally, new development in the western portion of the Planning Area would be subject to mitigation measures designed to protect historic resources in the previously adopted Sierra Vista, Amoruso Ranch, Creekview, and West Roseville Specific Plans.

Because prehistoric and historic-era archaeological sites can occur below ground with little or no surface manifestation, it may not be feasible to entirely avoid impacts during buildout of the Planning Area under the Infill Housing Alternative, despite implementation of existing General Plan and proposed General Plan Update goals, policies, implementation measures and Mitigation Measures 4.9-2a and 4.9-2b. If unknown archaeological resources are encountered during construction without prior discovery, they may be inadvertently damaged or destroyed. This impact would be **similar to** the proposed General Plan Update, and for the same reasons described in the analysis of the proposed General Plan Update in Section 4.9, would be **significant and unavoidable**.

Reduced Growth Alternative

Under the Reduced Growth Alternative, there would be 4,500 fewer housing units than proposed under the General Plan Update and most of this development would occur in the Center and Corridor and Established Communities. Because a lesser amount of new construction would occur as compared to the proposed General Plan Update, there would be a reduced potential to encounter and potentially damage or destroy archaeological resources.

Projects implemented under the Reduced Growth Alternative would be required to comply with goals and policies contained in the proposed General Plan Update. As stated previously, prehistoric and historic-era archaeological sites can occur below ground with little or no surface manifestation. Despite implementation of the goals, policies, and implementation measures in the existing General Plan and proposed General Plan Update, it may not be possible to entirely avoid impacts to archaeological resources during buildout of the Reduced Growth Alternative. No other feasible mitigation measures are available. The Reduced Growth Alternative would not avoid the significant and unavoidable impact to archaeological resources that could occur under the proposed General Plan Update. Therefore, impacts to archaeological resources under the Reduced Growth Alternative would be **reduced** compared to the proposed General Plan Update because of less development in the western portion of the City, but for the same reasons described in the analysis of the proposed General Plan Update in Section 4.9, would still be **significant and unavoidable**.

No Project Alternative

The existing General Plan includes the same level of development as would occur under the proposed General Plan Update, and therefore a similar level of potential damage to archaeological resources could occur. Under the No Project Alternative, there would be no content revisions to the existing General Plan goals, policies, and implementation measures, and no new General Plan goals, policies, and implementation measures. The existing General Plan contains goals and policies designed to reduce impacts to archaeological resources would continue to be implemented. However, Mitigation Measures 4.9-2a and 4.9-2b requiring new General Plan implementation measures that would protect archaeological resources would not be implemented.

All construction under the No Project Alternative in the City would still be required to comply with Chapter 19.61 of the City of Roseville's Zoning Ordinance. Furthermore, a variety of state laws require consultation with the State Historic Preservation Officer and proper evaluation and treatment of archaeological resources. In addition, all future projects subject to CEQA are required to evaluate and provide appropriate mitigation for archaeological resources as part of future CEQA documents.

Finally, new development in the western portion of the Planning Area would be subject to mitigation measures designed to protect archaeological resources in the previously adopted Sierra Vista, Amoruso Ranch, Creekview, and West Roseville Specific Plans. Despite implementation of the existing General Plan goals, policies, implementation measures and project-specific mitigation measures, it may not be possible to entirely avoid impacts to archaeological resources during buildout of the Planning Area. Because prehistoric and historic-era archaeological sites can occur below ground with little or no surface manifestation, it may not be feasible to entirely avoid impacts during buildout of the No Project Alternative, despite implementation of existing General Plan goals, policies, and implementation measures. If unknown archaeological resources are encountered during construction without prior discovery, they may be inadvertently damaged or destroyed. Impacts to archaeological resources under the No Project Alternative would be **similar to** the proposed General Plan Update because a similar level of development would occur, and for the same reasons described in the analysis of the proposed General Plan Update in Section 4.9, would be **significant and unavoidable**.

6.5.9.3 HUMAN REMAINS

Infill Housing Alternative

Similar to the proposed General Plan Update, the Infill Housing Alternative would have significant impacts related to disturbance of human remains. The Infill Housing Alternative would add approximately 1,400 multi-family dwelling units in the City's Infill Area and require additional ground-disturbing activities, as compared to the proposed General Plan Update. However, the additional 1,400 housing units would be constructed in already developed areas that have been previously disturbed for existing residential development and supporting infrastructure. Therefore, assuming that excavation for redevelopment activities occurred at the same depth as the existing development, the potential to encounter human remains from development of an additional 1,400 housing units would be less as compared to new development on vacant land.

As discussed in Section 4.9, some burial ground locations (generally from the historic-era) are known but there is the possibility that ground-disturbing activities in the Planning Area could encounter prehistoric or historic-era human remains. Existing General Plan Archaeological, Historic, and Cultural Resources Policies 1, 2, 4, 7, and 8, as well as revised proposed General Plan Update Goal OS4.1 and Policies OS4.1 and OS4.4, would protect cultural resources, including human remains. In addition, the existing General Plan contains implementation measures to protect and preserve human remains. The Infill Housing Alternative would implement the same proposed General Plan Update new and revised goals, policies, and implementation measures and implement Mitigation Measure 4.9-3 presented in Section 4.9 for the proposed General Plan Update. In addition, all future projects subject to CEQA are required to evaluate and provide appropriate mitigation for human remains as part of future CEQA documents. Finally, new development in the western portion of the Planning Area would be subject to mitigation measures designed to avoid disturbance of human remains in the previously adopted Sierra Vista, Amoruso Ranch, Creekview, and West Roseville Specific Plans.

Because prehistoric and historic archaeological sites that contain human remains can occur below ground with little or no surface manifestation, it may not be feasible to entirely avoid impacts to interred human remains during buildout of the Planning Area under the Infill Housing Alternative, despite implementation of existing General Plan and proposed General Plan Update goals, policies, implementation measures and Mitigation Measure 4.9-3. If unanticipated buried human remains are encountered during construction, they may be inadvertently damaged or destroyed. This impact would be **similar to** the proposed General Plan Update, and for the same reasons described in the analysis of the proposed General Plan Update in Section 4.9, would be **significant and unavoidable**.

Reduced Growth Alternative

Under the Reduced Growth Alternative, there would be 4,500 fewer housing units than proposed under the General Plan Update and most of this development would occur in the Center and Corridor and Established Communities. Because a lesser amount of new construction would occur as compared to the proposed General Plan Update, there would be a reduced potential to disturb human remains.

Projects implemented under the Reduced Growth Alternative would be required to comply with goals and policies contained in the proposed General Plan Update. As stated previously, prehistoric and historic archaeological sites that contain human remains can occur below ground with little or no surface manifestation. If unanticipated buried human remains are encountered during construction, they may be inadvertently damaged or destroyed.

This impact would be **similar to** the proposed General Plan Update, and for the same reasons described in the analysis of the proposed General Plan Update in Section 4.9, would be **significant and unavoidable**.

No Project Alternative

The existing General Plan includes the same level of development as would occur under the proposed General Plan Update, and therefore a similar level of potential damage to disturb human remains could occur. Under the No Project Alternative, there would be no content revisions to the existing General Plan goals, policies, and implementation measures, and no new General Plan goals, policies, and implementation measures. The existing General Plan contains goals and policies designed to reduce impacts to human remains would continue to be implemented. However, Mitigation Measure 4.9-3 requiring new General Plan implementation measures that would protect disturbance of human remains would not be implemented.

All construction under the No Project Alternative in the City would still be required to comply with Chapter 19.61 of the City of Roseville's Zoning Ordinance. New development in the western portion of the Planning Area would be subject to mitigation measures designed to protect human remains in the previously adopted Sierra Vista, Amoruso Ranch, Creekview, and West Roseville Specific Plans. Despite implementation of the existing General Plan goals, policies, implementation measures and project-specific mitigation measures, it may not be possible to entirely avoid impacts to human remains during buildout of the Planning Area.

As stated previously, prehistoric and historic-era archaeological sites can occur below ground with little or no surface manifestation and it may not be feasible to entirely avoid impacts during buildout of the No Project Alternative, despite implementation of existing General Plan goals, policies, and implementation measures. If disturbance of human remains occurs during construction without prior discovery, they may be inadvertently damaged or destroyed. Impacts to human remains under the No Project Alternative would be **similar to** the proposed General Plan Update because a similar level of development would occur, and for the same reasons described in the analysis of the proposed General Plan Update in Section 4.9, would be **significant and unavoidable**.

6.5.9.4 TRIBAL CULTURAL RESOURCES

Infill Housing Alternative

Similar to the proposed General Plan Update, the Infill Housing Alternative would have significant impacts related to substantial adverse changes in the significance of tribal cultural resources. The Infill Housing Alternative would add approximately 1,400 multi-family dwelling units in the City's Infill Area and require additional ground-disturbing activities, as compared to the proposed General Plan Update. However, the additional 1,400 housing units would be constructed in already developed areas that have been previously disturbed for existing residential development and supporting infrastructure. Therefore, assuming that excavation for redevelopment activities occurred at the same depth as the existing development, the potential to encounter tribal cultural resources from development of an additional 1,400 housing units would be less as compared to new development on vacant land.

As discussed in Section 4.9, numerous prehistoric archaeological sites have been identified as part of investigations conducted for Specific Plans in the city, including the Maidu Indian Sites. Prehistoric resources also may be considered tribal cultural resources and can include sites, features, and objects that are CRHR-listed,

eligible to be listed, or in a local register of historical resources as defined in Public Resources Code Section 5020.1(k). Existing General Plan Archaeological, Historic, and Cultural Resources Policies 1, 2, 4, 7, and 8, as well as revised proposed General Plan Update Goal OS4.1 and Policies OS4.1, OS4.4, OS4.9, and OS4.10 would help to protect tribal cultural resources. In addition, the existing General Plan contains implementation measures to protect and preserve tribal cultural resources. The Infill Housing Alternative would implement the same proposed General Plan Update new and revised goals, policies and implementation measures and implement Mitigation Measure 4.9-3 presented in Section 4.9 for the proposed General Plan Update. In addition, all future projects subject to CEQA are required to evaluate and provide appropriate mitigation for tribal cultural resources as part of future CEQA documents. Finally, new development in the western portion of the Planning Area would be subject to mitigation measures designed to protect tribal cultural resources in the previously adopted Sierra Vista, Amoruso Ranch, Creekview, and West Roseville Specific Plans.

Because tribal cultural resources sites can occur below ground with little or no surface manifestation, it may not be feasible to entirely avoid impacts during buildout of the Planning Area under the Infill Housing Alternative, despite implementation of existing General Plan and proposed General Plan Update goals, policies, implementation measures and Mitigation Measure 4.9-3. If unknown tribal cultural resources are encountered during construction without prior discovery, they may be inadvertently damaged or destroyed. This impact would be **similar to the proposed General Plan Update**, and for the same reasons described in the analysis of the proposed General Plan Update in Section 4.9, would be **significant and unavoidable**.

Reduced Growth Alternative

Under the Reduced Growth Alternative, there would be 4,500 fewer housing units than proposed under the General Plan Update and most of this development would occur in the Center and Corridor and Established Communities. Because a lesser amount of new construction would occur as compared to the proposed General Plan Update, there would be a reduced potential to encounter and potentially damage or destroy tribal cultural resources.

Projects implemented under the Reduced Growth Alternative would be required to comply with goals and policies contained in the proposed General Plan Update. As stated previously, tribal cultural sites can occur below ground with little or no surface manifestation. Despite implementation of the goals, policies, and implementation measures in the existing General Plan and proposed General Plan Update, it may not be possible to entirely avoid impacts to tribal cultural resources during buildout of the Reduced Growth Alternative. No other feasible mitigation measures are available. The Reduced Growth Alternative would not avoid the significant and unavoidable impact to tribal cultural resources that could occur under the proposed General Plan Update. Therefore, impacts to tribal cultural resources under the Reduced Growth Alternative would be **reduced** compared to the proposed General Plan Update because there would be less development in the western portion of the City, but for the same reasons described in the analysis of the proposed General Plan Update in Section 4.9, would still be **significant and unavoidable**.

No Project Alternative

The existing General Plan includes the same level of development as would occur under the proposed General Plan Update, and therefore a similar level of potential damage to tribal cultural resources could occur. Under the No Project Alternative, there would be no content revisions to the existing General Plan goals, policies, and implementation measures, and no new General Plan goals, policies, and implementation measures. The existing

General Plan contains goals and policies designed to reduce impacts to tribal cultural resources would continue to be implemented. However, Mitigation Measure 4.9-3 requiring new General Plan implementation measures that would protect tribal cultural resources would not be implemented.

All construction under the No Project Alternative in the City would still be required to comply with Chapter 19.61 of the City of Roseville's Zoning Ordinance. Furthermore, a variety of state laws require consultation and proper evaluation and treatment of tribal cultural resources. In addition, all future projects subject to CEQA are required to evaluate and provide appropriate mitigation for historic resources as part of future CEQA documents.

Finally, new development in the western portion of the Planning Area would be subject to mitigation measures designed to protect tribal cultural resources in the previously adopted Sierra Vista, Amoruso Ranch, Creekview, and West Roseville Specific Plans. Despite implementation of the existing General Plan goals, policies, implementation measures and project-specific mitigation measures, it may not be possible to entirely avoid impacts to tribal cultural resources during buildout of the Planning Area. Because tribal cultural resources sites can occur below ground with little or no surface manifestation, it may not be feasible to entirely avoid impacts during buildout of the No Project Alternative, despite implementation of existing General Plan goals, policies, and implementation measures. If unknown tribal cultural resources are encountered during construction without prior discovery, they may be inadvertently damaged or destroyed. Impacts to tribal cultural resources under the No Project Alternative would be **similar to** the proposed General Plan Update because a similar level of development would occur, and for the same reasons described in the analysis of the proposed General Plan Update in Section 4.9, would be **significant and unavoidable**.

6.5.10 HAZARDS AND HAZARDOUS MATERIALS

6.5.10.1 USE, TRANSPORT, DISPOSAL, AND ACCIDENTAL SPILLS (*CREATE A SIGNIFICANT HAZARD THROUGH ROUTINE TRANSPORT, USE, OR DISPOSAL OR POSSIBLE RELEASE OF HAZARDOUS MATERIALS FROM UPSET OR ACCIDENT CONDITIONS*)

Infill Housing Alternative

The Infill Housing Alternative would result in additional construction to support the proposed additional 1,400 housing units. Therefore, the Infill Housing Alternative would result in an increased use, transport, and disposal of hazardous materials (such as fuels and oils during the construction phase), and an increased potential for accidental spills during the construction phase, as compared to the proposed General Plan Update. As discussed in Draft EIR Impact 4.10-1 (Section 4.10, "Hazards and Hazardous Materials"), the use, transport, and disposal of hazardous materials are subject to numerous regulations at the local, state, and federal level that are designed to protect the public health. The Infill Housing Alternative includes all the same goals and policies as the proposed General Plan Update, including Policies SAFE5.1, SAFE5.3, and AQ1.21, which require the disclosure, use, and storage of hazardous materials in compliance with local, state, and federal regulations. In addition, existing General Plan Hazardous Materials Goal 1 and Policy 2 require consideration of hazardous materials issues in the land use planning process. Implementation of current state and federal regulations, as well as the policies of the proposed General Plan Update may not prevent all potential releases of hazardous materials, but would serve to minimize both the frequency and the magnitude, if such a release occurs, and would reduce the potential impacts of the routine transportation of hazardous materials in the City. Therefore, because there would be increased use, transport, and disposal of hazardous materials under the Infill Housing Alternative, related impacts and the

potential for accidental spills of hazardous materials under the Infill Housing Alternative would be **slightly greater than** the proposed General Plan Update, but would still be **less than significant**.

Reduced Growth Alternative

Under the Reduced Growth Alternative, a lesser amount of new construction would occur as compared to the proposed General Plan Update, and thus there would be reduced use, transport, disposal, and possible release of hazardous materials. The Reduced Growth Alternative includes all the same goals and policies as the proposed General Plan Update, including Policies SAFE5.1, SAFE5.3, and AQ1.21, as well as existing General Plan Hazardous Material Goal 1 and Policy 2, which require consideration of hazardous materials issues in the land use planning process and require the use, disposal, storage, and transport of hazardous materials in compliance with local, state, and federal safety requirements. Because there would be reduced use, transport, disposal, and possible release of hazardous materials, a **reduced** level of impact would occur compared to the proposed General Plan Update. For the same reasons discussed in Draft EIR Impact 4.10-1, compliance with local, state, and federal regulations governing the use, transport, and disposal of hazardous materials, as well the proposed General Plan Update policies, would result in **less-than-significant** impacts related to the use, transport, disposal, and accidental spills of hazardous materials under the Reduced Growth Alternative.

No Project Alternative

Under the No Project Alternative, the same amount of development would occur as compared to the proposed General Plan Update, and therefore a similar level of potential use, transport, disposal, and exposure to spills of hazardous materials, could occur. Under the No Project Alternative, there would be no content revisions to the existing General Plan goals and policies, and no new General Plan goals and policies. For example, revisions to Policies SAFE5.1, SAFE5.3, and AQ1.21 provide clarity in the policy language under the proposed General Plan Update and these revisions would not be implemented under the No Project Alternative. However, the existing General Plan goals and policies would continue to be implemented and these existing policies require consideration of hazardous materials issues in the land use planning process. Furthermore, all projects in the City would be required by law to comply with local, state, and federal laws and regulations related to the use, transport, disposal, and cleanup of hazardous materials spills. Therefore, impacts related to the use, transport, disposal, and accidental spills of hazardous materials under the No Project Alternative would be **similar to** the proposed General Plan Update, and for the same reasons discussed in Draft EIR Impact 4.10-1, would remain **less than significant**.

6.5.10.2 HAZARDOUS MATERIALS WITHIN ONE-QUARTER MILE OF A SCHOOL (*Emission or Handling of Hazardous or Acutely Hazardous Materials, Substances, or Waste within One-Quarter Mile of an Existing or Proposed School*)

Infill Housing Alternative

The Infill Housing Alternative would result in additional construction to support the proposed additional 1,400 housing units. This construction would be focused within the infill areas, as identified in Exhibit 6-1, which include existing schools. Therefore, the Infill Housing Alternative could result in the increased handling of hazardous materials (such as fuels and oils during the construction phase) within 0.25 mile of a school, as compared to the proposed General Plan Update. As discussed in Draft EIR Impact 4.10-2 (Section 4.10, “Hazards and Hazardous Materials”), the use, transport, and disposal of hazardous materials are subject to numerous

regulations at the local, state, and federal level that are designed to protect the public health. The Housing Alternative includes all the same goals and policies as the proposed General Plan Update, including those that would address hazardous near schools. existing General Plan Hazardous Materials Goal 1 and Hazardous Materials Policy 2, Air Quality Goal 2, Air Quality Policies 8 and 11, Schools Goal 1, and Schools Policy 7 (which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Policies SAFE5.1 and SAFE 5.3, Goal AQ1.1 and Policies AQ1.3 and 1.21, and Schools Policy PF.4, which ensure that consideration is made of land uses potentially handling hazardous materials, and thereby, would further ensure that such land uses are not developed in proximity to schools. Furthermore, the Infill Housing Alternative would not increase the number of commercial or industrial land uses that could handle hazardous materials on an operational basis. Therefore, impacts from emission or handling of hazardous materials within 0.25 mile of a school would be **slightly greater than** the proposed General Plan Update, but would still be **less than significant**.

Reduced Growth Alternative

Under the Reduced Growth Alternative, a lesser amount of new construction would occur as compared to the proposed General Plan Update, and thus there would be a reduced potential for hazardous materials to be emitted or handled within 0.25 mile of a school. The Reduced Growth Alternative includes all the same goals and policies as the proposed General Plan Update, including those listed above regarding the Infill Housing Alternative that would ensure that consideration is made of land uses potentially handling hazardous materials, and thereby, would further ensure that such land uses are not developed in proximity to schools. For the same reasons discussed in Impact 4.10-2 of the Draft EIR, compliance with local, state, and federal regulations governing the use, transport, and disposal of hazardous materials, as well the proposed General Plan Update policies that regulate development near schools, would prevent future conflicts between hazardous materials handling and emissions and schools. Therefore, impacts from emission or handling of hazardous materials within 0.25 mile of a school would be **reduced** compared to the proposed General Plan Update, and would remain **less than significant**.

No Project Alternative

Under the No Project Alternative, the same amount of development would occur as compared to the proposed General Plan Update, and therefore a similar potential for hazardous materials to be emitted or handled within 0.25 mile of a school could occur. Under the No Project Alternative, there would be no content revisions to the existing General Plan goals and policies, and no new General Plan goals and policies. For example, Policies SAFE5.1 and SAFE 5.3, Goal AQ1.1 and Policies AQ1.3 and 1.21, and Schools Policy PF.4, would not be revised to include revisions that would result in improved protection for school children and employees, along with general public citizens in Roseville related to hazardous materials. However, the existing General Plan goals and policies would continue to be implemented, including those that require consideration of hazardous materials issues in the land use planning process, along with Schools Policy 8, which states that, where feasible, schools shall be located away from hazards. Therefore, for the reasons same reasons discussed in Draft EIR Impact 4.10-2, impacts related to the emission or handling of hazardous materials within 0.25 mile of a school under the No Project Alternative would be **similar to** the proposed General Plan Update, and would remain **less than significant**.

6.5.10.3 HAZARDOUS MATERIALS SITES (*Public Health Hazards from Locating Project Development on a Known Hazardous Materials Site Compiled Pursuant to Government Code Section 65962.5*)

Infill Housing Alternative

The Infill Housing Alternative would result in additional construction to support the proposed additional 1,400 housing units within infill areas, as identified in Exhibit 6-1. There are approximately 70 known active hazardous materials sites in the City, most of which have been remediated and are closed. There are 10 open, active sites which are undergoing remedial action under the jurisdiction of DTSC and/or the Central Valley RWQCB; the largest of these sites is located at the Union Pacific Railyards, where some additional housing could be developed under the Infill Housing Alternative. Therefore, ground disturbance associated with the Infill Housing Alternative has a greater potential to occur at known hazardous materials sites on the Cortese List, as compared to the proposed General Plan Update. In addition, older buildings may contain asbestos-containing materials (ACMs) and lead-based paint, and major fuel pipelines cross through the city and could be encountered by excavation activities, which could result in human and environmental hazards during the demolition and excavation processes; the additional development under the Infill Housing Alternative would more likely be redevelopment or retrofit of existing structures than new construction in undeveloped areas. The Infill Housing Alternative includes all the same goals and policies as the proposed General Plan Update, including existing General Plan Hazardous Materials Goal 1 and Hazardous Materials Policy 2 (which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Policies SAFE5.1 and SAFE 5.3, and Policies AQ1.21 and AQ1.22, which would ensure cooperation with agencies such as DTSC and SWRCB to reduce risk from known hazardous material sites and respond to any hazardous materials releases, and reduce harmful emissions at the Rail Yard. In addition, the City would continue to require Hazardous Materials Management Plans, and all projects would comply with local, state, and federal regulations associated with potential and known hazardous materials sites. Standard construction contracts require construction contractors for projects to locate buried underground pipelines prior to the start of earth-moving activities, by consulting plans on file with the City, Placer County, DigAlert, and the Pipeline and Hazardous Materials Safety Administration. Therefore, because ground disturbance associated with the Infill Housing Alternative has a greater potential to occur at known hazardous materials sites on the Cortese List, as compared to the proposed General Plan Update, impacts from construction in hazardous materials sites under the Infill Housing Alternative would be **greater** than the proposed General Plan Update, but, for the same reasons discussed in Draft EIR Impact 4.10-3, would still be **less than significant**.

Reduced Growth Alternative

Under the Reduced Growth Alternative, a lesser amount of new construction would occur as compared to the proposed General Plan Update, and thus there would be a reduced potential for construction in hazardous materials sites. The Reduced Growth Alternative includes all the same goals and policies as the proposed General Plan Update, including existing General Plan Hazardous Materials Goal 1 and Hazardous Materials Policy 2 (which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Policies SAFE5.1 and SAFE 5.3, and Policies AQ1.21 and AQ1.22, which would ensure cooperation with agencies, such as DTSC and SWRCB to reduce risk from known hazardous material sites and respond to any hazardous materials releases, and reduce harmful emissions at the Rail Yard. Because there would be a reduced potential for construction in hazardous materials sites, a **reduced** level of impact would occur compared to the proposed General Plan Update. For the same reasons discussed in Draft EIR Impact 4.10-3, site-specific

hazardous materials investigations, and compliance with local, state, and federal regulations governing hazardous materials remediation and abatement, as well the proposed General Plan Update policies, would result in **less-than-significant** impacts related to construction in a hazardous materials site under the Reduced Growth Alternative.

No Project Alternative

Under the No Project Alternative, the same amount of development would occur as compared to the proposed General Plan Update, and therefore a similar potential for construction in hazardous materials sites could occur. Under the No Project Alternative, there would be no content revisions to the existing General Plan goals and policies, and no new General Plan goals and policies. For example, Policies SAFE5.1 and SAFE 5.3, and Policies AQ1.21 and AQ1.22 would not be revised to ensure cooperation with agencies, such as DTSC and SWRCB to reduce risk from known hazardous material sites and respond to any hazardous materials releases, and reduce harmful emissions at the Rail Yard. However, the existing General Plan goals and policies would continue to be implemented, including those that require consideration of hazardous materials issues in the land use planning process. In addition, Chapter 9.60 of the Roseville Municipal Code establishes regulations for the identification and disclosure of hazardous materials use and management that are applicable to all development in the City. The City's Emergency Operations Plan describes organizational and operational responsibilities in the event of an emergency, including hazardous materials emergencies and clean up and de-contamination procedures. Finally, remediation of known hazardous materials sites on the Cortese List is ongoing, as regulated by SWRCB and/or the California Department of Toxic Substances Control, and the local Certified Unified Program Agency. Therefore, impacts related to construction in a hazardous materials site under the No Project Alternative would be **similar to** the proposed General Plan Update, and for the reasons same reasons discussed in Draft EIR Impact 4.10-3 would be **less than significant**.

6.5.10.4 EMERGENCY RESPONSE AND EVACUATION PLANS (*Impair Implementation of or Physical Interference with an Adopted Emergency Response Plan or an Emergency Evacuation Plan*)

Infill Housing Alternative

Implementation of the Infill Housing Alternative would develop 1,400 new residential units requiring evacuation in case of an emergency and resulting in additional travel demand on the roadways. As discussed in Draft EIR Impact 4.10-4 (Section 4.10, "Hazards and Hazardous Materials"), an efficient roadway and circulation system is vital for the evacuation of residents and the mobility of fire suppression, emergency response, and law enforcement vehicles. The Infill Housing Alternative includes all the same goals and policies as the proposed General Plan Update, including existing General Plan Circulation-Functional Classification Goal 1, and Fire Protection Goal 2 and Policy 9 (which have been renumbered for the proposed General Plan Update), as well as proposed General Plan Update revised Policy CIRC1.5, which requires appropriate design of roadways and intersections and updates to the Roseville Emergency Operations Plan and the City's Multi-Hazard Mitigation Plan. The City also maintains, and reviews projects for consistency with, its *Design and Construction Standards* requiring minimum roadways widths, turnaround areas, and turning radii to ensure that emergency vehicle access is maintained. These standards and the City's review process would be maintained and enforced in the same manner under the Infill Housing Alternative as would be experienced under the proposed General Plan Update. Therefore, because additional residential units under this alternative would require evacuation in case of an emergency and result in additional travel demand on the roadways, future development associated with the Infill

Housing Alternative would result in impacts from potential interference with emergency response and evaluation plans which would be **greater than** the proposed General Plan Update, but would still be **less than significant**.

Reduced Growth Alternative

Under the Reduced Growth Alternative, a lesser amount of new construction would occur as compared to the proposed General Plan Update, and thus there would be fewer individuals and locations requiring evacuation in case of an emergency and a reduced potential for interference with an adopted emergency response and/or evacuation plan. The Reduced Growth Alternative includes all the same goals and policies as the proposed General Plan Update, including existing General Plan Circulation-Functional Classification Goal 1, and Fire Protection Goal 2 and Policy 9 (which have been renumbered for the proposed General Plan Update), as well as proposed General Plan Update revised Policy CIRC1.5, which requires appropriate design of roadways and intersections and updates to the Roseville Emergency Operations Plan and the City's Multi-Hazard Mitigation Plan. Because there would be fewer individuals and locations requiring evacuation in the case of an emergency, the Reduced Growth Alternative would result in a **reduced** level of impact compared to the proposed General Plan Update. For the same reasons discussed in Draft EIR Impact 4.10-4, compliance with the City's *Design and Construction Standards* and the proposed General Plan Update policies, along with regular updates to the Roseville Emergency Operations Plan and the City's Multi-Hazard Mitigation Plan, would result in **less-than-significant** impacts related to interference with emergency response or evacuation plans under the Reduced Growth Alternative.

No Project Alternative

Under the No Project Alternative, the same amount of development would occur as compared to the proposed General Plan Update, and therefore a similar potential for interference with emergency response or evacuation plans could occur. Under the No Project Alternative, there would be no updates to the General Plan to provide more detailed and updated implementation measures that can reduce potential impact. For example, revised Policy CIRC1.5 would not be revised to require appropriate design of roadways and intersections. However, the existing General Plan goals and policies would continue to be implemented, including Circulation-Functional Classification Goal 1, and Fire Protection Goal 2 and Policy 9 (which have been renumbered for the proposed General Plan Update) which require appropriate design of roadways and intersections and updates to the Roseville Emergency Operations Plan and the City's Multi-Hazard Mitigation Plan. In addition, compliance with the City's Design and Construction Standards is required for all development in the City, and implementation of the Roseville Emergency Operations Plan and the City's Multi-Hazard Mitigation Plan would continue to occur under the existing General Plan. Therefore, for the same reasons discussed in Draft EIR Impact 4.10-4, impacts related to interference with emergency response or evacuation plans under the No Project Alternative would be **similar to** the proposed General Plan Update, and would remain **less than significant**.

6.5.10.5 URBAN AND WILDLAND FIRES (*Exposure of People and Structures to Significant Risk of Urban and Wildland Fires*)

Infill Housing Alternative

The Infill Housing Alternative would result in an additional 1,400 housing units, as compared to the proposed General Plan Update, resulting in additional services population that could be at risk of exposure to urban and wildland fires. However, as described in Draft EIR Impact 4.10-5 (Section 4.10, "Hazards and Hazardous Materials"), the Planning Area is not located in or near state responsibility areas or land classified as very high

fire hazard severity zones. The Planning Area is designated by CAL FIRE (2008) as a Local Responsibility Area, and there are no Very High Fire Hazard Severity Zones in or adjacent to the Planning Area. Therefore, the wildfire hazard area for the City is considered low. Fire protection services are provided by the Roseville Fire Department. All development is required to comply with the City's Fire Code, City Design and Construction Standards, and with state requirements for defensible space surrounding rural properties and water for adequate fire flows. In addition, the Infill Housing Alternative includes all the same goals and policies as the proposed General Plan Update, including existing General Plan Circulation-Functional Classification Goal 1, Fire Protection Goals 1 and 2 and Policies 1, 4, 5, 6, and 9, and Privately-Owned Utilities Policy 2 (which have been renumbered for the proposed General Plan Update), as well as revised proposed General Plan Update Policy CIRC1.5, which would address fire risks for existing and new development in the City. Therefore, irrespective of the additional residential development under this alternative, impacts from exposure of people or structures to urban and wildland fires under the Infill Housing Alternative would be **similar to** the proposed General Plan Update, and, for the same reasons described in Draft EIR Impact 4.10-5, would also be **less than significant**.

Reduced Growth Alternative

Under the Reduced Growth Alternative, a lesser amount of new construction would occur as compared to the proposed General Plan Update, and thus there would be a reduced potential for exposure to urban and wildland fires. The Reduced Growth Alternative includes all the same goals and policies as the proposed General Plan Update, including existing General Plan Circulation-Functional Classification Goal 1, Fire Protection Goals 1 and 2 and Policies 1, 4, 5, 6, and 9, and Privately-Owned Utilities Policy 2, as well as revised proposed General Plan Update Policy CIRC1.5, which would address fire risks for existing and new development in the City. Because there would be a lesser amount of new construction which could be exposed to urban and wildland fires, the Reduce Growth Alternative would result in a **reduced** level of impact compared to the proposed General Plan Update. For the same reasons discussed in Draft EIR Impact 4.10-5, compliance City's Fire Code, City Design and Construction Standards, proposed General Plan Update policies, and with state requirements for defensible space surrounding rural properties and water for adequate fire flows would result in **less-than-significant** impacts related to exposure to urban and wildland fires under the Reduced Growth Alternative.

No Project Alternative

Under the No Project Alternative, the same amount of development would occur as compared to the proposed General Plan Update, and therefore a similar potential for exposure to urban and wildland fires could occur. The existing General Plan goals and policies would continue to be implemented. In addition, all development is required to comply with the City's Fire Code, City Design and Construction Standards, and with state requirements for defensible space surrounding rural properties and water for adequate fire flows. Therefore, for the same reasons discussed in Draft EIR Impact 4.10-5, impacts related to increased risk of exposure to urban and wildland fires under the No Project Alternative would be **similar to** the proposed General Plan Update, and would remain **less than significant**.

6.5.11 PUBLIC SERVICES AND RECREATION

6.5.11.1 POLICE PROTECTION

Infill Housing Alternative

The Infill Housing Alternative would result in an additional 1,400 housing units, as compared to the proposed General Plan Update, which would, in turn, result in an increase in the need for police protection services. Similar to the General Plan Update, new development under the Infill Housing Alternative would not result in a need for new police protection facilities. As discussed in Draft EIR Section 4.11, “Public Services and Recreation”, the City’s General Fund, primarily supported by sales tax and property tax revenues, funds Roseville Police Department services and staffing. Additional development within the City will also generate additional tax revenue to support the hiring of the necessary additional personnel. Analyses conducted for the adopted Specific Plans within the City found that sufficient additional physical facilities would be provided within each Specific Plan Area, as necessary, to support adequate law enforcement services in the City.

The General Plan Update contains policies related to police protection services (Police Services Goal 1 and Policies 1, 2, 3, 5 and 8) that would ensure adequate police protection services would meet the needs of increasing population and non-residential development. These policies emphasize the use of modern technology and adequate training to maximize effective law enforcement services for the community. Community-based service and education programs would be designed to prevent crime and emphasize citizen protection and involvement that allow citizens to monitor their communities for criminal activity. In addition, the Roseville Police Department staff will review all development proposals to ensure crime prevention considerations are addressed. The proposed General Plan Update new and revised goals, policies, and implementation measures would also occur under the Infill Housing Alternative. Therefore, the increase in the need for police protection services under the Infill Development Alternative would be **similar to** the proposed General Plan Update, and for the same reasons described in the analysis of the proposed General Plan Update in Section 4.11, would be **less than significant**.

Reduced Growth Alternative

Under the Reduced Growth Alternative, there would be 4,500 fewer housing units than proposed under the General Plan Update and most of this development would occur in the Center and Corridor and Established Communities. The Reduced Growth Alternative could result in less potential for increased police protection personnel. Thus, the necessary level of new police protection services would be reduced. Because there would be less need for increased police protection personnel, the Reduced Growth Alternative would result in a **reduced** level of impact compared to the proposed General Plan Update. For the same reasons as discussed in Section 4.11, police protection policies contained in the General Plan Update and review of new development plans by police department personnel at the permitting stage would result in **less-than-significant** impacts related to the increased need for fire and police services under the Reduced Growth Alternative.

No Project Alternative

The existing General Plan includes the same level of development as would occur under the proposed General Plan Update, and therefore a similar potential for increased police protection services would occur. Under the No Project Alternative, there would be no content revisions to the existing General Plan goals, policies and implementation measures, and no new General Plan goals, policies and implementation measures. However, the

existing General Plan goals and policies would continue to be implemented. All development is required to comply with the City's Fire Code and City Design and Construction Standards. In addition, the existing General Plan contains policies related to planning for and provision of police services, and these policies would continue to be implemented. Impacts related to the increased need for police protection services under the No Project Alternative would be **similar to** the proposed General Plan Update, and for the same reasons described in the analysis of the proposed General Plan Update in Section 4.11, would be **less than significant**.

6.5.11.2 FIRE PROTECTION

Infill Housing Alternative

The Infill Housing Alternative would result in an additional 1,400 housing units, as compared to the proposed General Plan Update, which would in turn result in an increase in the need for fire protection services. As discussed in Draft EIR Section 4.11, new fire stations have been planned for the North Industrial Area (Station No. 8), the Sierra Vista Specific Plan area (Station No. 10), and the Amoruso Ranch Specific Plan area (Station No. 11) to meet new demands for fire suppression and maintain adequate response times. Similar to the proposed General Plan Update, development under the Infill Housing Alternative would require those new fire stations to meet new demands. All new fire protection facilities would be constructed within the Planning Area. The locations of Station No. 8, Station No. 10, and Station No. 11 were identified in the Campus Oaks Master Plan Addendum and Initial Study, the Sierra Vista Specific Plan EIR, and the Amoruso Ranch Specific Plan EIR, respectively.

Existing General Plan Circulation–Functional Classification Goal 1, Fire Protection Goals 1 and 2 and Policies 1, 3, 4, 5, and 6, as well as revised proposed General Plan Update Policy CIRC1.5 would ensure adequate fire protection services would meet the needs of increasing population and non-residential development. The General Plan Update goals and policies are also intended to protect against the loss of life, property, and the environment by providing emergency access, promoting fire prevention programs and standards, monitoring department service levels, providing highly trained personnel to ensure effective suppression of fires, and phasing the timing of the construction of fire stations to be available to serve the surrounding service area. In addition, the Roseville Fire Department staff will review all development proposals to ensure development plans comply with California Fire Code and City Design and Construction Standards. Incorporation of all California Fire Code and City Design and Construction Standards into new development would reduce the dependence on fire department equipment and personnel by reducing fire hazards.

The proposed General Plan Update new and revised goals, policies and implementation measures would also occur under the Infill Housing Alternative. The physical environmental effects associated with construction and operation of new fire protection facilities under the Infill Development Alternative would be **similar to** the proposed General Plan Update, and for the same reasons described in the analysis of the proposed General Plan Update in Section 4.11, would be **less than significant**.

Reduced Growth Alternative

Under the Reduced Growth Alternative, there would be 4,500 fewer housing units than proposed under the General Plan Update and most of this development would occur in the Center and Corridor and Established Communities. The Reduced Growth Alternative could result in less potential for increased fire protection services, and two (Sierra Vista and Amoruso Ranch stations) of the three fire stations identified to serve new

development would likely not be built during the General Plan horizon year of 2035. Thus, the necessary level of new fire protection services and facilities would be reduced, and this would result in a **reduced** level of impact as compared to the proposed General Plan Update. For the same reasons as discussed in Section 4.11, fire policies contained in the General Plan Update, review of new development plans by fire and police department personnel at the permitting stage and compliance with the California Fire Code and City Design and Construction Standards, would result in **less-than-significant** impacts related to the increased need for fire services under the Reduced Growth Alternative.

No Project Alternative

The existing General Plan includes the same level of development as would occur under the proposed General Plan Update, and therefore a similar potential for increased fire protection services would occur. Under the No Project Alternative, there would be no content revisions to the existing General Plan goals, policies and implementation measures, and no new General Plan goals, policies and implementation measures. However, the existing General Plan goals and policies would continue to be implemented. All development is required to comply with the City's Fire Code and City Design and Construction Standards. In addition, the existing General Plan contains policies related to planning for and provision of fire services, and these policies would continue to be implemented. Impacts related to the increased need for fire protection services under the No Project Alternative would be **similar to the proposed General Plan Update**, and for the same reasons described in the analysis of the proposed General Plan Update in Section 4.11, would be **less than significant**.

6.5.11.3 SCHOOLS

Infill Housing Alternative

The Infill Housing Alternative would result in an additional 1,400 housing units that would generate additional students. As discussed in Section 4.11, new schools are planned by the Roseville City School District (in the Amoroso Ranch Specific Plan Area, West Roseville Specific Plan Area, Creekview Specific Plan Area, and Sierra Vista Specific Plan Area), by the Roseville Joint Union High School District (in the West Roseville Specific Plan Area), and by the Center Joint Unified School District (in the Sierra Vista Specific Plan Area) to meet future growth in the City under the General Plan Update. Similar to the proposed General Plan Update, development under the Infill Housing Alternative would require those new schools to meet new demands, and the additional students generated by the Infill Housing Alternative could require school facilities and services in one or more of the existing school districts (depending on the ultimate location of the additional housing units). New development would pay the State-mandated school impact fees that are being levied at the time of development in accordance with Senate Bill (SB) 50. To ensure adequate funding for new school facilities the City Council adopted Ordinance 2434 (School Facilities Mitigation Plan) in February 1991. This ordinance encourages the payment of fees, participation in a Mello-Roos Community Facilities District, and school facility mitigation plans for new development proposed within over-crowded districts. With the enactment of SB 50, Ordinance 2434 cannot be made mandatory, but can be negotiated as part of the development agreement process. With voluntary participation by the applicants, however, the funding sources encouraged by Ordinance 2434 may be greater than the state-mandated fees.

The environmental impacts of the construction and operation of the planned school facilities noted above were analyzed in CEQA documents prepared for those Specific Plans. The focus of the existing General Plan School Services Goal 3 and Policies 3 and 6, as well as revised proposed General Plan Update Goal PF3.1 and Policies

PF3.1–3.5 is on financing, timing, and siting of school facilities. The proposed General Plan Update new and revised goals, policies, and implementation measures would also occur under the Infill Housing Alternative. The California Legislature has declared that payment of the State-mandated school impact fee is deemed to be full and adequate mitigation for school facilities and services under CEQA (California Government Code Section 65996). Impacts related to the increased need for school services and facilities under the Infill Housing Alternative would be **greater** than the proposed General Plan Update, but for the same reasons described in the analysis of the proposed General Plan Update in Section 4.11, would still be **less than significant**.

Reduced Growth Alternative

Under the Reduced Growth Alternative, there would be 4,500 fewer housing units than proposed under the General Plan Update and most of this development would occur in the Center and Corridor and Established Communities. Under the Reduced Growth Alternative, a lesser amount of new residential construction would occur as compared to the proposed General Plan Update, and thus the necessary level of new school services and facilities would be reduced. The Reduced Growth Alternative would generate fewer new students, and new schools identified to serve development in the western portion of the Planning Area would likely not be built during the General Plan horizon year of 2035; therefore, a **reduced** level of impact would occur compared to the proposed General Plan Update. For the same reasons as discussed in Section 4.11, school policies contained in the General Plan Update, and payment of the State-mandated school impact fee, would result in **less-than-significant** impacts related to the increased need for school services and facilities under the Reduced Growth Alternative.

No Project Alternative

The existing General Plan includes the same level of development as would occur under the proposed General Plan Update, and a similar amount of development would occur as compared to the proposed General Plan Update. Therefore, a similar potential for increased school services facilities would occur. Under the No Project Alternative, there would be no content revisions to the existing General Plan goals, policies and implementation measures, and no new General Plan goals, policies and implementation measures. However, the existing General Plan goals and policies would continue to be implemented. All development is required to pay the State-mandated school impact fee or comply with City Ordinance 2434. In addition, the existing General Plan contains policies related to planning for and provision of school services and facilities, and these policies would continue to be implemented. Therefore, impacts related to the increased need for school services and facilities under the No Project Alternative would be **similar to** the proposed General Plan Update, and for the same reasons described in the analysis of the proposed General Plan Update in Section 4.11, would be **less than significant**.

6.5.11.4 PARKS

Infill Housing Alternative

The Infill Housing Alternative would result in an additional 1,400 housing units, which would add new population and increase the demand for new and existing parks and recreation facilities, as compared to the proposed General Plan Update. In addition, this additional population would be likely to use existing park facilities potentially resulting in a greater accelerated physical deterioration of existing facilities, as compared to the proposed General Plan Update. As described in Section 4.11, the General Plan Update could accommodate additional acres of developed parkland, the construction of which could result in adverse impacts on the physical environment. Furthermore, Existing General Plan Parks and Recreation Policies 4 and 5, as well as revised

proposed General Plan Update Goals PR1.1 and 1.2 and Policies PR1.1–1.7, 1.12 and 1.14 establish the overall parkland standard as nine acres of parkland per 1,000 residents, and provide flexibility in applying parks standards, in terms of size, facilities, and service areas, so that existing and future needs can be met. The proposed General Plan Update new and revised goals, policies and implementation measures would also occur under the Infill Housing Alternative. As a method to achieve the City’s parkland standards, alternative land dedications may be considered for lands that provide active and passive recreational value. In addition, payment of in-lieu fees could also be used by the City to improve, expand, and maintain existing City parks to ensure that accelerated deterioration does not occur. Impacts related to the increased need or deterioration of park facilities under the Infill Housing Alternative would be **greater** than the proposed General Plan Update, but for the same reasons described in the analysis of the proposed General Plan Update in Section 4.11, would still be **less than significant**.

Reduced Growth Alternative

Under the Reduced Growth Alternative, there would be 4,500 fewer housing units than proposed under the General Plan Update, and thus the necessary amount of new park facilities and the deterioration of existing park facilities would be reduced; therefore, a **reduced** level of impact would occur compared to the proposed General Plan Update. For the same reasons as discussed in Section 4.11, environmental review of proposed new park facilities in this EIR, alternative land dedications, payments of in-lieu fees, and compliance with park policies contained in the General Plan Update, would result in **less-than-significant** impacts related to the increased need or deterioration of park facilities under the Reduced Growth Alternative,.

No Project Alternative

The existing General Plan includes the same level of development as would occur under the proposed General Plan Update, and a similar amount of development would occur as compared to the proposed General Plan Update. Therefore, a similar potential for increased park facilities or the deterioration of existing park facilities would occur. Under the No Project Alternative, there would be no content revisions to the existing General Plan goals, policies and implementation measures, and no new General Plan goals, policies and implementation measures. However, the existing General Plan goals and policies would continue to be implemented. All development is required to comply with City Municipal Code Chapter 4.37, “Neighborhood Park Fee,” and Chapter 4.28, “Citywide Park Fee,” which ensure compliance with the applicable zoning ordinance and general plan requirements for the neighborhood and citywide park and recreation infrastructure funding. These fees are collected from all new residential dwelling units within the City limits and are adjusted each July 1st based on the inflation rate for construction costs from the previous year. In addition, the existing General Plan contains goals and policies related to the provision of park facilities (including the requirement for nine acres of parkland for every 1,000 residents), and these policies would continue to be implemented. Therefore, impacts related to the increased need or deterioration of park facilities under the No Project Alternative would be **similar to** the proposed General Plan Update, and for the same reasons described in the analysis of the proposed General Plan Update in Section 4.11, would be **less than significant**.

6.5.12 PUBLIC UTILITIES

6.5.12.1 WATER SUPPLY

Infill Housing Alternative

The Infill Housing Alternative would result in an additional 1,400 housing units, which would result in an increased demand for additional water supply, as compared to the proposed General Plan Update. Based on per capita water demand per person, at buildout of the Infill Alternative the water demand would be 37,184 acre-feet per year (afy) (assuming the relationship between residential and non-residential water demand does not change between present and buildout of the General Plan). Overall, the Infill Housing Alternative would increase water supply demand by 554 afy.

As described in Draft EIR Section 4.12, “Utilities and Service Systems,” the City’s water supply consists of surface water, groundwater in dry years or in times of emergencies, and recycled water for irrigation. The City’s Urban Water Management Plan (UWMP) accounted for existing and future land uses in Roseville and its planning area (West Yost 2016). Water supply is projected to be sufficient in normal water years over the UWMP’s 20-year planning period (i.e., 2015 to 2035). The UWMP noted that in single-dry years, and in certain multiple dry years, a water supply deficit may occur. However, the City has identified two strategies to ensure an adequate supply of water in the single-dry and multiple-dry years: water conservation, and groundwater injection and recovery wells. The City has determined that assuming a 20 percent of normal water year demand, water conservation would alleviate potential water supply deficits (West Yost 2016). The City’s existing groundwater wells serve as a back-up water supply and to improve water supply reliability during drought and emergency conditions. The City intends to construct additional groundwater wells over the next 15 years for a total of 10 new wells. State law requires demonstration of adequate long-term water supply for large development as defined by SB 610 (i.e., more than 500 dwelling units or nonresidential equivalent) through preparation of a Water Supply Assessment; therefore, individual development projects, including those entitled under this alternative, would not be able to obtain a building permit until it has been demonstrated to the satisfaction of the City via the SB 610 process that a sufficient water supply is available to serve each individual development project in normal, single-dry, and multiple-dry years.

Existing General Plan Water System Goal 2 and Water and Energy Conservation Policy 3, and Extension of City Services – New Development, as well as revised proposed General Plan Update Goal PF6.1, PF6.4, PF6.5 and Policies PF6.1, PF6.2, PF6.4, PF6.5, PF6.8, PF6.10, and PF6.11; Goals PF9.1 and PF9.2 and Policies PF9.1, PF9.4, and PF.5 require the City to pursue adequate water supplies to serve existing and projected growth, develop and expand alternatives to continue conjunctive use of water with neighboring agencies, implement water efficiency standards, and continue the management and expansion of the ASR program to increase resiliency and reliability of water supply during all supply conditions. The General Plan Update Water and Energy Efficiency Goal and the 2019 CALGreen Code would encourage water conservation, promote public education for water conservation, and continue the City’s drought-tolerant landscape ordinance. The Infill Housing Alternative would comply with proposed General Plan Update new and revised goals, policies and implementation measures and comply with existing and future local and state laws and regulations, as identified under the proposed General Plan Update. Impacts related to the need for additional water supplies under the Infill Housing Alternative would be **greater than** the proposed General Plan Update, but for the same reasons described in the analysis of the proposed General Plan Update in Section 4.12, would still be **less than significant**.

Reduced Growth Alternative

Under the Reduced Growth Alternative, approximately 4,500 fewer housing units would be constructed and 17,320–47,320 fewer jobs would be created. Based on per-capita water demand per person, at buildout of the Reduced Growth Alternative the water demand would be 26,268 afy (assuming the relationship between residential and non-residential water demand does not change between present and buildout of the General Plan). Overall, the Reduced Growth Alternative would decrease water supply demand by 10,362 afy. Therefore, the water deficiencies identified in the UWMP for the proposed General Plan Update in single-dry years, and in certain multiple dry years, would not occur. As described on Draft EIR Section 4.12, the proposed General Plan Update contains goals and policies that promote water conservation, promote public education, continue the City's drought-tolerant landscape ordinance, and require the City to pursue adequate water supplies to serve existing and projected growth, develop and expand alternatives to continue conjunctive use of water with neighboring agencies, implement water efficiency standards, and continue the management and expansion of the ground water and ASR program. Furthermore, State law requires demonstration of adequate long-term water supply for large development as defined by SB 610 (i.e., more than 500 dwelling units or nonresidential equivalent) through preparation of a Water Supply Assessment. Because sufficient water supplies would be available in all water year types to serve the projected development, and because this alternative would reduce demand, the impact related to demand for new water supplies would be **reduced** under the Reduced Growth Alternative compared to the proposed General Plan Update, and this impact would be **less than significant**.

No Project Alternative

The existing General Plan includes the same level of development as would occur under the proposed General Plan Update, and a similar potential for increased water supply would occur. Under the No Project Alternative, there would be no content revisions to the existing General Plan goals, policies and implementation measures, and no new General Plan goals, policies and implementation measures. However, existing General Plan contains goals and would continue to be implemented the existing General Plan contains policies related to development of new water supplies and implementing water conservation, and these policies would continue to be implemented. Furthermore, all new development would be subject to the requirements of SB 610 to demonstrate that sufficient water supplies exist to serve individual site-specific development projects. Finally, the City would continue to pursue its ASR program to develop additional groundwater injection wells (would also be used as a replacement for surface water in dry years), and the City would continue to implement water conservation measures. Therefore, impacts related to the need for additional water supplies under the No Project Alternative would be **similar to** the proposed General Plan Update, and for the same reasons described in the analysis of the proposed General Plan Update in Section 4.12, would be **less than significant**.

6.5.12.2 WASTEWATER

Infill Housing Alternative

The Infill Housing Alternative would result in an additional 1,400 housing units, which would result in an increase in demand for wastewater treatment capacity, as compared to the proposed General Plan Update. Overall, the Infill Housing Alternative would increase wastewater flow by 0.23 million gallons per day (mgd).

Wastewater from the City is currently treated at the Dry Creek Wastewater Treatment Plant (WWTP) and the Pleasant Grove WWTP. As described in Draft EIR Section 4.12, the Pleasant Grove WWTP would have adequate

capacity to serve demand from buildout of the General Plan demand in addition to existing commitments. In the future, the Dry Creek WWTP could require upgrades to provide adequate capacity to serve demand from buildout of the 2035 General Plan in addition to existing commitments. The proposed General Plan Update Wastewater and Recycled Water Systems Goals PF.1 and PF.2 and Policies PF.2, 3, and 4 ensure that wastewater treatment capacity is available for proposed development and intensification and that wastewater generation is minimized and require the City to initiate expansion studies to determine necessary improvements to meet projected wastewater treatment demands upon 75 percent utilization of treatment plant capacity, and these policies would apply to the Infill Housing Alternative, as well. Implementation Measures in the General Plan require any development proposal that has an impact on the wastewater submit project plans to the Environmental Utilities Department for review and comment, and projects are required to identify wastewater treatment plant capacity and potential alternatives to treatment and discharge. Specific Plans are required to specify total projected wastewater generation, impacts, and treated wastewater use potential based on land use designations within their plan area, and through development agreements, identify the provision of expanded wastewater treatment capacity. Therefore, the City would ensure sufficient long-term wastewater treatment is available to treat wastewater flows generated at buildout of its service area, including flows generated by the Infill Housing Alternative. Impacts related to the increased demand for wastewater treatment capacity under the Infill Housing Alternative would be **greater than** the proposed General Plan Update, but for the same reasons described in the analysis of the proposed General Plan Update in Section 4.11, would still be **less than significant**.

Reduced Growth Alternative

Under the Reduced Growth Alternative, approximately 4,500 fewer housing units, which would result in a decrease in demand for wastewater treatment capacity, as compared to the proposed General Plan Update. Overall, the Reduced Growth Alternative would decrease wastewater flow by 0.86 mgd.

As described on Draft EIR Section 4.12, the proposed General Plan Update contains goals and policies that ensure that wastewater treatment capacity is available for proposed development and intensification and that wastewater generation is minimized and require the City to initiate expansion studies to determine necessary improvements to meet projected wastewater treatment demands upon 75 percent utilization of treatment plant capacity. Furthermore, Implementation Measures in the General Plan require any development proposal that has an impact on the wastewater submit project plans to the Environmental Utilities Department for review and comment, and projects are required to identify wastewater treatment plant capacity and potential alternatives to treatment and discharge. Specific Plans are required to specify total projected wastewater generation, impacts, and treated wastewater use potential based on land use designations within their plan area, and through development agreements, identify the provision of expanded wastewater treatment capacity. Because sufficient long-term wastewater treatment is available to treat wastewater flows generated at buildout of its service area, including flows generated by the Reduced Growth Alternative, the impact related to increased demand for wastewater treatment capacity would be **reduced** under the Reduced Growth Alternative compared to the proposed General Plan Update, and for the same reasons described in the analysis of the proposed General Plan Update in Section 4.12, this impact would be **less than significant**.

No Project Alternative

The existing General Plan includes the same level of development as would occur under the proposed General Plan Update, and a similar potential for increased wastewater generation would occur. Under the No Project Alternative, there would be no updates to the General Plan to provide more detailed and updated implementation

measures that can reduce potential impacts. There would be no content revisions to the existing General Plan goals, policies and implementation measures, and no new General Plan goals, policies and implementation measures. However, the existing General Plan goals and policies would continue to be implemented. Furthermore, implementation measures in the General Plan require projects to submit project plans to the Environmental Utilities Department for review and comment, and projects are required to identify wastewater treatment plant capacity and potential alternatives to treatment and discharge. Specific Plans are required to specify total projected wastewater generation, impacts, and treated wastewater use potential based on land use designations within their plan area, and through development agreements, identify the provision of expanded wastewater treatment capacity. Therefore, impacts related to increased demand for wastewater treatment capacity under the No Project Alternative would be **similar to** the proposed General Plan Update, and for the same reasons described in the analysis of the proposed General Plan Update in Section 4.12, would be **less than significant**.

6.5.12.3 SOLID WASTE

Infill Housing Alternative

The Infill Housing Alternative would result in an additional 1,400 housing units, which would result in an increased generation of solid waste, as compared to the proposed General Plan Update. Buildout of the Infill Alternative could generate an additional 312 to 435 tons of solid waste per day (tpd) (156 tpd per person plus 156 to 279 tpd per employee), or 7 tpd more than the proposed General Plan Update (305 to 428 tpd).^{6, 7}

As discussed on Draft EIR Section 4.12, all future development in the City is required to comply with a variety of state and local regulations and statutes related to reducing solid waste, including the 2019 CALGreen Code, AB 341, AB 1826, and the City's Construction and Demolition and Recycling Ordinance. Existing General Plan Solid Waste, Source Reduction & Recycling Goals 1, 2, and 3 and Policies 1, 4, as well as revised proposed General Plan Update Policies PF8.2, PF8.3, and PF8.5 would reduce solid waste through compliance with the source reduction and recycling standards mandated by the state by reducing the projected quantity of solid waste disposed at the regional landfill, by requiring a waste characterization profile for proposed large-scale commercial and industrial development projects, and by developing public education and recycling programs. The Infill Housing Alternative would comply with proposed General Plan Update new and revised goals, policies, and implementation measures and comply with existing and future local and state laws and regulations, as identified under the General Plan Update. In addition, implementation measures in the proposed General Plan Update require Specific Plans to identify solid waste generation, impacts on the regional landfill, and opportunities for source reduction and recycling. Furthermore, the Western Regional Sanitary Landfill (WRSL) has capacity to accommodate solid waste generated by both the proposed General Plan Update and the additional 1,400 housing units proposed under the Infill Housing Alternative. Therefore, impacts related to the increased generation of solid waste under the Infill Housing Alternative would be **greater than** the proposed General Plan Update, but for the same reasons described in the analysis of the proposed General Plan Update in Section 4.12, would still be **less than significant**.

⁶ Based on CalRecycle's estimated 2018 annual per capita disposal rate of 4.8 pounds per resident per day, the estimated increase in population (65,059 persons) would generate approximately 312,283 pound per day of solid waste, which equates to 156.1 tpd (CalRecycle 2018).

⁷ Based on CalRecycle's estimated 2018 annual per capita disposal rate of 8.2 pounds per employee per day and an estimated increase of between 38,000 and 68,000 employees, approximately 311,600 to 557,600 pound per day of solid waste would be generated per day, which equates to 155.8 to 278.8 tpd (CalRecycle 2018).

Reduced Growth Alternative

Under the Reduced Growth Alternative, approximately 4,500 fewer housing units would be constructed and 17,320–47,320 fewer jobs would be created. Buildout of the Reduced Growth Alternative could generate an additional 232 tpd (147 tpd per person plus 85 tpd per employee), or between 73 tpd and 196 tpd less than the proposed General Plan Update (305 to 428 tpd)^{8, 9}; therefore, a **reduced** level of impact would occur compared to the proposed General Plan Update

For the same reasons as discussed in Draft EIR Section 4.12, compliance with state and local standards that require a reduction in solid waste, compliance with policies related to solid waste contained in the proposed General Plan Update, and considering the WRS� has capacity to accommodate the additional solid waste, would result in **less-than-significant** impacts related to the increased generation of solid waste under the Reduced Growth Alternative,.

No Project Alternative

The existing General Plan includes the same level of development as would occur under the proposed General Plan Update, and a similar potential for increased generation of solid waste would occur. Under the No Project Alternative, there would be no content revisions to the existing General Plan goals, policies and implementation measures, and no new General Plan goals, policies and implementation measures. The existing General Plan contains goals and policies related solid waste reduction, and these policies would continue to be implemented. All development is required to comply with state and local standards that require a reduction in solid waste, and the WRS� has capacity to accommodate the additional solid waste from projected new development. Therefore, impacts related to increased generation of solid waste under the No Project Alternative would be **similar to** the proposed General Plan Update, and would be **less than significant**.

6.5.13 HYDROLOGY AND WATER QUALITY

6.5.13.1 VIOLATION OF WATER QUALITY STANDARDS OR WASTE DISCHARGE REQUIREMENTS OR CONFLICT WITH A WATER QUALITY CONTROL PLAN

Infill Housing Alternative

The additional housing units planned under the Infill Housing Alternative would result in additional construction-related earthmoving activities that could increase erosion and sedimentation in stormwater runoff and could affect long-term water quality by adding impervious surfaces and increasing urban stormwater runoff potentially contaminated with pollutants, as compared to the proposed General Plan Update. In addition, groundwater quality could be degraded by construction-related dewatering activities and through percolation of polluted surface water runoff into the aquifer from operation of proposed urban land uses. However, as discussed in Draft EIR Impact 4.13-1 (Section 4.13, “Hydrology and Water Quality”), all new and infill development envisioned under the proposed General Plan Update would be required to comply with the provisions of the City’s Municipal Code

⁸ Based on CalRecycle’s estimated 2018 annual per capita disposal rate of 4.8 pounds per resident per day, the estimated increase in population (6,107 persons) would generate approximately 293,136 pound per day of solid waste, which equates to 146.6 tpd (CalRecycle 2018).

⁹ Based on CalRecycle’s estimated 2018 annual per capita disposal rate of 8.2 pounds per employee per day and an estimated increase of 20,680 employees, approximately 169,576 pound per day of solid waste would be generated per day, which equates to 84.8 tpd (CalRecycle 2018).

requiring proper drainage and erosion control, as well as the SWRCB's Construction General Permit, *West Placer Stormwater Quality Design Manual* (cbec eco engineering, inc. and CDM Smith 2018), *Stormwater Quality BMP Guidance Manual for Construction* (City of Roseville 2011a), and the *City of Roseville Stormwater Management Program* (2004) to reduce post-construction runoff in through the incorporation of BMPs, low impact development (LID), and hydromodification management techniques as part of the City's MS4 permit. Earthmoving activities that could encounter groundwater are issued WDRs by the Central Valley RWQCB through the project-specific permitting process; the WDRs contain provisions that are specifically intended to protect groundwater quality. Protection of groundwater quality from stormwater percolation is accomplished through implementation of the City's MS4 permit.

The Infill Housing Alternative includes all of the same goals and policies as the proposed General Plan Update, including Policies OS2.2 and OS3.1 along with existing General Plan Flood Protection Goal 2 and Policy 7, Seismic and Geologic Hazards Policies 3 and 6, Groundwater Recharge and Water Quality Goals 1 and 2 and Policies 2, 3, and 4, and Vegetation and Wildlife Goal 1. All of these existing and proposed General Plan Update goals and policies would serve to minimize long-term water quality impacts associated with increased urbanization. The goal of these policies as they relate to stormwater runoff, and surface and groundwater quality, is to provide for adequate water quality protection during construction and operation of projects developed under the General Plan (and this alternative). The goal of the proposed General Plan Update policies as they relate to stormwater management is to provide flood protection, enhance water quality, prevent infrastructure deterioration, and facilitate compliance with state and federal laws. Implementation of the proposed General Plan Update policies would avoid, minimize, or compensate for potential water quality impacts by requiring projects to reduce pollution and runoff through implementation of LID technologies, BMPs, pretreatment, and upgrades to stormwater and wastewater treatment capacity, as needed. These measures would protect water quality as required by the *Water Quality Control Plan (Basin Plan) for the Sacramento and San Joaquin River Basins* (Central Valley RWQCB 2018). Therefore, impacts from degradation of water quality and conflicts with implementation of a water quality control plan under the Infill Housing Alternative would be **greater than** the proposed General Plan Update, but would still be **less than significant**.

Reduced Growth Alternative

Under the Reduced Growth Alternative, a lesser amount of new development would occur as compared to the proposed General Plan Update, and therefore the risks of surface water and groundwater quality degradation and conflicts with the water quality control plan would be lower. However, the same types of impacts would still occur. The Reduced Growth Alternative includes all of the same goals and policies as the proposed General Plan Update, including Policies OS2.2 and OS3.1, along with existing General Plan Flood Protection Goal 2 and Policy 7, Seismic and Geologic Hazards Policies 3 and 6, Groundwater Recharge and Water Quality Goals 1 and 2 and Policies 2, 3, and 4, and Vegetation and Wildlife Goal 1. All of these existing and proposed General Plan Update goals and policies are designed to provide for adequate water quality protection during site-specific project construction and operation. Furthermore, for the same reasons discussed in Draft EIR Impact 4.13-1 (Section 4.13, "Hydrology and Water Quality"), all new projects are required to comply with the SWRCB's Construction General Permit, which requires applicants to prepare and implement a SWPPP with associated BMPs designed to reduce erosion and protect water quality by reducing stormwater runoff. All projects are also required to comply with the City's MS4 permit implemented through the *City of Roseville Stormwater Management Program* (2004) to reduce post-construction runoff in through the incorporation of BMPs, LID, and hydromodification management techniques. These measures would protect water quality as required by the *Water*

Quality Control Plan (Basin Plan) for the Sacramento and San Joaquin River Basins (Central Valley RWQCB 2018). Therefore, impacts from degradation of water quality and conflicts with implementation of a water quality control plan under the Reduced Growth Alternative would be **reduced** compared to the proposed General Plan Update, and would still be **less than significant**.

No Project Alternative

The existing General Plan includes the same level of development as would occur under the proposed General Plan Update, and therefore the risks of water quality pollution and conflicts with the water quality control plan would be similar. Under the No Project Alternative, there would be no content revisions to the existing General Plan goals and policies, and no new General Plan goals and policies. For example, proposed General Plan Update Policies OS2.2 and OS3.1 would not be revised to provide examples of BMPs that could be implemented, such as low impact development and naturalized stormwater management features, to reduce stormwater runoff. However, existing General Plan Flood Protection Goal 2 and Policy 7, Seismic and Geologic Hazards Policies 3 and 6, Groundwater Recharge and Water Quality Goals 1 and 2 and Policies 1, 2, 3, and 4, and Vegetation and Wildlife Goal 1 would continue to be implemented, and they are all designed to provide for adequate water quality protection during site-specific project construction and operation. Furthermore, for the same reasons discussed in Draft EIR Impact 4.13-1 (Section 4.13, “Hydrology and Water Quality”), all development is required to comply with state and local standards to prevent water quality degradation, including compliance with the SWRCB’s Construction General Permit to reduce construction-related runoff, and with the City’s MS4 permit implemented through the *City of Roseville Stormwater Management Program* (2004) to reduce post-construction runoff in through the incorporation of BMPs, LID, and hydromodification management techniques. In addition, the existing General Plan contains goals and policies related to the protection of water quality, and these policies would continue to be implemented. All of these measures would protect water quality as required by the *Water Quality Control Plan (Basin Plan) for the Sacramento and San Joaquin River Basins* (Central Valley RWQCB 2018). Therefore, impacts from degradation of water quality and conflicts with implementation of a water quality control plan under the No Project Alternative would be **similar to** the proposed General Plan Update, and would still be **less than significant**.

6.5.13.2 GROUNDWATER RECHARGE/SUSTAINABLE GROUNDWATER MANAGEMENT PLAN (SUBSTANTIAL INTERFERENCE WITH GROUNDWATER RECHARGE OR SUBSTANTIAL DEPLETION OF GROUNDWATER SUPPLIES THAT WOULD IMPEDE IMPLEMENTATION OF A GROUNDWATER SUSTAINABLE PLAN)

Infill Housing Alternative

The Infill Housing Alternative would result in the construction of additional housing units, as compared to the proposed General Plan Update. The additional infill housing would be located along major urban corridors (as shown in Exhibit 6-1) and because (1) these areas are already developed and covered with existing impervious surfaces which already prevent groundwater recharge, and (2) no parks, golf courses, or other areas designed as open space that currently provide direct groundwater recharge would be converted for the additional housing units, the additional infill residential units would result in only a slightly greater reduction in permeability than the proposed General Plan Update. However, the Infill Housing Alternative also includes all of the development proposed in the proposed General Plan Update, much of which would occur on land that is currently undeveloped. As discussed in Draft EIR Impact 4.13-2 (Section 4.13, “Hydrology and Water Quality”), the *Western Placer County Groundwater Management Plan* (Montgomery Watson Harza 2007) currently provides planned and

coordinated monitoring, operation, and administration of groundwater basins in the project area with the goal of long-term groundwater resource sustainability. Development of the groundwater sustainability plan (GSP) for the North American basin (where the Planning Area is located) as required by the Sustainable Groundwater Management Act, is a coordinated effort among five groundwater sustainability agencies (i.e., West Placer, Sacramento, South Sutter, Sutter County, and Recreation District 1001), and preparation of the GSP is in process. The North American basin is not a critically overdrafted basin. New urban infrastructure with impervious surfaces (e.g., buildings, roads, parking areas) can result in a reduction in rainfall that would otherwise percolate through the soil and result in groundwater recharge. However, as discussed in the *Evaluation of Potential Groundwater Recharge Areas in West Placer County, California* (Placer County 2017), most of the direct recharge through soil occurs in the eastern half of the planning area; direct recharge in the western Planning Area (where most of the new development is projected to occur), is extremely limited due to the low permeability of surface soils, the presence of a cemented hardpan beneath the surface, and the lack of direct connectivity with the groundwater aquifer in this area. Direct groundwater recharge in the western Planning Area occurs primarily through existing stream channels. The City's ongoing ASR program includes new groundwater wells that are designed to inject and store surplus drinking water in the underlying groundwater aquifer during periods of normal and above normal precipitation. This stored drinking water would be extracted and used to meet peak demands during dry years. The ongoing ASR program is part of the *Western Placer County Groundwater Management Plan* (Montgomery Watson Harza 2007) and will be included in the GSP.

The Infill Housing Alternative includes all of the same goals and policies as the proposed General Plan Update, including Policies OS2.2 and OS3.1, Goal PF9.1 and Policies PF9.1, PF9.3, PF9.4, PF9.5, and Goal PF6.4 and Policies PF6.10 and 6.11. These policies would be updated to reflect current actions within the City to protect groundwater supply and recharge (such as the City's ASR program), and include future specific actions, such as state and local water efficiency standards and LID techniques that would help conserve water supplies. In addition, existing General Plan Water Quality and Groundwater Recharge Goal 2 and Policies 2–6, Wastewater and Recycled Water Systems Goal 3 and Policy 1, and Vegetation and Wildlife Goal 1 would continue to be implemented. All of these existing and proposed General Plan Update goals and policies would promote groundwater recharge, enhance the quality of surface water that percolates through to the aquifer, pursue the use of recycled water to reduce reliance on surface and groundwater supplies, and continue to implement the City's ASR program for injection and recovery of water. Implementation of these policies, along with compliance with the *City of Roseville Stormwater Management Program* (2004), would help preserve the groundwater recharge potential of the currently undeveloped portions of the Planning Area through the implementation of LID features, preservation of existing stream channels, and would encourage water conservation/demand management. Therefore, impacts from substantial reduction in groundwater recharge and potential conflicts with a sustainable groundwater management plan under the Infill Housing Alternative would be **similar to** the proposed General Plan Update, and would still be **less than significant**.

Reduced Growth Alternative

Under the Reduced Growth Alternative, a lesser amount of new development would occur as compared to the proposed General Plan Update, and therefore fewer impermeable surfaces would be constructed that could reduce the potential for direct groundwater recharge. However, the same types of impacts would still occur. The Reduced Growth Alternative includes all of the same goals and policies as the proposed General Plan Update, including Policies OS2.2 and OS3.1, Goal PF9.1 and Policies PF9.1, PF9.3, PF9.4, PF9.5, and Goal PF6.4 and Policies PF6.10 and 6.11, along with existing General Plan Water Quality and Groundwater Recharge Goal 2 and Policies

2–6, Wastewater and Recycled Water Systems Goal 3 and Policy 1, and Vegetation and Wildlife Goal 1. These goals and policies are designed to promote groundwater recharge and conservation of water resources. For the same reasons as discussed in Draft EIR Impact 4.13-2 (Section 4.13, “Hydrology and Water Quality”), implementation of these goals and policies in addition to compliance with the *City of Roseville Stormwater Management Program* (2004) would help preserve the groundwater recharge potential of the currently undeveloped portions of the Planning Area through the required implementation of LID features in new development, preservation of existing stream channels, and would encourage water conservation/demand management. Furthermore, the North American basin is not a critically overdrafted basin, and the City’s ongoing ASR program is part of the *Western Placer County Groundwater Management Plan* (Montgomery Watson Harza 2007), which administers groundwater basins in the project area with the goal of long-term groundwater resource sustainability; the ongoing ASR program will be included in the GSP. Therefore, impacts from substantial reduction in groundwater recharge and potential conflicts with a sustainable groundwater management plan under the Reduced Growth Alternative would be **reduced** compared to the proposed General Plan Update, and would still be **less than significant**.

No Project Alternative

The existing General Plan includes the same level of development as would occur under the proposed General Plan Update, and therefore the potential for interference with groundwater recharge would be similar. Under the No Project Alternative, there would be no content revisions to the existing General Plan goals and policies, and no new General Plan goals and policies. For example, Goal PF9.1 and Policies PF9.1, PF9.3, PF9.4, PF9.5, and Goal PF6.4 and Policies PF6.10 and 6.11 would not be updated to reflect current actions within the City to protect groundwater supply and recharge (such as the City’s ASR program), or to include future specific actions such as state and local water efficiency standards and LID techniques that would help conserve water supplies. However, existing General Plan Flood Protection Goal 2 and Policy 7, Seismic and Geologic Hazards Policies 3 and 6, Groundwater Recharge and Water Quality Goals 1 and 2 and Policies 1, 2, 3, and 4, and Vegetation and Wildlife Goal 1 are all designed to provide for adequate water quality protection during site-specific project construction and operation, and these goals and policies would continue to be implemented. Furthermore, as discussed in Draft EIR Impact 4.13-2 (Section 4.13, “Hydrology and Water Quality”), all new development is required to comply with the *City of Roseville Stormwater Management Program* (2004), which requires implementation of LID features at each project site that would continue to allow some groundwater recharge to occur. In addition, the existing General Plan contains goals and policies requiring the preservation of existing stream channels, promoting groundwater recharge, and encouraging water conservation/demand management, and these policies would continue to be implemented. Finally, the City’s ongoing ASR program would continue to be implemented as part of the *Western Placer County Groundwater Management Plan* (Montgomery Watson Harza 2007), and will be included in the GSP. Therefore, impacts from substantial reduction in groundwater recharge and potential conflicts with a sustainable groundwater management plan under the No Project Alternative would be **similar to** the proposed General Plan Update, and would still be **less than significant**.

6.5.13.3 ALTERATION OF DRAINAGES – EROSION (SUBSTANTIAL ALTERATION OF DRAINAGE PATTERNS RESULTING IN SUBSTANTIAL EROSION OR SILTATION)

Please see subsection 6.4.7, “Geology, Soils, and Paleontological Resources,” above, under the heading “Soil Erosion” for the discussion of impacts that could occur under the Infill Housing, Reduced Development, and No Project Alternatives related to increased erosion from construction-related alteration of drainages.

6.5.13.4 ALTERATION OF DRAINAGES – RUNOFF, POLLUTANTS, AND FLOODING (*SUBSTANTIAL ALTERATION OF DRAINAGE PATTERNS RESULTING IN RUNOFF THAT WOULD EXCEED THE CAPACITY OF STORMWATER DRAINAGE SYSTEMS AND/OR CAUSE AN INCREASE IN FLOODING OR PROVIDE ADDITIONAL SOURCES OF POLLUTED RUNOFF*)

Infill Housing Alternative

The Infill Housing Alternative would include additional housing units. However, as described above, additional infill housing would be located along major urban corridors (as shown in Exhibit 6-1) and because these areas are already developed and covered with existing impervious surfaces, the additional infill residential units would result in only a minor increase in impervious surfaces as compared to the proposed General Plan Update.

As discussed in Draft EIR Impact 4.13-4 (Section 4.13, “Hydrology and Water Quality”), additional impervious surfaces would increase the rate and amount of stormwater runoff, which could exceed drainage system capacities and result in erosion, sedimentation, and flooding. However, all projects in the Planning Area are required to comply with the *West Placer Stormwater Quality Design Manual* (cbec and CDM Smith 2018) to reduce post-construction runoff and control urban runoff pollution in compliance with of the City's Phase II MS4 permit through the incorporation of BMPs, LID, and hydromodification management techniques. Hydromodification management requires regulated projects to slow and minimize the amount of runoff so that there is no net-increase in post-construction runoff flow rate as compared to the pre-construction value. The City’s Urban Stormwater Quality Management and Discharge Control Ordinance (Municipal Code, Title 14, Chapter 14.20) requires that all projects design and implement a stormwater management plan that implements methodologies contained in the *West Placer Stormwater Quality Design Manual* (cbec eco engineering and CDM Smith 2018). The City’s *Design and Construction Standards* (City of Roseville 2019), Section 10 Drainage, address development in or adjacent to the City’s Regulatory Floodplain, drainage diversion, drainage capacity and design, peak design calculations and methods, hydraulic standards for drainage systems, inlet and outlet structures, pumps, design of channels and outfalls, culverts and bridges, detention and retention basins, and maintenance access requirements. The Open Space Preserve Overarching Management Plan (City of Roseville 2011b) includes specific requirements and adopted mitigation measures related to open space management, maintenance, and monitoring that are related to drainage, flooding, and water quality.

The City’s Flood Damage Prevention Ordinance (Title 9, Chapter 9.8) sets standards to minimize public and private losses due to flood conditions. All new development in the Planning Area is reviewed by the Placer County Flood Control and Water Conservation District to ensure it meets District standards. In addition, the City has established a flood mitigation fee program for the construction of a regional retention basin flood control project at the Al Johnson Wildlife Area, in the northwestern portion of the Planning Area. The Infill Housing Alternative includes all of the same goals and policies as the proposed General Plan Update, including SAFE1.3, 2.1, 2.2, 2.3, 2.6, 2.8; and OS2.2 and 3.1. These policies would be updated to require new development to evaluate flood hazards, implement LID techniques to slow the rate of runoff and provide stormwater quality pre-treatment, pay flood assessment district fees towards construction of the regional flood control project, and preserve and maintain habitat along creek corridors (which would reduce erosion). In addition, existing General Plan Flood Protection Goals 1 and 2 and Policies 4, 5, 7, and 9, Open Space System Goal 1 and Policy 10, Vegetation and Wildlife Goal 1 and Policies 3 and 4, Water Quality and Groundwater Recharge Goal 1 and Policies 2–4, and Seismic and Geologic Hazards Policy 6 would continue to be implemented. All of these existing and proposed General Plan Update goals and policies are designed to preserve open space including stream and creek corridors, maintain and improve the City’s storm drainage system, and prevent an increase in flood hazards

from new development. Therefore, impacts from alteration of drainages that would result in increased flooding and exceedance of the City's storm drainage system under the Infill Housing Alternative would be **greater than** the proposed General Plan Update, but still would be **less than significant**.

Reduced Growth Alternative

Under the Reduced Growth Alternative, a lesser amount of new development would occur as compared to the proposed General Plan Update, and therefore fewer impermeable surfaces would be constructed that could result in flooding and exceedance of the City's storm drainage system. However, the same types of impacts would still occur. The Reduced Growth Alternative includes all of the same goals and policies as the proposed General Plan Update, including SAFE1.3, 2.1, 2.2, 2.3, 2.6, 2.8; and OS2.2 and 3.1, along with existing General Plan Protection Goals 1 and 2 and Policies 4, 5, 7, and 9, Open Space System Goal 1 and Policy 10, Vegetation and Wildlife Goal 1 and Policies 3 and 4, Water Quality and Groundwater Recharge Goal 1 and Policies 2–4, and Seismic and Geologic Hazards Policy 6, all of which are designed to preserve open space including stream and creek corridors, maintain and improve the City's storm drainage system, and prevent an increase in flood hazards from new development. For the same reasons as discussed in Draft EIR Impact 4.13-4 (Section 4.13, "Hydrology and Water Quality"), implementing the above-listed existing and proposed policies and compliance with the City's MS4 Permit, the *West Placer Stormwater Quality Design Manual*, the City's *Design and Construction Standards*, the City's Urban Stormwater Quality Management and Discharge Control Ordinance and the Flood Damage Prevention Ordinance would require proper design of drainage from future projects, as well as hydromodification management techniques to slow and minimize the amount of runoff so that there is no net-increase in post-construction runoff flow rate as compared to the pre-construction value. Furthermore, the detention basins at the Al Johnson Wildlife Area that are necessary to reduce downstream flood flows from increased City of Roseville development would still be implemented. Therefore, impacts from alteration of drainages that would result in increased flooding and exceedance of the City's storm drainage system under the Reduced Growth Alternative would be **reduced compared to** the proposed General Plan Update, and would still be **less than significant**.

No Project Alternative

The existing General Plan includes the same level of development that would result in new impermeable surfaces as would occur under the proposed General Plan Update, and therefore the potential for increased flooding and exceedance of the City's storm drainage system would be similar. Under the No Project Alternative, there would be no content revisions to the existing General Plan goals and policies, and no new General Plan goals and policies. For example, policies SAFE1.3, 2.1, 2.2, 2.3, 2.6, and 2.8 would not be updated to specify additional detailed actions that would help to prevent flooding, prevent exceedance of existing drainage capacity, and prevent downstream pollutant transport. However, existing General Plan Protection Goals 1 and 2 and Policies 4, 5, 7, and 9, Open Space System Goal 1 and Policy 10, Vegetation and Wildlife Goal 1 and Policies 3 and 4, Water Quality and Groundwater Recharge Goal 1 and Policies 2–4, and Seismic and Geologic Hazards Policy 6 are designed to preserve open space including stream and creek corridors (to help prevent erosion), maintain and improve the City's storm drainage system, and prevent an increase in flood hazards from new development, and these goals and policies would continue to be implemented. Furthermore, as discussed in Draft EIR Impact 4.13-4 (Section 4.13, "Hydrology and Water Quality"), all new development is required to comply with the City's MS4 Permit, the *West Placer Stormwater Quality Design Manual*, the City's *Design and Construction Standards*, the City's Urban Stormwater Quality Management and Discharge Control Ordinance and the Flood Damage Prevention Ordinance, which require proper design of drainage from future projects, as well as hydromodification

management techniques to slow and minimize the amount of runoff so that there is no net-increase in post-construction runoff flow rate as compared to the pre-construction value. In addition, the existing General Plan contains goals and policies that are designed to preserve open space including stream and creek corridors, maintain and improve the City's storm drainage system, and prevent an increase in flood hazards from new development, and these policies would continue to be implemented. Finally, the detention basins at the Al Johnson Wildlife Area that are necessary to reduce downstream flood flows from increased City of Roseville development would still be implemented. Therefore, impacts from alteration of drainages that would result in increased flooding and exceedance of the City's storm drainage system under the No Project Alternative would be **similar to** the proposed General Plan Update, and would still be **less than significant**.

6.5.13.5 RELEASE OF POLLUTANTS IN FLOOD HAZARD, TSUNAMI, OR SEICHE ZONES

Infill Housing Alternative

Because of the Planning Area's distance from the Pacific Ocean, tsunamis would not affect the City. There are no waterbodies in the Planning Area that are large enough to result in seiche hazards; furthermore, active seismic sources are more than 30 miles away. Therefore, tsunami and seiche hazards are discussed further in this alternatives analysis.

The Infill Housing Alternative would result in the construction of additional housing units, which could result in increased potential for short-term, temporary storage of materials in flood hazard zones, as compared to the proposed General Plan Update. However, as described in Draft EIR Impact 4.13-5 (Section 4.13, "Hydrology and Water Quality"), the City of Roseville Municipal Code, Title 19, Section 19.18.040 prohibits the stockpiling or storage of any materials in a designated flood zone unless a flood encroachment permit is issued. Flood encroachment permits contain specific terms and conditions that must be implemented by the permit applicant, including a prohibition on storage of materials that are buoyant, flammable, toxic, explosive, or could be injurious to human, animal, or plant life during a flood; the materials and/or equipment must not be subject to major damage from a flood and must be readily removable from the area if a flood warning is issued; and all materials or equipment must be kept anchored or otherwise restrained to prevent them from being carried downstream by floodwaters. Compliance with the terms of the flood encroachment permit would ensure that any materials or equipment that are temporarily stored in a flood hazard zone would not result in a release of pollutants during a flood. There are no proposed General Plan Update goals or policies related to transport of pollutants in flood hazard zones that are proposed for revision. However, existing General Plan Flood Protection Goal 2 and Policy 9, and Water Quality and Groundwater Recharge Goal 1 and Policy 2 are designed to protect water quality in floodplains, and require new projects to implement erosion control and topsoil conservation measures to limit sediments within watercourses. Impacts from release of pollutants in a flood hazard zone under the Infill Housing Alternative would be **greater than** the proposed General Plan Update, but would still be **less than significant**.

Reduced Growth Alternative

Under the Reduced Growth Alternative, a lesser amount of new development would occur as compared to the proposed General Plan Update, and thus there would be lower potential for temporary, short-term storage of equipment and materials in flood hazard zones; therefore, a **reduced** level of impact would occur as compared to the proposed General Plan Update. For the same reasons as discussed in Draft EIR Impact 4.13-5 (Section 4.13, "Hydrology and Water Quality"), the City of Roseville Municipal Code, Title 19, Section 19.18.040 prohibits the stockpiling or storage of any materials in a designated flood zone unless a flood encroachment permit is issued.

Compliance with the terms and conditions contained in the flood encroachment permit, along with implementation of existing General Plan Flood Protection Goal 2 and Policy 9, and Water Quality and Groundwater Recharge Goal 1 and Policy 2 (which are designed to protect water quality in floodplains), would still result in **less-than-significant** impacts from release of pollutants stored in a flood hazard zone under the Reduced Growth Alternative.,

No Project Alternative

The existing General Plan includes the same level of development as would occur under the proposed General Plan Update, and thus there would be similar potential for temporary, short-term storage of equipment and materials in flood hazard zones. There are no existing goals or policies related to transport of pollutants in flood hazard zones that are proposed for revision as part of the General Plan Update. However, existing General Plan Flood Protection Goal 2 and Policy 9, and Water Quality and Groundwater Recharge Goal 1 and Policy 2, are designed to protect water quality in floodplains, and require new projects to implement erosion control and topsoil conservation measures to limit sediments within watercourses. Furthermore, as discussed in Draft EIR Impact 4.13-5 (Section 4.13, “Hydrology and Water Quality”), City of Roseville Municipal Code, Title 19, Section 19.18.040 prohibits the stockpiling or storage of any materials in a designated flood zone unless a flood encroachment permit is issued, and compliance with the terms and conditions contained in the flood encroachment permit would prevent pollution from materials temporarily stored in a flood zone. Therefore, the impact from potential release of pollutants stored in a flood hazard zone under the No Project Alternative would be **similar** to the proposed General Plan Update, and would still be **less than significant**.

6.5.14 AESTHETICS

6.5.14.1 SCENIC VISTAS (*SUBSTANTIAL ADVERSE EFFECT ON A SCENIC VISTA*)

Infill Housing Alternative

The Infill Housing Alternative would result in additional housing units, as compared to the proposed General Plan Update. As shown in Exhibit 6-1, the additional infill housing would be located within existing developed areas of the City. However, the Infill Housing Alternative also includes all of the development envisioned under the proposed General Plan Update. As discussed in Draft EIR Impact 4.14-1 (Section 4.14, “Aesthetics”), existing views in the Planning Area consist mainly of developed, urban land with associated open space and parks. At the western and northwestern edges of the Planning Area, views of flat, open farmland to the west and north can be seen from some adjacent properties in the built environment at the urban edge. However, there are no scenic vistas within the Planning Area, nor is the Planning Area visible from any designated scenic viewpoint. The Infill Housing Alternative includes all of the same goals and policies as the proposed General Plan Update, including Goal LU7.3 and Policies LU8.7, LU9.9, OS2.1, and OS2.2, which contain minor edits that are proposed for clarity. In addition, existing General Plan Community Design Policies 6 and 8, Growth Management Goal 13 and Policy 8, Growth Management-Growth Areas Policy 6, Open Space Goal 1 and Policy 1, and Vegetation and Wildlife Goal 1 would still be implemented, and these goals and policies are designed to continue to (1) apply design standards that promote the use of high-quality building materials, architectural and site designs, landscaping, signage, and amenities through the design process, and (2) preserve, protect, and enhance a significant system of interconnected natural habitat areas, including creek and riparian corridors, oak woodlands, wetlands, and adjacent grassland areas. Furthermore, all development must be consistent with the City’s (2008) *Community Design Standards*, which is reviewed during the permitting process. Therefore, the impacts of the

Infill Housing Alternative on scenic vistas would be **similar to** the proposed General Plan Update, and would still be **less than significant**.

Reduced Growth Alternative

Under the Reduced Growth Alternative, a lesser amount of new construction would occur as compared to the proposed General Plan Update. As shown in Exhibit 6-2, the lack of additional development in the western and northwestern edges of the Planning Area under the Reduced Growth Alternative would result in preservation of existing views of undeveloped agricultural land from residences at the edge of the urban fringe, at least in the short term. However, as discussed in Draft EIR Impact 4.14-1 (Section 4.14, “Aesthetics”), there are no scenic vistas within the Planning Area, nor is the Planning Area visible from any designated scenic viewpoint; therefore, a **similar** level of impact would occur as compared to the proposed General Plan Update. The Reduced Growth Alternative includes all of the same goals and policies as the proposed General Plan Update, including Goal LU7.3 and Policies LU8.7, LU9.9, OS2.1, and OS2.2, which contain minor edits that are proposed for clarity. In addition, existing General Plan Community Design Policies 6 and 8, Growth Management Goal 13 and Policy 8, Growth Management-Growth Areas Policy 6, Open Space Goal 1 and Policy 1, and Vegetation and Wildlife Goal 1 would still be implemented, and these goals and policies require the application of design standards that promote high-quality development, and require the preservation of a significant system of interconnected natural habitat areas. Furthermore, all development must be consistent with the City’s (2008) *Community Design Standards*, which is reviewed during the permitting process. Therefore, the Reduced Growth Alternative would still result in **less-than-significant** impacts related to scenic vistas.

No Project Alternative

The existing General Plan includes the same level of development that would occur under the proposed General Plan Update. For the same reasons as discussed in Draft EIR Impact 4.14-1 (Section 4.14, “Aesthetics”), there are no scenic vistas within the Planning Area, nor is the Planning Area visible from any designated scenic viewpoint. Under the No Project Alternative, proposed updates to Goal LU7.3 and Policies LU8.7, LU9.9, OS2.1, and OS2.2 would not occur; however, the proposed changes consist solely of minor edits that are proposed for clarity. Existing General Plan Community Design Policies 6 and 8, Growth Management Goal 13 and Policy 8, Growth Management-Growth Areas Policy 6, Open Space Goal 1 and Policy 1, and Vegetation and Wildlife Goal 1 would continue to be implemented, and these goals and policies require the application of design standards that promote high-quality development, and require the preservation of a significant system of interconnected natural habitat areas. Furthermore, all development must be consistent with the City’s (2008) *Community Design Standards*, which is reviewed during the permitting process. Finally, there are no scenic vistas within the Planning Area. Therefore, impacts related to scenic vistas under the No Project Alternative would be **similar to** the proposed General Plan Update, and would still be **less than significant**.

6.5.14.2 VISUAL CHARACTER AND QUALITY (IN A NON-URBANIZED AREA, SUBSTANTIALLY DEGRADE THE EXISTING VISUAL CHARACTER OR QUALITY OF THE SITE AND ITS SURROUNDINGS, AND IN AN URBANIZED AREA, CONFLICT WITH APPLICABLE ZONING AND OTHER REGULATIONS GOVERNING SCENIC QUALITY)

Infill Housing Alternative

The Infill Housing Alternative would result in additional housing units, as compared to the proposed General Plan Update. In the infill areas (shown in Exhibit 6-1), buildout of the General Plan would not result in substantive

changes to the visual character because the area is already fully developed. However, the Infill Housing Alternative also includes all of the new urban development envisioned under the proposed General Plan Update in the currently undeveloped western and northwestern portions of the Planning Area. As discussed in Draft EIR Impact 4.14-2 (Section 4.14, “Aesthetics”), the western and northwestern areas of the City have been in the process of developing, and therefore some areas already contain newer residences, commercial developments, and public infrastructure and facilities oriented around a curvilinear street network and an interconnected system of open space adjoining the creeks that flow through the area. The new development that could occur through buildout of the General Plan would be of a similar type and mass and consistent with City design guidelines and standards, and would be similarly oriented around an interconnected system of open space. Furthermore, all projects are required to comply with the City’s Community Design Standards, which address a variety of topics related to design, including site planning and architectural design standards; landscaping and screening techniques to preserve and enhance the visual quality; signage; streetscape improvements such as street trees, landscaped medians, and street furnishings; and lighting design.

State law requires the City’s Zoning Code to be consistent with the General Plan. The Zoning Ordinance establishes specific, enforceable standards with which development must comply such as minimum lot size, maximum building height, minimum building setback, and a list of allowable uses. Zoning applies lot-by-lot, whereas the General Plan has a community-wide perspective. The City’s Zoning Ordinance includes various zones for residential, commercial, industrial, open space, and agricultural uses, as well as several overlay zones that apply to specific conditions (e.g. floodplain overlay). Provisions pertaining to visual resources such as site-specific design standards, preservation of open space, landscaping, street trees, grading on steep slopes, and signs, are covered in separate sections.

The Infill Housing Alternative includes all of the same goals and policies as the proposed General Plan Update, including Policies LU3.4, Goal LU7.3, and Policies LU7.2 and 7.7, LU8.7, LU8.11, LU9.5, LU9.6, LU9.9, Goal OS1.2, OS1.3, Policies OS1.4, OS 1.12, OS2.1, OS2.2, OS4.16, and Goal PR1.2, all of which are designed to promote the integration of open space and natural resources, as well as compatibility within and between the natural and the urban environments in the land use planning process. In addition, existing General Plan Community Form Goal 1 and Policies 1 and 2; Community Design Goals 1, 2, and 4 and Policies 1, 3, 4, 5, 6, 7 and 8; Growth Management Goal 13 and Policies 8 and 9; Growth Management-Growth Areas Policy 6; Open Space Goal 1 and Policy 1; Vegetation and Wildlife Goal 1 and Policy 4; Open Space Goal 1 and Policies 1, 2, and 9; Privately-Owned Utilities Policy 2; Seismic and Geologic Hazards Policy 6; and Flood Protection Policy 9, would continue to be implemented, and would promote high-quality development, require the preservation of historic buildings, require contour grading, require the installation of underground (instead of overhead) power and communication lines, require development in Specific Plan Areas to be designed around a unified architectural theme that integrates open space, and require the preservation of a significant system of interconnected natural habitat areas and maintain the existing natural stream courses (which in turn promotes high-quality visual character and quality).

Because all site-specific development in the City is required to (1) comply with existing and proposed General Plan Update policies specifically designed to provide for high-quality design, (2) implement design standards contained in the City’s (2008) *Community Design Standards* (required during the City’s design review process prior to the issuance of a building permit), (3) continue to preserve significant amounts of open space and native vegetation, particularly along stream corridors, and (4) implement site-specific adopted Specific Plans and Municipal Code requirements related to aesthetics and design—all of which are specifically designed to ensure

the continuation of high-quality design and the preservation of visual character and quality—a conflict with applicable zoning and other regulations governing scenic quality, would not occur under this alternative.

However, the northwest and western portions of the Planning Area are not yet urbanized. The visual character in these portions of the Planning Area would change from existing undeveloped open space and agricultural land to urban development as a result of the site-specific project developments envisioned under the Infill Housing Alternative. Therefore, impacts from degradation of visual character and quality under the Infill Housing Alternative would be **similar to** the proposed General Plan Update, and would still be **significant and unavoidable**.

Reduced Growth Alternative

Under the Reduced Growth Alternative, a lesser amount of new construction would occur as compared to the proposed General Plan Update. Most of the new development would occur in existing urbanized portions of the Planning Area (see Exhibit 6-2). As discussed in Draft EIR Impact 4.14-2 (Section 4.14, “Aesthetics”), development under the Reduced Growth Alternative would be of a similar type and mass and consistent with City design guidelines and standards, and would be similarly oriented around an interconnected system of open space. Furthermore, all projects are required to comply with the City’s Community Design Standards, which address a variety of topics related to design and visual character.

The Reduced Growth Alternative includes all of the same goals and policies as the proposed General Plan Update, including Policies LU3.4, Goal LU7.3, and Policies LU7.2 and 7.7, LU8.7, LU8.11, LU9.5, LU9.6, LU9.9, Goal OS1.2, OS1.3, Policies OS1.4, OS 1.12, OS2.1, OS2.2, OS4.16, and Goal PR1.2, all of which are designed to promote the integration of open space and natural resources, as well as compatibility within and between the natural and the urban environments in the land use planning process. In addition, existing General Plan Community Form Goal 1 and Policies 1 and 2; Community Design Goals 1, 2, and 4 and Policies 1, 3, 4, 5, 6, 7 and 8; Growth Management Goal 13 and Policies 8 and 9; Growth Management-Growth Areas Policy 6; Open Space Goal 1 and Policy 1; Vegetation and Wildlife Goal 1 and Policy 4; Open Space Goal 1 and Policies 1, 2, and 9; Privately-Owned Utilities Policy 2; Seismic and Geologic Hazards Policy 6; and Flood Protection Policy 9, would continue to be implemented, and would promote high-quality development, require the preservation of historic buildings, require contour grading, require the installation of underground (instead of overhead) power and communication lines, require development in specific plan areas to be designed around a unified architectural theme that integrates open space, and require the preservation of a significant system of interconnected natural habitat areas and maintain the existing natural stream courses (which in turn promotes high-quality visual character and quality).

State law requires the City’s Zoning Code to be consistent with the General Plan, and the existing and proposed General Plan Update policies would prevent a conflict with applicable zoning and other regulations governing scenic quality. Furthermore, new residential, mixed-use residential, or employment center projects under the Reduced Growth Alternative that are located within a transit priority area would not result in significant aesthetic impacts (Public Resources Code Section 21099[d][1]). Finally, because the Reduced Growth Alternative would not allow new development in the non-urbanized northern and western portions of the Planning Area, the visual character in these areas would not change. Therefore, the Reduced Growth Alternative would avoid the **significant and unavoidable** impact that would occur under the proposed General Plan Update, and would result in **less-than-significant** impacts from degradation of visual character and quality.

No Project Alternative

The existing General Plan includes the same level of development that would occur under the proposed General Plan Update, and the new development would occur in the same locations as the proposed General Plan Update, including the currently undeveloped northern and western portions of the Planning Area. Therefore, a similar potential for degradation of visual character and quality would occur. Under the No Project Alternative, Proposed updates to Policies LU3.4, Goal LU7.3, and Policies LU7.2 and 7.7, LU8.7, LU8.11, LU9.5, LU9.6, LU9.9, Goal OS1.2, OS1.3, Policies OS1.4, OS 1.12, OS2.1, OS2.2, OS4.16, and Goal PR1.2 would not occur. However, the existing General Plan Community Form Goal 1 and Policies 1 and 2; Community Design Goals 1, 2, and 4 and Policies 1, 3, 4, 5, 6, 7 and 8; Growth Management Goal 13 and Policies 8 and 9; Growth Management-Growth Areas Policy 6; Open Space Goal 1 and Policy 1; Vegetation and Wildlife Goal 1 and Policy 4; Open Space Goal 1 and Policies 1, 2, and 9; Privately-Owned Utilities Policy 2; Seismic and Geologic Hazards Policy 6; and Flood Protection Policy 9, would continue to be implemented, and would promote high-quality development, require the preservation of historic buildings, require contour grading, require the installation of underground (instead of overhead) power and communication lines, require development in Specific Plan Areas to be designed around a unified architectural theme that integrates open space, and require the preservation of a significant system of interconnected natural habitat areas including existing streambeds and watercourses (which in turn promotes high-quality visual character and quality).

State law requires the City's Zoning Code to be consistent with the General Plan, and the existing General Plan policies would prevent a conflict with applicable zoning and other regulations governing scenic quality. However, the northwest and western portions of the Planning Area are not yet urbanized. The visual character in these portions of the Planning Area would change from existing undeveloped open space and agricultural land to urban development as a result of the site-specific project developments under the existing General Plan. Therefore, impacts from degradation of visual character and quality under the No Project Alternative would be **similar to** the proposed General Plan Update, and would still be **significant and unavoidable**.

6.5.14.3 LIGHT AND GLARE (CREATE A NEW SOURCE OF SUBSTANTIAL LIGHT OR GLARE THAT WOULD ADVERSELY AFFECT DAY OR NIGHTTIME VIEWS IN THE AREA)

Infill Housing Alternative

The Infill Housing Alternative would result in additional housing units, as compared to the proposed General Plan Update. The additional infill housing would be located in existing developed areas, as shown in Exhibit 6-1. These areas are already urbanized, and therefore already generate sources of light and glare. However, the Infill Housing Alternative also includes all of the new development in the non-urbanized western and northern portions of the Planning Area that is envisioned under the proposed General Plan. As discussed in Draft EIR Impact 4.14-3 (Section 4.14, "Aesthetics"), most residential buildings produce limited light during the night, generally from low-level outdoor security lighting and light that emanates from unscreened windows. Lighting from nighttime outdoor sporting events and streetlights is of higher candlepower and can result in skyglow and nighttime glare effects. New and redeveloped buildings could also result in increased glare from roofing materials and architectural coatings. The City's (2008) *Community Design Guidelines* include lighting standards for all types of land uses, such as the requirements that pole-mounted lights be no taller than 25 feet, a preference for "pedestrian style" lighting (less than 10 feet tall), and the requirement that lighting sources must have cut off lenses and should be located to avoid light spillage and glare on adjacent properties and in private spaces. However, there are no General Plan goals or policies related to lighting or glare. The proposed General Plan Update includes new

Policy LU7.9 to control artificial lighting to avoid spill-over lighting, and the use of anti-reflective architectural materials and coatings to prevent glare. However, it is not feasible to mitigate the new light and glare impacts completely without prohibiting the use of light in new development. No other feasible mitigation measures are available. Therefore, the impact from creation of new sources of nighttime light and glare under the Infill Housing Alternative would be **slightly greater** than the proposed General Plan Update, and would still be **significant and unavoidable**.

Reduced Growth Alternative

Under the Reduced Growth Alternative, a lesser amount of new construction would occur as compared to the proposed General Plan Update, and thus there would be a reduced potential for new sources of light and glare. Furthermore, the new development would primarily be located in existing urban areas (as shown in Exhibit 6-2), which already generate nighttime light and glare. As discussed in Draft EIR Impact 4.14-3 (Section 4.13, “Aesthetics”), the City’s *Community Design Guidelines* include lighting standards for new and existing development. Because the Reduced Growth Alternative would result in a substantially reduced level of new residential and commercial development (as well as new streets with overhead light standards that would not be installed because development outside of existing areas generally would not occur) as compared to the proposed General Plan Update, the level of new nighttime light and glare as compared to the proposed General Plan Update would be substantially lower. The existing General Plan does not contain goals or policies related to light and glare. The proposed General Plan Update includes new Policy LU7.9, to control artificial lighting to avoid spill-over lighting, and the use of anti-reflective architectural materials and coatings to prevent glare. However, it is not feasible to mitigate the new light and glare impacts completely without prohibiting the use of light in new development. Therefore, the impact from creation of new sources of nighttime light and glare under the Reduced Development Alternative would be **reduced** as compared to the proposed General Plan Update, but would still be **significant and unavoidable**.

No Project Alternative

The existing General Plan includes the same level of development that would occur under the proposed General Plan Update, and therefore a similar potential for generation of new nighttime light and glare would occur. As discussed in Draft EIR Impact 4.14-3 (Section 4.13, “Aesthetics”), lighting standards contained in the City’s (2008) *Community Design Guidelines* would be implemented. However, there are no existing General Plan goals or policies that related to lighting or glare, and under the No Project Alternative, new Policy LU7.9, to control artificial lighting to avoid spill-over lighting, and the use of anti-reflective architectural materials and coatings to prevent glare), would not be implemented. Therefore, impacts from creation of new sources of nighttime light and glare under the No Project Alternative would be **greater** as compared to the proposed General Plan Update, and would still be **significant and unavoidable**.

6.5.15 ENERGY

6.5.15.1 ENERGY CONSUMPTION (*Significant Environmental Impacts Due to the Wasteful, Inefficient, or Unnecessary Consumption of Energy Resources*)

Infill Housing Alternative

The Infill Housing Alternative would result in development of 1,400 additional residential units, as compared to the proposed General Plan Update. This would result in an increased energy demand compared to the General

Plan Update for construction and operation of the additional dwelling units. The extent to which the Infill Housing Alternative would improve energy efficiency related to transportation energy consumption compared to the proposed General Plan Update depends on the demographics and job locations of the households that occupy the additional multi-family dwellings, the extent to which funding is available to improve non-vehicular transportation options for these future households, the future cost of vehicular travel compared to other transportation options, the development of complementary land uses in close proximity to future multi-family development, and other factors. However, there is evidence of preferences for housing locations close to work that enable short commutes; preferences for walkability and access to shopping, services, and transit; demand for a mix of housing types and attached products in suburbs; increasing numbers of small households, creating a market for smaller homes; and the need for greater market diversity.¹⁰ In addition, multi-family units are more energy efficient compared to lower-density, single-family dwelling units – both with respect to the largest statewide energy demand sector, transportation, as well as building energy. As explained above in Section 6.5.3, “Transportation,” the additional development under this alternative would be focused within areas where VMT per service population is typically lower than the citywide average (see Exhibit 6-2 for areas of development and Table 6.3-3 for relative comparison of VMT per service population in Specific Plan Areas throughout the city). Transportation is the largest energy consuming sector in California and focusing development in these areas will help achieve transportation-related energy efficiencies beyond those which would be achieved under the proposed General Plan Update. Furthermore, if the multi-family housing added in infill areas would supplant housing demand at the fringes, this Infill Housing Alternative could further improve energy efficiencies as compared to the proposed General Plan Update.

In addition, the Infill Housing Alternative includes all the same goals and policies as the proposed General Plan Update, many of which, as identified in Section 4.15, “Energy,” promote energy efficiency and reduce peak energy demand in new development and promote increased energy efficiencies in existing development through behavioral changes and physical retrofits of existing structures. Many of these policies would be directly applicable to the additional development under this alternative and generate energy efficiencies specific to this alternative.

Impacts related to extension of energy-related infrastructure are analyzed in the utilities section of this EIR and considered in the environmental topic-specific sections of this EIR (air quality, biological resources, etc.) and there are no additional impacts that have not already been considered in detail.

While the Infill Housing Alternative has the potential to achieve additional transportation and building energy efficiencies compared to the proposed General Plan Update, because there are many important factors about the character and location of future development, and the demographic characteristics of future households and employees within the Planning Area, the overall competitiveness of transit compared to driving throughout the region, the cost of fuel, and other factors, the degree to which this alternative would increase energy efficiency is currently unknown. Overall, the energy consumption associated with implementation of the Infill Housing Alternative would be **similar** to that experienced under the proposed General Plan Update, and this impact would still be **less than significant**.

¹⁰ Sacramento Area Council of Governments (SACOG). 2018 White Paper on Future Housing Product Type Demand and Preference. Available: https://www.sacog.org/sites/main/files/file-attachments/14_white_paper_on_future_housing_product_type_demand.pdf

Reduced Growth Alternative

Under the Reduced Growth Alternative, less new development would occur as compared to the proposed General Plan Update, and therefore, there would be reduced energy demands associated with both construction and operational phases. Under this alternative, development would be focused in areas with access to existing infrastructure, which would reduce the need for energy in major infrastructure expansion and extension relative to the proposed General Plan Update. In addition, under this alternative, development would be focused in areas that tend to have lower rates of VMT (see Exhibit 6-2 for areas of development and Table 6.3-3 for relative comparison of VMT per service population in Specific Plan Areas throughout the city). Since transportation is the largest energy consuming sector, placing more development in lower-VMT areas would substantially reduce energy demand and improve energy efficiency compared to the proposed General Plan Update.

In addition, the Reduced Growth Alternative includes all the same goals and policies as the proposed General Plan Update, many of which, as identified in Section 4.15, “Energy,” promote energy efficiency and reduce peak energy demand in new development and promote increased energy efficiencies in existing development through behavioral changes and physical retrofits of existing structures. Many of these policies would be directly applicable to the additional development under this alternative.

Impacts related to extension of energy-related infrastructure are analyzed in the utilities section of this EIR and considered in the environmental topic-specific sections of this EIR (air quality, biological resources, etc.) and there are no additional impacts that have not already been considered in detail. Overall, the energy consumption associated with implementation of the Reduced Growth Alternative would be **reduced** under this alternative compared to the proposed General Plan Update, and this impact would still be **less than significant**.

No Project Alternative

Under the No Project Alternative, a similar amount of development would occur as compared to the proposed General Plan Update, and therefore a similar level of construction-related and operational energy demands would occur. However, under the No Project Alternative, the goal and policy revisions and additional under the proposed General Plan Update would not be implemented. Therefore, under the No Project Alternative, no updates to the General Plan to provide more detailed and updated implementation measures that can reduce potential impacts, and no updates to comply with State law changes, would occur. Many of the detailed implementation measures added and policies to comply with State law changes would reduce vehicular transportation demand and associated energy demand.

While the existing General Plan contains policies such as the Plan Community Form – Downtown Neighborhoods Policy 2, Community Form - Relationship to Transit, Pedestrian, Air Quality (RTPAQ) Policy 1, Bikeways/Trails Goal 1 and Policy 2, and Air Quality General Policy 4 that are designed reduce transportation-related energy demand, the proposed General Plan Update Goals AQ1.3–1.8 and Policies AQ1.1, 1.3, 1.6, 1.7, 1.9–1.19 and 1.22; Goal CIRC3 and Policies 3.1, and 3.6; Goal CIRC4 and Policies CIRC4.1–4.6; Goal CIRC5.1 and Policy CIRC5.1; Goal CIRC6.1 and Policies CIRC6.1 and 6.2; Policies LU2.1–2.6, 3.4, 7.2, and 8.10; Policy PF4.6; Goals PF9.1 and 9.2 and Policies PF9.1, 9.4, 9.5, 9.8, and 9.9, listed in Section 4.15, “Energy,” include revisions to the existing General Plan that would further promote energy efficiency in land use and transportation planning and building design. Without the goal and policy revisions of the proposed General Plan Update, the No Project Alternative may not achieve the same level of in energy efficiency that would be achieved by future development under the proposed General Plan.

Impacts related to extension of energy-related infrastructure are analyzed in the utilities section of this EIR and considered in the environmental topic-specific sections of this EIR (air quality, biological resources, etc.) and there are no additional impacts that have not already been considered in detail. Overall, the energy consumption associated with implementation of the No Project Alternative would be **greater than** the proposed General Plan Update, but would still be **less than significant**.

6.5.15.2 CONFLICT WITH ENERGY PLANS (*Conflict with or Obstruct a State or Local Plan for Renewable Energy or Energy Efficiency*)

Infill Housing Alternative

The Infill Housing Alternative would result in development of 1,400 additional residential units, as compared to the proposed General Plan Update. This would result in an increased energy demand compared to the General Plan Update for construction and operation of the additional dwelling units.

The Infill Housing Alternative would incorporate the same revisions included in the proposed General Plan Update, including Policies LU7.2, PF4.4, PF4.6, PF9.1, PF9.4, PF9.5, PF9.8, PF9.9, AQ1.15, AQ1.17, AQ1.18, and AQ1.19, which would improve energy efficiency within the Planning Area by encouraging energy efficient design standards and transportation systems, promoting energy efficiency retrofits of existing structures, promoting energy efficiency and conservation programs associated with utilities, and requiring compliance with federal, state, and local energy-related regulations.

In addition, this alternative would incorporate state plans and policies for renewable energy and energy efficiency include the California Energy Code and California Green Building Standards Code (CalGreen). Development under the proposed General Plan Update would be required to comply with these policies per the California Code of Regulations. Locally, project designs would be subject to review with consideration for the City of Roseville's Community Design Guidelines.

While the Infill Housing Alternative has the potential to achieve additional transportation and building energy efficiencies compared to the proposed General Plan Update, this alternative would be required to comply with all state-mandated energy efficiency requirements, and would not conflict with any state or local renewable energy or energy efficiency plan. Overall, the impact would be **similar to** the proposed General Plan Update, and this impact would still be **less than significant**.

Reduced Growth Alternative

Under the Reduced Growth Alternative, less new development would occur as compared to the proposed General Plan Update, and therefore, there would be reduced energy demands associated with both construction and operational phases. In addition, the Reduced Growth Alternative includes all the same goals and policies as the proposed General Plan Update, many of which, as identified in Section 4.15, "Energy," would encourage energy efficient design standards and transportation systems, promote energy efficiency retrofits of existing structures, and promote energy efficiency and conservation programs associated with utilities

As with the Infill Housing Alternative, this alternative would incorporate state plans and policies for renewable energy and energy efficiency include the California Energy Code and California Green Building Standards Code (CalGreen). Development under the proposed General Plan Update would be required to comply with these

policies per the California Code of Regulations. Locally, project designs would be subject to review with consideration for the City of Roseville's Community Design Guidelines.

While the Reduced Growth Alternative would reduce energy demand compared to the proposed General Plan Update, this is not necessarily relevant to conflicts with renewable energy or energy efficiency plans. This alternative would be required to comply with all state-mandated energy efficiency requirements, and would not conflict with any state or local renewable energy or energy efficiency plan. Overall, the impact would be **similar** to the proposed General Plan Update, and this impact would still be **less than significant**.

No Project Alternative

Under the No Project Alternative, a similar amount of development would occur as compared to the proposed General Plan Update, and therefore a similar level of construction-related and operational energy demands would occur. However, under the No Project Alternative, the goal and policy revisions and additional under the proposed General Plan Update would not be implemented. For example, the No Project Alternative would not include revisions that promote energy efficiency, such as proposed General Plan Update Goals AQ1.3–1.8 and Policies AQ1.1, 1.3, 1.6, 1.7, 1.9–1.19 and 1.22; Goal CIRC3 and Policies 3.1, and 3.6; Goal CIRC4 and Policies CIRC4.1–4.6; Goal CIRC5.1 and Policy CIRC5.1; Goal CIRC6.1 and Policies CIRC6.1 and 6.2; Policies LU2.1–2.6, 3.4, 7.2, and 8.10; Policy PF4.6; Goals PF9.1 and 9.2 and Policies PF9.1, 9.4, 9.5, 9.8, and 9.9.

However, design and construction of new and retrofit buildings would be required to comply with the most recently adopted California Energy Code and California Green Building Standards Code (CalGreen), which are expected to become increasingly more stringent over time to further the State's renewable energy and GHG reduction goals. In addition, design of new and retrofit construction within the Planning Area would be reviewed by the City of Roseville for consistency with the City's Community Design Guidelines, which includes requirements for consideration of energy efficiency measures and incorporation of renewable energy production features in the design of projects. While the No Project Alternative may not achieve the same energy efficiency as the proposed General Plan Update, this is not necessarily relevant to conflicts with renewable energy or energy efficiency plans. This alternative would be required to comply with all state-mandated energy efficiency requirements, and would not conflict with any state or local renewable energy or energy efficiency plan. Overall, the impact would be **similar** to the proposed General Plan Update, and this impact would still be **less than significant**.

6.6 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Table 6-1, shown at the introduction to the alternatives analysis in Section 6.5 above, provides a summary comparison of the environmental impacts of the Infill Housing Alternative, the Reduced Growth Alternative, and the No Project Alternative to the environmental impacts of the proposed General Plan Update based on the detailed analysis presented throughout this Chapter. As shown, the Infill Housing Alternative has one reduced impact compared to the proposed General Plan Update and 24 increased impacts, the Reduced Growth Alternative has 40 reduced impacts and one increased impact, and the No Project Alternative has no reduced impacts and 10 increased impacts.

CEQA requires that, among the alternatives, an “environmentally superior” alternative be identified and that the reasons for such selection be disclosed. The environmentally superior alternative is the alternative that would

generate the fewest or least severe adverse impacts. Therefore, the Reduced Growth Alternative is environmentally superior.

This page intentionally left blank

7 REFERENCES

7.1 INTRODUCTION

None.

7.2 PROJECT DESCRIPTION

City of Roseville. 2011. Creekview Specific Plan Final EIR. Dated April 2011. Available online at:
http://www.roseville.ca.us/gov/development_services/planning.

City of Roseville. 2016. Amoruso Ranch Specific Plan Environmental Impact Report. Prepared by the City of Roseville with assistance from Analytical Environmental Services.

MCG. 2016. Solid Waste Generation and Impact Analysis on Western Placer Waste Management Facilities. April 2016.

RMC Water and Environment (RMC). 2009. South Placer Regional Wastewater and Recycled Water Systems Evaluation. Updated Final Report, Dated December 2009. Available online at:
http://www.water.ca.gov/urbanwatermanagement/2010uwmps/Roseville,%20City%20of/Appendix%20F%20spwa_systems_evaluation_update_121409_reduce%20%282%29.pdf. Accessed February 2015.

RMC. *See* RMC Water and Environment.

West Yost Associates. 2016 (May). City of Roseville 2015 Urban Water Management Plan. Available:
https://roseville.ca.us/government/departments/environmental_utilities/at_your_service/water_supply. Accessed November 10, 2019.

7.3 EXECUTIVE SUMMARY

None.

7.4 LAND USE PLANNING AND AGRICULTURAL RESOURCES

California Department of Conservation. 2016. California Important Farmland Finder. Available:
<https://maps.conservation.ca.gov/DLRP/CIFF/>.

City of Roseville. 2004 (January). *Final Environmental Impact Report for the West Roseville Specific Plan and Sphere of Influence Amendment – Volume 1, Chapters 1, 2, 3, and 4*. Roseville, CA. Prepared by EIP Associates. Available: http://www.roseville.ca.us/gov/development_services/planning.

City of Roseville. 2010 (May). *Sierra Vista Specific Plan Final Environmental Impact Report—Section 4.7, Geology, Soils, and Seismicity*. Available:
https://www.roseville.ca.us/government/departments/development_services/planning/specific_plans_planning_areas/sierra_vista_specific_plan. Accessed October 21, 2019.

City of Roseville. 2011. Creekview Specific Plan Final EIR. Dated April 2011. Available online at: http://www.roseville.ca.us/gov/development_services/planning.

City of Roseville. 2016. Amoruso Ranch Specific Plan Environmental Impact Report. Prepared by the City of Roseville with assistance from Analytical Environmental Services.

City of Roseville. 2020. City of Roseville Interactive Map Viewer. Parcel Viewer. Available: <https://data-roseville.opendata.arcgis.com/pages/applications>.

DOC. *See* California Department of Conservation.

Placer County. 2020. Land Information Search. Available: http://maps.placer.ca.gov/Html5viewer/Index.html?configBase=http://arcgis/Geocortex/Essentials/REST/sites/LIS_Public/viewers/LIS_Base-Public/virtualdirectory/Resources/Config/Default.

7.5 POPULATION AND HOUSING

California Department of Finance. 2012 (November) (May). E-8 Historical Population and Housing Estimates for Cities, Counties, and the State, 2000-2010. Available: <http://dof.ca.gov/Forecasting/Demographics/Estimates/E-8/2000-10/>. Accessed February 3, 2020.

California Department of Finance. 2019 (May). E-5 Population and Housing Estimates for Cities, Counties, and the State, January 2011-2019, with 2010 Benchmark. Available: <http://www.dof.ca.gov/Forecasting/Demographics/Estimates/e-5/>. Accessed December 3, 2019.

California Department of Housing and Community Development. 2019. Housing Element Compliance Report. Available: <https://www.hcd.ca.gov/community-development/housing-element/docs/status.pdf>. Accessed: February 7, 2020.

California Employment Development Department. 2020a. Major Employers in Placer County. Available: <https://www.labormarketinfo.edd.ca.gov/majorer/countymajorer.asp?CountyCode=000061>. Accessed October 22, 2019.

California Employment Development Department. 2020b (April). Monthly Labor Force Data for Cities and Census Designated Places. Annual Average 2018. Available: <https://www.labormarketinfo.edd.ca.gov/data/labor-force-and-unemployment-for-cities-and-census-areas.html>. Accessed October 23, 2019.

California Employment Development Department. 2020c (January 24). Labor Force and Unemployment Rate for Cities and Census Designated Places, December 2019. Available: <https://www.labormarketinfo.edd.ca.gov/data/labor-force-and-unemployment-for-cities-and-census-areas.html>. Accessed: February 14, 2020.

City of Roseville. 2015. Roseville General Plan 2013-2021 Housing Element. Available: https://www.roseville.ca.us/UserFiles/Servers/Server_7964838/File/Government/Departments/Development%20Services/Planning/General%20Plan/10_Housing_Element.pdf. Accessed October 22, 2019.

- City of Roseville. 2016. *Roseville General Plan. Land Use Element*. Available: https://www.roseville.ca.us/government/departments/development_services/planning/general_plan_development_guidelines. Accessed October 22, 2019.
- City of Roseville. 2017 (May). Office of Economic Development 2017-2022 Economic Development Strategy. Available: <https://www.roseville.ca.us/cms/One.aspx?portalId=7964922&pageId=8717416>. Accessed December 3, 2019.
- City of Roseville. 2019a (December 31). Residential Development Activity. Available: https://www.roseville.ca.us/UserFiles/Servers/Server_7964838/File/Government/Departments/Development%20Services/DevelopmentActivity/Residential_Development_Activity.pdf. Accessed February 3, 2020.
- City of Roseville. 2019b (June). Annual Budget Fiscal Year 2019-20. Available: <https://www.roseville.ca.us/cms/One.aspx?portalId=7964922&pageId=8916788>. Accessed October 23, 2019.
- DOF. See California Department of Finance.
- EDD. See California Employment Development Department.
- SACOG. See Sacramento Area Council of Governments.
- Sacramento Area Council of Governments. 2019. Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS). Available: <https://www.sacog.org/2020-metropolitan-transportation-plansustainable-communities-strategy-update>.
- Sacramento Area Council of Governments. 2020 (September). SACOG Regional Housing Needs Plan Cycle 6 (2021-2029). Available: <https://www.sacog.org/regional-housing-needs-allocation-rhna>. Accessed February 10, 2020.
- U.S. Census Bureau. 2016. 2016 American Community Survey 1-Year Estimate S0801: Commuting Characteristics. Available: <https://data.census.gov/>. Accessed February 13, 2020.
- U.S. Census Bureau. 2018. 2014-2018 American Community Survey 5-Year Estimates. DP03: Selected Economic Characteristics. Available: <https://data.census.gov/>. Accessed February 10, 2020.

7.6 TRANSPORTATION

- California Air Resources Board. 2019. 2017 Scoping Plan-Identified VMT Reductions and Relationship to State Climate Goals. Available: <https://ww2.arb.ca.gov/resources/documents/carb-2017-scoping-plan-identified-vmt-reductions-and-relationship-state-climate>. Accessed January 4, 2020.
- California Department of Transportation. 2016 (November 9). Local Development – Intergovernmental Review Program Interim Guidance. Available: <https://dot.ca.gov/programs/transportation-planning/office-of-smart-mobility-climate-change/sb-743>. Accessed September 9, 2019.

- . 2014. Public Road Data. Available: <https://dot.ca.gov/programs/research-innovation-system-information/highway-performance-monitoring-system>. Accessed February 5, 2020.
- . 2018. *2018 Standard Plans and Standard Specifications*. Available: <https://dot.ca.gov/programs/design/ccs-standard-plans-and-standard-specifications>. Accessed March 17, 2020.
- California Governor's Office of Planning and Research. 2018. Technical Advisory on Evaluating Transportation Impacts in CEQA. Available: http://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf. Accessed January 31, 2020.
- City of Roseville. 2008. Bicycle Master Plan. Available: https://www.roseville.ca.us/UserFiles/Servers/Server_7964838/File/Government/Departments/Public%20Works/Biking%20&%20Walking/Planning/2008%20Bicycle%20Master%20Plan2.pdf. Accessed January 4, 2020.
- . 2009. *Americans with Disabilities Act ADA Transition Plan for Public Rights-of-Way*. Available: https://www.roseville.ca.us/government/departments/public_works/ada_accessibility. Accessed March 17, 2020.
- . 2011. Pedestrian Master Plan. https://cityofroseville.hosted.civiclive.com/UserFiles/Servers/Server_7964838/File/Government/Departments/Public%20Works/Biking%20&%20Walking/Planning/2-2011_Pedestrian%20Master%20Plan_WEB.pdf. Accessed January 4, 2020.
- . 2016a. Amoruso Ranch Specific Plan. Available: <https://www.roseville.ca.us/cms/One.aspx?portalId=7964922&pageId=8774579>. Accessed January 27th, 2020.
- . 2016b. Amoruso Ranch Specific Plan Final Environmental Impact Report – Section 4.3 Transportation and Circulation. Available: https://www.roseville.ca.us/UserFiles/Servers/Server_7964838/File/Government/Departments/Development%20Services/Planning/Specific%20Plans%20&%20Planning%20Areas/Amoruso%20Ranch%20Final%20EIR%20Vol%201/04.3%20Transportation%20and%20Circulation.pdf. Accessed January 27th, 2020.
- . 2016c. General Plan. Available: https://www.roseville.ca.us/government/departments/development_services/planning/general_plan_development_guidelines. Accessed January 27th, 2020.
- . 2019. Roseville Transit Local Bus Services Guide. Available: https://www.roseville.ca.us/UserFiles/Servers/Server_7964838/File/Government/Departments/Public%20Works/Roseville%20Transit/Services%20&%20Schedules/Local/-2019-Nov-18-Local-Bus-Service-Guide-WEB.pdf. Accessed January 30, 2020.
- . 2019. Roseville Transit Commuter Bus Services Guide. Available: https://www.roseville.ca.us/UserFiles/Servers/Server_7964838/File/Government/Departments/Public%20

[Works/Roseville%20Transit/Services%20&%20Schedules/Commuter/2019-Nov-18-Commuter%20Guide-Web.pdf](#). Accessed January 30, 2020.

———. 2020. *Design and Construction Standards*. Available: https://www.roseville.ca.us/government/departments/development_services/engineering_land_development/construction_management_inspection/design_construction_standards. Accessed March 17, 2020.

County of Placer. 2008. Placer Commuter Express Schedule. 2008. Available: <https://www.placer.ca.gov/DocumentCenter/View/2075/Placer-commuter-express-schedule-PDF>. Accessed February 4, 2020.

Placer County Transportation Planning Agency. 2007. Transit Master Plan for South Placer County. Available: http://www.pctpa.net/library/LRTP_Final%20Report_June07.pdf. Accessed January 31, 2020.

———. 2017 (January 27). Results of Measure M. Available: <http://pctpa.net/blog/results-of-measure-m/>. Accessed February 5, 2020.

———. 2018. Roseville Short Range Transit Plan. Available: <http://pctpa.net/transit/2018-roseville-transit-short-range-transit-plan/>. Accessed January 31, 2020.

———. 2019. 2040 Regional Transportation Plan. Available: <http://pctpa.net/regional-planning/2040-regional-transportation-plan-documents/>. Accessed February 5, 2020.

———. Undated. Keep Placer Moving. Available: <https://www.keepplacermoving.com/transportation-investment-plan/>. Accessed February 5, 2020.

Sacramento Council of Governments. 2019a. 2020 Metropolitan Transportation Plan/Sustainable Communities Strategy. Available: https://www.sacog.org/sites/main/files/file-attachments/2020_mtp-scs.pdf?1580330993. Accessed January 31, 2020.

———. 2019b. 2020 Metropolitan Transportation Plan/Sustainable Communities Strategy Draft Environmental Impact Report. Available: https://www.sacog.org/sites/main/files/file-attachments/ch_16_transportation_pdeir.pdf?1569040290. Accessed January 31, 2020.

———. 2020. 2016 Total Residential VMT. Available: <http://www.arcgis.com/apps/webappviewer/index.html?id=43bc67ddaca444608b315dbb75381d08>. Accessed March 5, 2020.

Transportation Research Board. 2016. Highway Capacity Manual 6th Edition.

US Census Bureau. 2018. 2013-2017 American Community Survey Report S0802 Means of Transportation to Work by Selected Characteristics. Available: <https://factfinder.census.gov/faces/nav/jsf/pages/index.xhtml>. Accessed January 4, 2020.

7.7 AIR QUALITY

ARB. *See* California Air Resources Board.

- California Air Resources Board. 2004. Roseville Rail Yard Study. Available at:
<https://ww3.arb.ca.gov/diesel/documents/rrstudy/rrstudy101404.pdf>. Accessed February 2020.
- California Air Resources Board. 2005 (April). Air Quality and Land Use Handbook: A Community Health Perspective.
- California Air Resources Board. 2009. The California Almanac of Emissions and Air Quality: 2009 Edition.
- California Air Resources Board. 2011. Air Quality and Emissions: Transport. Available at
<https://ww3.arb.ca.gov/aqd/transport/transport.htm>. Accessed February 2020.
- California Air Resources Board. 2013. The California Almanac of Emissions and Air Quality: 2013 Edition.
- California Air Resources Board. 2017. 2016 State Strategy for the State Implementation Plan for Federal Ozone and PM2.5 Standards. Available: <https://www.arb.ca.gov/planning/sip/2016sip/2016sip.htm>. Accessed February 2020.
- California Air Resources Board. 2018. Ambient Air Quality Standards. Available:
<http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>. Accessed February 2020.
- California Air Resources Board. 2019. Air Quality Pollutants and Standards. Available:
<http://www.airquality.org/Air-Quality-Health/Air-Quality-Pollutants-and-Standards>. Accessed February 2020.
- California Air Resources Board. 2020. Overview: Diesel Exhaust and Health. Available at:
<https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health>. Accessed March 2020.
- City of Roseville. 2016. Amoruso Ranch Specific Plan Environmental Impact Report. Prepared by the City of Roseville with assistance from Analytical Environmental Services.
- EPA. *See* U.S. Environmental Protection Agency.
- Placer County Air Pollution Control District. 2016. Placer County Air Pollution Control District California Environmental Quality Act Thresholds of Significance Justification Report. Auburn, CA.
- Placer County Air Pollution Control District. 2017a. Placer County Air Pollution Control District Board Resolution #17-08. Auburn, CA.
- Placer County Air Pollution Control District. 2017b. Placer County Air Pollution Control District California Environmental Quality Act (CEQA) Handbook. Available at <https://www.placer.ca.gov/1801/CEQA-Handbook>. Accessed February 2020.
- Placer County Air Pollution Control District. 2019. Board of Directors Handbook.
<https://www.placerair.org/DocumentCenter/View/34619/2019-Directors-Handbook?bidId=>.
- PCAPCD. *See* Placer County Air Pollution Control District.

Placer County. 2019. Sunset Area Plan – Placer Ranch Specific Plan Environmental Impact Report. Available at: <https://placerair.org/2702/Sunset-Area-Plan---Placer-Ranch-Specific>. Accessed March 2020.

SACOG. *See* Sacramento Area Council of Governments.

Sacramento Area Council of Governments (SACOG). 2019. 2020 Metropolitan Transportation Plan/Sustainable Communities Strategy. Available: <https://www.sacog.org/2020-metropolitan-transportation-plansustainable-communities-strategy-update>. Accessed January 2020.

Sacramento Metropolitan Air Quality Management District. 2016. <http://www.airquality.org/LandUseTransportation/Documents/Ch7Odors%20FINAL6-2016.pdf>.

Sacramento Metropolitan Air Quality Management District. 2017. Guide to Air Quality Assessment in Sacramento County. Available: <http://www.airquality.org/businesses/ceqa-land-use-planning/ceqa-guidance-tools>. Accessed January 2020.

SMAQMD. *See* Sacramento Metropolitan Air Quality Management District.

U.S. Environmental Protection Agency. 2017a. Ozone Pollution and Your Patients' Health. Patient Exposure and the Air Quality Index. Available at <https://www.epa.gov/ozone-pollution-and-your-patients-health/patient-exposure-and-air-quality-index>. Accessed February 2020.

U.S. Environmental Protection Agency. 2017b. Basic Information about Carbon Monoxide (CO) Outdoor Air Pollution. Available: <https://www.epa.gov/co-pollution/basic-information-about-carbon-monoxide-co-outdoor-air-pollution>. Accessed February 2020.

U.S. Environmental Protection Agency. 2017c. Basic Information about NO₂. Available: <https://www.epa.gov/no2-pollution/basic-information-about-no2>. Accessed February 2020.

U.S. Environmental Protection Agency. 2017d. Sulfur Dioxide Basics. Available: <https://www.epa.gov/so2-pollution/sulfur-dioxide-basics>. Accessed February 2020.

U.S. Environmental Protection Agency. 2018a. Air Emissions Inventories: National Summary of Carbon Monoxide Emissions. Available: https://www3.epa.gov/cgi-bin/broker?polchoice=CO& debug=0& service=data& program=dataprog.national_1.sas. Accessed February 2020.

U.S. Environmental Protection Agency. 2018b. Carbon Monoxide Trends. Available: <https://www.epa.gov/air-trends/carbon-monoxide-trends#coreg>. Accessed February 2020.

U.S. Geological Survey. 2011. Reported Historic Asbestos Mines, Historic Asbestos Prospects, and Other Natural Occurrences of Asbestos in California. Available: ftp://ftp.consrv.ca.gov/pub/dmg/pubs/ms/59/MS59_Plate.pdf. Accessed March 2020.

USGS. *See* U.S. Geological Survey.

WHO. *See* World Health Organization.

World Health Organization. 2016. Ambient (outdoor) air quality and health. Available: <http://www.who.int/mediacentre/factsheets/fs313/en/>. Accessed February 2020.

Western Regional Climate Center. 2019a. Prevailing Wind Direction. Available at https://wrcc.dri.edu/Climate/comp_table_show.php?type=wind_dir_avg. Accessed February 2020.

Western Regional Climate Center. 2019b. Average Wind Speeds. Available at https://wrcc.dri.edu/Climate/comp_table_show.php?type=wind_speed_avg. Accessed February 2020.

WRCC. *See* Western Regional Climate Center.

Zhu, Y., W. C. Hinds, S. Kim, and S. Shen. 2002. Study of Ultrafine Particles Near a Major Highway with Heavy-duty Diesel Traffic. In *Atmospheric Environment* 36:4323–4335.

7.8 GREENHOUSE GAS EMISSIONS

California Air Resources Board. 2020. California Greenhouse Gas Emission Inventory – 2019 Edition. Available: <https://ww2.arb.ca.gov/ghg-inventory-data>.

ARB. *See* California Air Resources Board.

City of Roseville. 2011a. Creekview Specific Plan Final EIR. Dated April 2011. Available online at: http://www.roseville.ca.us/gov/development_services/planning.

City of Roseville. 2016. Amoruso Ranch Specific Plan Environmental Impact Report. Prepared by the City of Roseville with assistance from Analytical Environmental Services.

EPA. *See* U.S. Environmental Protection Agency.

Intergovernmental Panel on Climate Change (IPCC). 2015. Climate Change 2014: The Physical Science Basis. Available: <https://www.ipcc.ch/report/ar5/syr/>.

Intergovernmental Panel on Climate Change (IPCC). 2018: Summary for Policymakers. In: Global Warming of 1.5°C. An IPCC Special Report on the impacts of global warming of 1.5°C above pre-industrial levels and related global greenhouse gas emission pathways, in the context of strengthening the global response to the threat of climate change, sustainable development, and efforts to eradicate poverty [Masson-Delmotte, V., P. Zhai, H.-O. Pörtner, D. Roberts, J. Skea, P.R. Shukla, A. Pirani, W. Moufouma-Okia, C. Péan, R. Pidcock, S. Connors, J.B.R. Matthews, Y. Chen, X. Zhou, M.I. Gomis, E. Lonnoy, T. Maycock, M. Tignor, and T. Waterfield (eds.)]. In Press. Available: <https://www.ipcc.ch/sr15/>.

PCAPCD. *See* Placer County Air Pollution Control District.

Placer County Air Pollution Control District. 2016. Placer County Air Pollution Control District California Environmental Quality Act Thresholds of Significance Justification Report. Auburn, CA.

Placer County. 2018. Placer County Community-Wide and County-Operations 2015 Greenhouse Gas Emissions Inventories. Produced by Sierra Business Council, supported by Pacific Gas and Electric Company in

collaboration with Placer County. Available at:

<https://www.placer.ca.gov/DocumentCenter/View/8533/Greenhouse-Gas-Emissions-Inventory-PDF?bidId=>.

U.S. Environmental Protection Agency. 2012. EPA and NHTSA Set Standards to Reduce Greenhouse Gases and Improve Fuel Economy for Model Years 2017-2025 Cars and Light Trucks. Available: <http://www3.epa.gov/otaq/climate/documents/420f12051.pdf>.

U.S. Environmental Protection Agency. 2015. Cutting Carbon Pollution, Improving Fuel Efficiency, Saving Money, and Supporting Innovation for Trucks. Available: <http://www3.epa.gov/otaq/climate/documents/420f15900.pdf>.

7.9 NOISE AND VIBRATION

American National Standards Institute. 1983. *Specification for Sound Level Meters, Standards Secretarial, Acoustical Society of America*. ANSI S1.4.1983. New York, NY. Available: <https://law.resource.org/pub/us/cfr/ibr/002/ansi.s1.4.1983.pdf>.

ANSI. *See* American National Standards Institute.

California Department of Transportation. 2013a. *Technical Noise Supplement*. Sacramento, CA. Prepared by IFC Jones & Stokes, Sacramento, CA. Available: https://www.gsweventcenter.com/Draft_SEIR_References/2013_09_Tech_Noise_Supp.pdf.

———. 2013b (September). *Transportation and Construction Vibration Guidance Manual*. Division of Environmental Analysis, Environmental Engineering, Hazardous Waste, Air, Noise, Paleontology Office, Sacramento, CA. Available: <https://www.cityofdavis.org/home/showdocument?id=4521>.

California Housing and Urban Development. 2013. HUD Noise Guidebook, Title 24, Part 51 - ENVIRONMENTAL CRITERIA AND STANDARDS, Subpart B - Noise Abatement and Control, April 1, 2013. Available: <https://www.govinfo.gov/content/pkg/CFR-2013-title24-vol1/pdf/CFR-2013-title24-vol1-part51-subpartB.pdf>.

Caltrans. *See* California Department of Transportation.

City of Roseville. 2014. Municipal Code. Section 9.24.030 (Health and Safety; Noise Regulations; Exemptions); Available: <http://qcode.us/codes/roseville/>.

City of Roseville. 2016. City of Roseville General Plan; IX. Noise Element. Roseville, CA. Available: https://www.roseville.ca.us/UserFiles/Servers/Server_7964838/File/Government/Departments/Development%20Services/Planning/General%20Plan/09_Noise_Element_web.pdf.

EPA. *See* U.S. Environmental Protection Agency.

Federal Highway Administration. 1978 (December). *Highway Traffic Noise Prediction Model*. FHWA-RD-77-108. Washington, DC: Office of Research, Office of Environmental Policy. Available: https://rosap.ntl.bts.gov/view/dot/30259/dot_30259_DS1.pdf.

Federal Highway Administration. 2006 (January). *Roadway Construction Noise Model User's Guide*. FHWA-HEP-05-054. Washington, DC. Available:
https://www.fhwa.dot.gov/Environment/noise/construction_noise/rcnm/rcnm.pdf.

Federal Transit Administration. 2018 (September). *Transit Noise and Vibration Impact Assessment*. FTA Report No. 0123. Washington, DC: Office of Planning and Environment. Available:
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.

FHWA. *See* Federal Highway Administration.

FTA. *See* Federal Transit Administration.

Governor's Office of Planning and Research. 2017. *State of California General Plan Guidelines*. Sacramento, CA. Available: http://opr.ca.gov/docs/OPR_COMPLETE_7.31.17.pdf.

HUD. *See* California Housing and Urban Development.

OPR. *See* Governor's Office of Planning and Research.

United State Housing and Urban Development. 2013 (April 1). *Noise Abatement and Control*. Title 24, Part 51 - Environmental Criteria and Standards, Subpart B.

U.S. Environmental Protection Agency. 1971 (December 31st). *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances*. Available:
<https://nepis.epa.gov/Exe/ZyPDF.cgi/9101NN3L.PDF?Dockey=9101NN3L.PDF>.

7.10 GEOLOGY AND SOILS, MINERALS, AND PALEONTOLOGICAL RESOURCES

California Department of Water Resources. 2019. Groundwater Information Center, Depth to Groundwater Fall 2018. Available: <https://gis.water.ca.gov/app/gicima/>. Accessed October 18, 2019.

California Geological Survey. 2008. Probabilistic Seismic Hazard Analysis Ground Motion Interpolator. Available: <https://www.conservation.ca.gov/cgs/ground-motion-interpolator-for-embedding.htm>. Accessed October 21, 2019.

California Geological Survey. 2017. CGS Seismic Hazards Program: Alquist-Priolo Fault Hazard Zones. Available: <https://www.arcgis.com/home/item.html?id=ee92a5f9f4ee4ec5aa731d3245ed9f53>. Accessed October 21, 2019.

CGS. *See* California Geological Survey.

City of Roseville. 2004 (February). *Stormwater Management Program*. Prepared by: Kennedy/Jenks Consultants. Available:
https://www.waterboards.ca.gov/water_issues/programs/stormwater/swmp/roseville_swmp.pdf. Accessed October 21, 2019.

- City of Roseville. 2010 (May). *Sierra Vista Specific Plan Final Environmental Impact Report—Section 4.7, Geology, Soils, and Seismicity*. Available:
https://www.roseville.ca.us/government/departments/development_services/planning/specific_plans_planning_areas/sierra_vista_specific_plan. Accessed October 21, 2019.
- City of Roseville. 2011a. *Stormwater Quality BMP Guidance Manual for Construction*. Available:
https://www.roseville.ca.us/UserFiles/Servers/Server_7964838/Image/Government/Departments/Development%20Services/Engineering%20Land%20Development/Stormwater%20Design%20Inspection/BMP_Guidance.pdf. Accessed October 28, 2019.
- City of Roseville. 2011b. *Open Space Preserve Overarching Management Plan*. Prepared by: ECORP Consulting, Inc. Available:
https://www.roseville.ca.us/government/departments/development_services/planning/citywide_planning_documents. Accessed October 24, 2019.
- City of Roseville. 2016. *Roseville 2035 General Plan*. Available:
https://www.roseville.ca.us/government/departments/development_services/planning/general_plan_development_guidelines. Accessed October 28, 2019.
- City of Roseville. 2019. *Design and Construction Standards*. Available:
https://www.roseville.ca.us/government/departments/development_services/engineering_land_development/construction_management_inspection/design_construction_standards. Accessed October 24, 2019.
- Dundas, R.G., R.B. Smith, and K.L. Verosub. 1996. The Fairmead Landfill Locality (Pleistocene, Irvingtonian), Madera County, California: Preliminary Report and Significance. *PaleoBios* Vol. 17, Nos. 2-4:50-58. University of California Museum of Paleontology. Berkeley, CA.
- DWR. See California Department of Water Resources.
- Gutierrez, C.I. 2011. *Preliminary Geologic Map of the Sacramento 30' x 60' Quadrangle, California*. California Geological Survey. Sacramento, CA.
- Hansen, P. 2008. *Caltrans Paleontology*. GeoSym'08, Symposium for Geologists in State Service. Presentations Abstracts. Sacramento, CA.
- Hay, O. P. 1927. *The Pleistocene of the Western Region of North America and its Vertebrated Animals*. Carnegie Institute-Washington, Publication 322B.
- Helley, E.J. and D.S. Harwood. 1985. *Geologic Map of the Late Cenozoic Deposits of the Sacramento Valley and Northern Sierran Foothills, California*. U.S. Geological Survey. Map MF-1790. Reston, VA.
- Hilton, R. P., D. C. Dailey, and H. G. McDonald. 2000 (April 15). A Late Pleistocene Biota from the Arco Arena Site, Sacramento, California. *PaleoBios* Abstracts 20(1).
- Jefferson, G. T. 1991a. *Technical Report No. 5: A Catalogue of Late Quaternary Vertebrates from California—Part One, Nonmarine Lower Vertebrate and Avian Taxa*. Natural History Museum of Los Angeles County, CA.

- Jefferson, G. T. 1991b. *Technical Report No. 7: A Catalogue of Late Quaternary Vertebrates from California—Part Two: Mammals*. Natural History Museum of Los Angeles County, CA.
- Jennings, C.W. and G.J. Saucedo. 2000. Digital Database of Faults from the Fault Activity Map of California and Adjacent Areas. Available: http://earthjay.com/cascadia/GIS/faults/FAM_README.PDF. Accessed October 1, 2019.
- Jennings, C.W. and W.A. Bryant. 2010. 2010 Fault Activity Map of California. Available: <http://maps.conservation.ca.gov/cgs/fam/>. Accessed October 18, 2019.
- Kolber, M. 2004. Mammoth Coup: Discovery of Huge Fossil Near Elk Grove Is a Big Deal for Northern California. *Sacramento Bee*, July 27, 2004.
- Loyd, R. 1995. Mineral Land Classification of Placer County, California. Open-File Report 95-10. California Division of Mines and Geology. Sacramento, CA.
- Marchand, D. E., and A. Allwardt. 1981. *Late Cenozoic Stratigraphic Units, Northeastern San Joaquin Valley, California*. U.S. Geological Survey Bulletin 1470. Washington, DC.
- Paleontology Portal. Undated. *Fossil Plants of the Ione Basin, California*. Available: <http://inyo.coffeecup.com/site/ione/ioneproject.html>. Accessed October 21, 2019.
- Piper, A. M., H. S. Gale, and H. E. Thomas. 1939. *Geology and Ground-Water Hydrology of the Mokelumne Area, California*. U.S. Geological Survey Water-Supply Paper 780. Washington, DC.
- Sierra College Natural History Museum. 2011. *Fossils of the Sierra Nevada*. Sierra Nevada Virtual Museum.
- Society of Vertebrate Paleontology. 2010. Standard Procedures for the Assessment and Mitigation of Adverse Impacts to Paleontological Resources. Society of Vertebrate Paleontology Impact Mitigation Guidelines Revision Committee. Available: http://vertpaleo.org/Membership/Member-Ethics/SVP_Impact_Mitigation_Guidelines.aspx. Accessed October 18, 2019.
- SVP. See Society of Vertebrate Paleontology.
- U.S. Geological Survey. 2001. Volcano Hazards of the Lassen Volcanic National Park Area, California. Fact Sheet 022-00. Available: <http://pubs.usgs.gov/fs/2000/fs022-00/>. Last updated May 24, 2005. Accessed October 18, 2019.
- U.S. Geological Survey. 2016. Volcano Hazards Program—Clear Lake Volcanic Field. Available: http://volcanoes.usgs.gov/volcanoes/clear_lake/geo_hist_summary.html. Last updated February 2, 2016. Accessed October 18, 2019.
- NRCS. See U.S. Natural Resources Conservation Service.
- U.S. Natural Resources Conservation Service (NRCS). 2019 (September). Web Soil Survey. Available: <http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>. Accessed October 21, 2019.

UCMP. *See* University of California, Berkeley Museum of Paleontology.

University of California Museum of Paleontology. 2019. Paleontological Collections Database. Available: <https://ucmpdb.berkeley.edu/about.shtml>. Accessed October 21, 2019.

USGS. *See* U.S. Geological Survey.

Wood, H.O. and F. Neumann. 1931. Modified Mercalli Intensity Scale of 1931. *Seismological Society of America Bulletin*, 21, 4, pp. 277–283.

7.11 BIOLOGICAL RESOURCES

CalHerps. *See* California Herps.

California Department of Fish and Wildlife. 2019a. Comment letter on the Notice of Preparation of a Draft Environmental Impact Report City of Roseville General Plan Update State Clearinghouse No. 2019080418. 24 September 2019.

California Department of Fish and Wildlife. 2019b. California Natural Diversity Database. Rarefind 5, Commercial Version, dated September 29, 2019. CDFW Biogeographic Data Branch. Available at: <https://www.wildlife.ca.gov/Data/CNDDB/Maps-and-Data>. Accessed 01 October 2019.

California Department of Fish and Wildlife. 2019c. California Wildlife Habitat Relationships System – Life History Account and Range Maps. Available at: <https://www.wildlife.ca.gov/Data/CWHR/Life-History-and-Range>. Accessed 29-30 October 2019.

California Department of Fish and Wildlife. 2019d. Chinook Salmon (*Oncorhynchus tshawytscha*). Available at: <https://www.wildlife.ca.gov/Conservation/Fishes/Chinook-Salmon>. Accessed 29 October 2019.

California Herps. 2019a. Western Spadefoot (*Spea hammondi*). Available at: <http://www.californiaherps.com/frogs/pages/s.hammondi.html>. Accessed 29 October 2019.

California Herps. 2019b. Western Pond Turtle (*Actinemys marmorata*). Available at: <http://www.californiaherps.com/turtles/pages/a.marmorata.html>. Accessed 29 October 2019.

California Herps. 2019c. Giant garter snake (*Thamnophis gigas*). Available at: <http://www.californiaherps.com/snakes/pages/t.gigas.html>. Accessed 29 October 2019.

California Native Plant Society. 2019a. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). CNPS Rare Plant Program. Available at: <http://www.rareplants.cnps.org>. Accessed 01 October 2019.

California Native Plant Society. 2019b. A Manual of California Vegetation (online edition). Available at: <http://www.cnps.org/cnps/vegetation/>; searched on 10 October 2019.

CDFW. *See* California Department of Fish and Wildlife.

- City of Roseville. 2004 (January). *Final Environmental Impact Report for the West Roseville Specific Plan and Sphere of Influence Amendment – Volume 1, Chapters 1, 2, 3, and 4*. Roseville, CA. Prepared by EIP Associates.
- City of Roseville. 2005 (May). *Roseville Creek and Riparian Management and Restoration Plan*. Prepared by Foothill Associates, Rocklin, CA.
- City of Roseville. 2010 (May). *Sierra Vista Specific Plan Environmental Impact Report – Volume 2, Chapter 4*. Roseville, CA.
- City of Roseville. 2011a (September). *Creekview Specific Plan Environmental Impact Report – Volume 2, Chapter 4*. Roseville, CA.
- City of Roseville. 2011b (August). *Open Space Preserve Overarching Management Plan*. Roseville, CA. Prepared by ECORP Consulting, Inc., Rocklin, CA.
- City of Roseville. 2016 (May). *Amoruso Ranch Specific Plan Final Environmental Impact Report*. Roseville, CA. Prepared by Analytical Environmental Services, Sacramento, CA. Available at: <https://www.roseville.ca.us/cms/One.aspx?portalId=7964922&pageId=8774579>. Accessed 22 October 2019.
- City of Roseville. 2019. Tree Preservation Ordinance (Municipal Code Chapter 19.66). Available at: <http://qcode.us/codes/roseville/>. Accessed 24 October 2019.
- CNPS. See California Native Plant Society.
- DWR. 2019. California Department of Water Resources Land Use Viewer. Available: <https://gis.water.ca.gov/app/CADWRLandUseViewer/>.
- DWR. See California Department of Water Resources.
- EPA. See U.S. Environmental Protection Agency.
- Griffith, et al. 2016. Ecoregions of California (poster): U.S. Geological Survey Open-File Report 2016–1021, with map, scale 1:1,100,000, <http://dx.doi.org/10.3133/ofr20161021>.
- Jones and Stokes. 2005. *Assessment of Habitat Conditions for Chinook Salmon and Steelhead in Western Placer County, California*. Prepared for Placer County Planning Department, Auburn, CA. May 2005.
- Levatich, T. and F. Padilla. 2019. EOD - eBird Observation Dataset. Cornell Lab of Ornithology. Available at: <https://www.gbif.org>. Data last changed 30 March 2019. Accessed 10 October 2019.
- Natural Resource Conservation Service. 2019. Custom WebSoil Survey Report. Web Soil Survey available online at: <http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm>. Accessed 28 October 2019.
- NMFS (National Marine Fisheries Service) 2005. Update Status of Federally Listed ESUs of West Coast Salmon and Steelhead. Available: <https://swfsc.noaa.gov/publications/fed/00749.pdf>.

NRCS. *See* U. S. National Resources Conservation Service.

Placer County Conservation Program. 2018 (December). *Western Placer County Habitat Conservation Plan/Natural Community Conservation Plan*. Prepared by ICF International, Sacramento, CA.

Placer County General Plan Update. 2013. Section 6 Natural Resources. Updated May 21, 2013.

Placer Land Trust. 2019. *Reason Farms Environmental Preserve – Quick Facts*. Available at <https://www.placerlandtrust.org>. Accessed 07 November 2019.

PLT. *See* Placer Land Trust.

U.S. Environmental Protection Agency. 2018 (November 27). *WATERS (Watershed Assessment, Tracking & Environmental Results System) GeoViewer*. Available: <https://www.epa.gov/waterdata/waters-geoviewer>. Accessed 1 November 2019.

U.S. Geological Survey. 2004 (January). *Final Environmental Impact Report for the West Roseville Specific Plan and Sphere of Influence Amendment – Volume 1, Chapters 1, 2, 3, and 4*. Roseville, CA. Prepared by EIP Associates.

U.S. Geological Survey. 2005 (May). *Roseville Creek and Riparian Management and Restoration Plan*. Prepared by Foothill Associates, Rocklin, CA.

U.S. Geological Survey. 2010 (May). *Sierra Vista Specific Plan Environmental Impact Report – Volume 2, Chapter 4*. Roseville, CA.

U.S. Geological Survey. 2011a (September). *Creekview Specific Plan Environmental Impact Report – Volume 2, Chapter 4*. Roseville, CA.

U.S. Geological Survey. 2011b (August). *Open Space Preserve Overarching Management Plan*. Roseville, CA. Prepared by ECORP Consulting, Inc., Rocklin, CA.

U.S. Geological Survey. 2016 (May). *Amoruso Ranch Specific Plan Final Environmental Impact Report*. Roseville, CA. Prepared by Analytical Environmental Services, Sacramento, CA. Available at: <https://www.roseville.ca.us/cms/One.aspx?portalId=7964922&pageId=8774579>. Accessed 22 October 2019.

U.S. Geological Survey. 2018a. Pleasant Grove Quadrangle, California, 7.5-minute series.

U.S. Geological Survey. 2018b. Verona Quadrangle, California, 7.5-minute series.

U.S. Geological Survey. 2018c. Nicolaus Quadrangle, California, 7.5-minute series.

U.S. Geological Survey. 2018d. Sheridan Quadrangle, California, 7.5-minute series.

U.S. Geological Survey. 2018e. Lincoln Quadrangle, California, 7.5-minute series.

U.S. Geological Survey. 2018f. Roseville Quadrangle, California, 7.5-minute series.

- U.S. Geological Survey. 2018g. Citrus Heights Quadrangle, California, 7.5-minute series.
- U.S. Geological Survey. 2018h. Rio Linda Quadrangle, California, 7.5-minute series.
- U.S. Geological Survey. 2018i. Taylor Monument Quadrangle, California, 7.5-minute series.
- U.S. Geological Survey. 2018j. Folsom Quadrangle, California, 7.5-minute series.
- U.S. Geological Survey. 2018k. Rocklin Quadrangle, California, 7.5-minute series.
- U.S. Geological Survey. 2018l. Gold Hill Quadrangle, California, 7.5-minute series.
- U.S. Geological Survey. 2018m. Auburn Quadrangle, California, 7.5-minute series.
- U.S. Geological Survey. 2018n. Pilot Hill Quadrangle, California, 7.5-minute series.
- U.S. Geological Survey. 2018o. Clarksville Quadrangle, California, 7.5-minute series.
- U.S. Geological Survey. 2018p. Carmichael Quadrangle, California, 7.5-minute series.
- U.S. Geological Survey. 2018q. Buffalo Creek Quadrangle, California, 7.5-minute series.
- U.S. Geological Survey. 2018r. Folsom SE Quadrangle, California, 7.5-minute series.
- U.S. Geological Survey. 2018s. Sacramento East Quadrangle, California, 7.5-minute series.
- United States Fish and Wildlife Service. 2005. Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon. Portland, Oregon. xxvi + 606 pages.
- United States Fish and Wildlife Service. 2007. Vernal Pool Tadpole Shrimp (*Lepidurus packardi*), 5-Year Review: Summary and Evaluation. Sacramento Fish and Wildlife Office, Sacramento, CA. September 2007.
- United States Fish and Wildlife Service. 2019a. Information for Planning and Consultation, IPaC Resource List for Placer and Sacramento Counties. Available at: <https://ecos.fws.gov/ipac>. Accessed 01 October 2019.
- United States Fish and Wildlife Service. 2019b. Critical Habitat for Threatened and Endangered Species, ArcGIS critical habitat mapper. Updated October 24, 2019. Available at: <https://www.arcgis.com>. Accessed 07 November 2019.
- United States Fish and Wildlife Service. 2019c. National Wetlands Inventory, Wetlands Mapper. Updated October 9, 2019. Available at: <https://www.fws.gov/wetlands/Data/Mapper.html>. Accessed 07 November 2019.
- United States Fish and Wildlife Service. 2019d. Vernal Pool Fairy Shrimp Species Overview. Available at: <https://www.fws.gov/oregonfwo/articles.cfm?id=149489448>. Accessed 28 October 2019.

- United States Fish and Wildlife Service. 2019e. Valley Elderberry Longhorn Beetle Species Information. Available at:
https://www.fws.gov/sacramento/es_species/Accounts/Invertebrates/valley_elderberry_longhorn_beetle/.
 Accessed 28 October 2019.
- United States Fish and Wildlife Service. 2019f. Steelhead (*Oncorhynchus* (=Salmo) mykiss). Available at:
<https://ecos.fws.gov/ecp0/profile/speciesProfile?spcode=E08D>. Accessed 29 October 2019.
- United States Fish and Wildlife Service. 2019g. Giant Garter Snake (*Thamnophis gigas*). Available at:
https://www.fws.gov/sacramento/es_species/Accounts/Amphibians-Reptiles/giant_garter_snake/.
 Accessed 29 October 2019.
- United States Fish and Wildlife Service. 2019h. Tricolored blackbird (*Agelaius tricolor*). Available at:
<https://ecos.fws.gov/ecp0/profile/speciesProfile?spcode=B06P>. Accessed 29 October 2019.
- USFWS. *See* United States Fish and Wildlife Service.
- USGS. *See* U. S. Geological Survey.
- Wildlands. 2019. Mitigation Projects: Toad Hill Ranch Mitigation Bank. Available at:
<https://www.wildlandsinc.com/banks/toad-hill-ranch-mitigation-bank-wetl/>. Accessed 28 October 2019.

7.12 CULTURAL AND TRIBAL CULTURAL RESOURCES

- Bennyhoff, James A. 1961. The Ethnography of the Plains Miwok. Unpublished Ph.D. Dissertation in Anthropology, University of California, Berkeley, CA.
- City of Roseville Planning Commission Meeting. 2006 June 8. Item VII-A: Zoning Ordinance Amendment – Citywide – Significant Building Ordinance – File # 2005PL-056 OA-000007.
- City of Roseville. 1992. Roseville 2010 General Plan EIR.
- City of Roseville. 2009. *Downtown Specific Plan*. Available:
https://www.roseville.ca.us/government/departments/development_services/planning/specific_plans_planning_areas/downtown_specific_plan. Accessed October 2019.
- City of Roseville. 2016. *2035 General Plan*. Available:
https://www.roseville.ca.us/government/departments/development_services/planning/general_plan_development_guidelines. Accessed October 2019.
- City of Roseville. 2019. “Demographics: Location and Population.” Available at
https://www.roseville.ca.us/government/departments/economic_development/demographics. Accessed October 2019.
- EDAW. 2008. Downtown Roseville Specific Plan Draft Environmental Impact Report.
- EDAW. 2009. Downtown Roseville Specific Plan Final Environmental Impact Report.

- Elsasser, Albert B. 1978. Development of Regional Prehistoric Cultures. In *California*, edited by R.F. Heizer, pp. 25-36. Handbook of North American Indians, Volume 8, W.G. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.
- Kroeber, A.L. 1925. Handbook of the Indians of California. *Bureau of American Ethnology Bulletin* 78. Washington D.C.
- Moratto, Michael J. 1984. *California Archaeology*. Academic Press, Orlando.
- National Parks Service. 1998, Revised. "National Register Bulletin 38: Guidelines for Evaluating and Documenting Traditional Cultural Properties." U.S. Department of the Interior, National Park Service, Washington, D.C.
- NPS. *See* National Park Service.
- Rosenthal, J. S, G. White, and M. Q. Sutton. 2007. "The Central Valley: A View from the Catbird's Seat" in *California Prehistory: Colonization, Culture, and Complexity*. Edited by Terry L. Jones and Kathryn A. Klar. Alta Mira Press.
- Wilson, N. L. 1972. "Notes on Traditional Foothill Nisenan Food Technology" in *Papers on Nisenan Environment and Subsistence*. Center for Archaeological Research at Davis, Publication Number 3. University of California, Davis.
- Wilson, N. L. and Towne, A. H. 1978. "Nisenan" in *Handbook of North American Indians*, Volume 8. Smithsonian Institution, Washington, D.C.

7.13 HAZARDS AND HAZARDOUS MATERIALS

- California Department of Water Resources. 2006. *Sacramento Valley Groundwater Basin, North American Subbasin*. California's Groundwater Bulletin 118. Available: <https://water.ca.gov/LegacyFiles/groundwater/bulletin118/basindescriptions/5-21.64.pdf>. Accessed October 30, 2019.
- California Department of Water Resources. 2008. *Steelhead Creek Water Quality Investigation, Final Technical Report*. Available: https://water.ca.gov/LegacyFiles/pubs/waterquality/municipal_wq_investigations/mwqi_reports/steelhead_creek_water_quality_investigation/steelhead_creek_water_quality_investigation_february_2008.pdf. Accessed October 30, 2019.
- California Department of Water Resources. 2012. *Urban Levee Design Criteria*. Available: <https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Urban-Levee-Design-Criteria--2012.pdf>. Accessed October 27, 2019.
- California Department of Water Resources. 2017. *Central Valley Flood Protection Plan*. Available: <http://cvfpub.ca.gov/cvfpp/>. Accessed October 27, 2019.

- California Department of Water Resources. 2019a. Best Available Maps. Available: <http://gis.bam.water.ca.gov/bam/>. Accessed September 19, 2019.
- California Department of Water Resources. 2019b. Basin Prioritization. Available: <https://water.ca.gov/Programs/Groundwater-Management/Basin-Prioritization>. Accessed October 31, 2019.
- California Department of Water Resources. 2019c. *Statewide Map of SGMA Basin Prioritization Results*. Available: <https://water.ca.gov/Programs/Groundwater-Management/Basin-Prioritization>. Accessed October 31, 2019.
- cbec eco engineering, inc. and CDM Smith. 2018. *West Placer Stormwater Quality Design Manual*. Available: <https://www.placer.ca.gov/DocumentCenter/View/1610/West-Placer-Storm-Water-Quality-Design-Manual-PDF>. Accessed December 31, 2019.
- Central Valley Regional Water Quality Control Board (Central Valley RWQCB). 2018. *The Water Quality Control Plan (Basin Plan) for the Sacramento and San Joaquin River Basins*. Available: https://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/#basinplans. Accessed October 29, 2019.
- Central Valley Regional Water Quality Control Board (Central Valley RWQCB). 2019. TMDL – Projects in the Central Valley Region. Available: https://www.waterboards.ca.gov/centralvalley/water_issues/tmdl/central_valley_projects/. Accessed October 29, 2019.
- City of Roseville. 2004 (February). *Stormwater Management Program*. Prepared by: Kennedy/Jenks Consultants. Available: https://www.waterboards.ca.gov/water_issues/programs/stormwater/swmp/roseville_swmp.pdf. Accessed October 21, 2019.
- City of Roseville. 2011a. *Stormwater Quality BMP Guidance Manual for Construction*. Available: [https://www.roseville.ca.us/UserFiles/Servers/Server_7964838/Image/Government/Departments/Development%20Services/Engineering%20Land%20Development/Stormwater%20Design%20Inspection/BMP Guidance.pdf](https://www.roseville.ca.us/UserFiles/Servers/Server_7964838/Image/Government/Departments/Development%20Services/Engineering%20Land%20Development/Stormwater%20Design%20Inspection/BMP%20Guidance.pdf). Accessed October 28, 2019.
- City of Roseville. 2011b. *Open Space Preserve Overarching Management Plan*. Prepared by: ECORP Consulting, Inc. Available: https://www.roseville.ca.us/government/departments/development_services/planning/citywide_planning_documents. Accessed October 24, 2019.
- City of Roseville. 2016a. *Amoruso Specific Plan Final Environmental Impact Report, 4.13 Hydrology and Water Quality*. Available: https://www.roseville.ca.us/government/departments/development_services/planning/specific_plans_planning_areas/amoruso_ranch_specific_plan. Accessed October 30, 2019.

- City of Roseville. 2016b. *Roseville 2035 General Plan*. Available: https://www.roseville.ca.us/government/departments/development_services/planning/general_plan_development_guidelines. Accessed October 28, 2019.
- City of Roseville. 2016c. *2015 Urban Water Management Plan*. Prepared by: West Yost Associates. Available: https://roseville.ca.us/government/departments/environmental_utilities/at_your_service/water_supply. Accessed November 1, 2019.
- City of Roseville. 2019a. City of Roseville Aquifer Storage and Recovery. Available: https://roseville.ca.us/residents/utility_exploration_center/aquifer_storage_recovery. Accessed October 31, 2019.
- City of Roseville. 2019b. Design and Construction Standards, Section 10 Drainage. Available: <https://www.roseville.ca.us/cms/one.aspx?pageId=8754129>. Accessed October 31, 2019.
- Federal Emergency Management Agency (FEMA). 2018. FEMA Flood Map Service Center. Available: <https://msc.fema.gov/portal/home>. Accessed October 30, 2019.
- Montgomery Watson Harza. 2007. *Western Placer County Groundwater Management Plan*. Available: <https://water.ca.gov/LegacyFiles/urbanwatermanagement/2010uwmps/Roseville,%20City%20of/Appendix%20E%20Groundwater%20Management.pdf>. Accessed October 31, 2019.
- Placer and Sacramento Counties. 2003. *Dry Creek Watershed Coordinated Resource Management Plan*. Available: <https://www.placer.ca.gov/DocumentCenter/View/9708/Plan-Document-PDF>. Accessed October 29, 2019.
- Placer County Flood Control and Water Conservation District (PCFCWCD). 1993. *Auburn Ravine, Coon, and Pleasant Grove Creeks Flood Mitigation*. Prepared by: CH₂M Hill. Available: <https://www.placer.ca.gov/1604/Flood-Control>. Accessed October 31, 2019.
- Placer County Flood Control and Water Conservation District (PCFCWCD). 2011. *Update to the Dry Creek Watershed Flood Control Plan*. Available: <https://www.placer.ca.gov/1640/Dry-Creek-Watershed-Plan>. Accessed October 29, 2019.
- Placer County Water Agency. 2006. *Integrated Water Resources Plan*. Prepared by: Brown and Caldwell, Rancho Cordova, CA.
- Placer County. 2006. *Pleasant Grove and Curry Creek Ecosystem Restoration Plan*. Prepared by: Foothills Associates. Available: <https://www.placer.ca.gov/3487/Pleasant-Grove-Curry-Creek>. Accessed October 29, 2019.
- Placer County. 2017. *Evaluation of Potential Groundwater Recharge Areas in West Placer County, California*. Prepared by: GEI Consultants. Available: https://westplacergroundwater.com/wp-content/uploads/2017/11/Groundwater-Recharge-Review_FINAL20171031.pdf. Accessed October 31, 2019.

- State Water Resources Control Board (SWRCB). 2012. *National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated With Construction and Land Disturbance Activities, Order No. 2012-006-DWQ*. Available: https://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2012/wqo2012_0006_dwq.pdf. Accessed October 30, 2019.
- State Water Resources Control Board (SWRCB). 2013. *National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000004, Waste Discharge Requirements (WDRs) for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4s), Order No. 2013-0001-DWQ*. Available: https://www.waterboards.ca.gov/water_issues/programs/stormwater/phase_ii_municipal.html. Accessed: October 30, 2019.
- State Water Resources Control Board (SWRCB). 2015. *Statewide General Permit for Storm Water Discharges Associated with Industrial Activities, Order 2014-0057-DWQ (Industrial General Permit)*. Available: https://www.waterboards.ca.gov/water_issues/programs/stormwater/igp_20140057dwq.shtml. Accessed October 31, 2019.
- State Water Resources Control Board (SWRCB). 2017. *2014 and 2016 California Integrated Report*. Available: https://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2014_2016.shtml. Accessed: October 30, 2019.
- U.S. Natural Resources Conservation Service (NRCS). 2018. Web Soil Survey. Available: <https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>. Accessed October 26, 2019.
- West Placer County Groundwater Sustainability Agency. 2019. GSP FAQs. Available: <https://westplacergroundwater.com/faq/#what-is-the-wpgsa-s-plan-for-preparing-the-gsp->. Accessed October 30, 2019.

7.14 PUBLIC SERVICES AND RECREATION

- California Department of Education 2000. Guide to School Site Analysis and Development.
- California Department of Education. 2019. Enrollment by Grade. Center Joint Unified School District, Dry Creek Joint Elementary, Eureka Union School District, Roseville City Elementary School District, and Roseville Joint Unified School District. Available: <https://dq.cde.ca.gov/dataquest/>. Accessed November 1, 2019.
- City of Roseville 2017. Geographic Information Systems shapefiles maintained by the City of Roseville.
- City of Roseville. 2010 (May). Sierra Vista Specific Plan Environmental Impact Report. Available: <https://roseville.ca.us/cms/One.aspx?portalId=7964922&pageId=8775140>. Accessed November 1, 2019.
- City of Roseville. 2015 (July). Campus Oaks Addendum and Initial Study of Environmental Significance. Campus Oaks Master Plan Amendment – General Plan Amendment, Rezone, Development Agreement Amendments – File #PL14-037 and File #PL14-0374. Available: <https://roseville.ca.us/cms/One.aspx?portalId=7964922&pageId=8775121>. Accessed November 1, 2019.

City of Roseville. 2016 (August). City of Roseville General Plan. Available:

https://www.roseville.ca.us/government/departments/development_services/planning/general_plan_development_guidelines. Accessed October 30, 2019.

City of Roseville. 2019 (June). Annual Budget Fiscal Year 2019-20. Available:

https://www.roseville.ca.us/government/departments/finance/financial_transparency. Accessed November 5, 2019.

Dry Creek Joint Elementary School District. 2015 (March). School Facilities Master Plan. Available:

<https://www.drycreek.k12.ca.us/FMOT>. Accessed November 1, 2019.

Placer County Sheriff's Department. 2019. Patrol. Available: <https://www.placer.ca.gov/2656/Patrol>. Accessed

October 29, 2019.

Roseville City School District. 2018 (November). Roseville City School District Facilities Utilization Master Plan. Available: <https://www.rcsdk8.org/facilities>. Accessed November 1, 2019.

Roseville City School District. 2019 (September). Riego Creek Elementary School. Available:

https://www.rcsdk8.org/sites/main/files/file-attachments/new_school_information_-_riego_creek_elementary_school.pdf. Accessed November 4, 2019.

Roseville Fire Department. 2019. Fire Station Locations. Available:

<https://www.roseville.ca.us/cms/One.aspx?portalId=7964922&pageId=8917224>. Accessed October 31, 2019.

Roseville Joint Union High School District. 2019. Attendance Boundaries. Available:

<https://www.rjuhsd.us/Page/7>. Accessed November 1, 2019.

Roseville Police Department. 2018. 2018 Annual Summary. Available:

https://www.roseville.ca.us/UserFiles/Servers/Server_7964838/File/Government/Departments/Police%20Department/About%20Roseville%20Police/PoliceAnnualSummary.pdf. Accessed October 29, 2019.

Roseville Police Department. 2019. 2019 Annual Summary. Available:

https://www.roseville.ca.us/UserFiles/Servers/Server_7964838/File/Government/Departments/Police%20Department/About%20Roseville%20Police/PoliceAnnualSummary.pdf. Accessed October 29, 2019.

7.15 UTILITIES AND SERVICES SYSTEMS

California Building Standards Commission. 2019 (July). 2019 California Green Building Standards Code.

Available: <https://www.dgs.ca.gov/BSC/Resources/Page-Content/Building-Standards-Commission-Resources-List-Folder/CALGreen>. Accessed January 7, 2019.

California Department of Resources Recycling and Recovery. 2018. Jurisdictional Per Capita Disposal Trends.

Roseville. Available: <https://www2.calrecycle.ca.gov/LGCentral/AnnualReporting/ReviewReports>. Accessed January 31, 2020.

- California Department of Resources Recycling and Recovery. 2019a. Solid Waste Information System. Facility/Site Summary Details: Western Placer Management Authority Material Recovery Facility (31-AA-0001). Available: <https://www2.calrecycle.ca.gov/swfacilities/Directory/31-AA-0001/>. Accessed November 7, 2019.
- California Department of Resources Recycling and Recovery. 2019b. Solid Waste Information System. Facility/Site Summary Details: Western Regional Landfill. (31-AA-0210). Available: <https://www2.calrecycle.ca.gov/swfacilities/Directory/31-AA-0210/>. Accessed November 7, 2019.
- CalRecycle. *See* California Department of Resources Recycling and Recovery.
- City of Roseville 2016a. *Roseville 2035 General Plan*. Available: https://www.roseville.ca.us/government/departments/development_services/planning/general_plan_development_guidelines. Accessed October 28, 2019.
- City of Roseville 2016b. City of Roseville Sewer System Management Plan. Available: https://www.roseville.ca.us/government/departments/environmental_utilities/at_your_service/sewer/sewer_system_management_plan. Accessed: November 7, 2019.
- City of Roseville. 2017 (February). CEQA-Plus Initial Study/Mitigated Negative Declaration for the City of Roseville Pleasant Grove Wastewater Treatment Plant Expansion and Energy Recovery Project (SCH # 2016122040). Available: https://www2.energy.ca.gov/business_meetings/2019_packets/2019-04-10/Item_17b_CITY_OF_ROSEVILLE/CEQA%20Information/06_Roseville_ERP_PGWWTP_Final_IS-MND_Feb_2017.pdf. Accessed November 13, 2019.
- City of Roseville. 2018 (May). Community Solar Project Initial Study/Mitigated Negative Declaration.
- City of Roseville. 2019a (September). City of Roseville Sewer System Management Plan Three-Year Audit for FY15/16 – 17/18. Available: <https://www.roseville.ca.us/cms/One.aspx?portalId=7964922&pageId=9787123&objectId.152496=9793662&contextId.152496=9793661>. Accessed November 11, 2019.
- City of Roseville. 2019b (January). City of Roseville Design Standards. Available: https://www.roseville.ca.us/government/departments/development_services/engineering_land_development/construction_management_inspection/design_construction_standards. Accessed November 11, 2019.
- PCWA. *See* Placer County Water Agency.
- Placer County Local Agency Formation Commission. 2017 (December). City of Roseville Municipal Service Review Update. Available: <https://www.placer.ca.gov/DocumentCenter/View/7733/Final-Roseville-Municipal-Service-Review-PDF>. Accessed November 10, 2019.
- Placer County Water Agency. 2005 (June). Foothill Phase II Water Treatment Plant and Pipeline Final EIR. State Clearinghouse No. 2004102002.
- RMC. 2009 (December). South Placer Regional Wastewater and Recycled Water Systems Evaluation Updated Final Report. Available:

http://roseville.ca.us/government/departments/environmental_utilities/at_your_service/sewer/south_placer_wastewater_authority. Accessed November 10, 2019.

West Yost Associates. 2016 (May). City of Roseville 2015 Urban Water Management Plan. Available: https://roseville.ca.us/government/departments/environmental_utilities/at_your_service/water_supply. Accessed November 10, 2019.

7.16 HYDROLOGY AND WATER QUALITY

California Department of Water Resources. 2006. *Sacramento Valley Groundwater Basin, North American Subbasin*. California's Groundwater Bulletin 118. Available: <https://water.ca.gov/LegacyFiles/groundwater/bulletin118/basindescriptions/5-21.64.pdf>. Accessed October 30, 2019.

California Department of Water Resources. 2008. *Steelhead Creek Water Quality Investigation, Final Technical Report*. Available: https://water.ca.gov/LegacyFiles/pubs/waterquality/municipal_wq_investigations/mwqi_reports/steelhead_creek_water_quality_investigation/steelhead_creek_water_quality_investigation_february_2008.pdf. Accessed October 30, 2019.

California Department of Water Resources. 2012. *Urban Levee Design Criteria*. Available: <https://water.ca.gov/-/media/DWR-Website/Web-Pages/Programs/Urban-Levee-Design-Criteria--2012.pdf>. Accessed October 27, 2019.

California Department of Water Resources. 2017. *Central Valley Flood Protection Plan*. Available: <http://cvfpub.ca.gov/cvfpp/>. Accessed October 27, 2019.

California Department of Water Resources. 2019a. Best Available Maps. Available: <http://gis.bam.water.ca.gov/bam/>. Accessed September 19, 2019.

California Department of Water Resources. 2019b. Basin Prioritization. Available: <https://water.ca.gov/Programs/Groundwater-Management/Basin-Prioritization>. Accessed October 31, 2019.

California Department of Water Resources. 2019c. *Statewide Map of SGMA Basin Prioritization Results*. Available: <https://water.ca.gov/Programs/Groundwater-Management/Basin-Prioritization>. Accessed October 31, 2019.

cbe eco engineering, inc. and CDM Smith. 2018. *West Placer Stormwater Quality Design Manual*. Available: <https://www.placer.ca.gov/DocumentCenter/View/1610/West-Placer-Storm-Water-Quality-Design-Manual-PDF>. Accessed December 31, 2019.

Central Valley Regional Water Quality Control Board. 2018. *The Water Quality Control Plan (Basin Plan) for the Sacramento and San Joaquin River Basins*. Available: https://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/#basinplans. Accessed October 29, 2019.

Central Valley Regional Water Quality Control Board. 2019. TMDL – Projects in the Central Valley Region. Available: https://www.waterboards.ca.gov/centralvalley/water_issues/tmdl/central_valley_projects/. Accessed October 29, 2019.

Central Valley RWQCB. *See* Central Valley Regional Water Quality Control Board.

City of Roseville. 2017. Geographic Information Systems shapefiles maintained by the City of Roseville.

City of Roseville. 2004 (February). *Stormwater Management Program*. Prepared by: Kennedy/Jenks Consultants. Available: https://www.waterboards.ca.gov/water_issues/programs/stormwater/swmp/roseville_swmp.pdf. Accessed October 21, 2019.

City of Roseville. 2011a. *Stormwater Quality BMP Guidance Manual for Construction*. Available: https://www.roseville.ca.us/UserFiles/Servers/Server_7964838/Image/Government/Departments/Development%20Services/Engineering%20Land%20Development/Stormwater%20Design%20Inspection/BMP_Guidance.pdf. Accessed October 28, 2019.

City of Roseville. 2011b. *Open Space Preserve Overarching Management Plan*. Prepared by: ECORP Consulting, Inc. Available: https://www.roseville.ca.us/government/departments/development_services/planning/citywide_planning_documents. Accessed October 24, 2019.

City of Roseville. 2016a. *Amoruso Specific Plan Final Environmental Impact Report, 4.13 Hydrology and Water Quality*. Available: https://www.roseville.ca.us/government/departments/development_services/planning/specific_plans_planning_areas/amoruso_ranch_specific_plan. Accessed October 30, 2019.

City of Roseville. 2016b. *Roseville 2035 General Plan*. Available: https://www.roseville.ca.us/government/departments/development_services/planning/general_plan_development_guidelines. Accessed October 28, 2019.

City of Roseville. 2016c. *2015 Urban Water Management Plan*. Prepared by: West Yost Associates. Available: https://roseville.ca.us/government/departments/environmental_utilities/at_your_service/water_supply. Accessed November 1, 2019.

City of Roseville. 2019a. City of Roseville Aquifer Storage and Recovery. Available: https://roseville.ca.us/residents/utility_exploration_center/aquifer_storage_recovery. Accessed October 31, 2019.

City of Roseville. 2019b. Design and Construction Standards, Section 10 Drainage. Available: <https://www.roseville.ca.us/cms/one.aspx?pageId=8754129>. Accessed October 31, 2019.

DWR. *See* California Department of Water Resources.

Federal Emergency Management Agency. 2018. FEMA Flood Map Service Center. Available: <https://msc.fema.gov/portal/home>. Accessed October 30, 2019.

FEMA. *See* Federal Emergency Management Agency.

Montgomery Watson Harza. 2007. *Western Placer County Groundwater Management Plan*. Available: <https://water.ca.gov/LegacyFiles/urbanwatermanagement/2010uwmps/Roseville,%20City%20of/Appendix%20E%20Groundwater%20Management.pdf>. Accessed October 31, 2019.

NRCS. *See* U. S. National Resources Conservation Service.

PCFCWCD. *See* Placer County Flood Control and Water Conservation District.

PCWA. *See* Placer County Water Agency.

Placer and Sacramento Counties. 2003. *Dry Creek Watershed Coordinated Resource Management Plan*. Available: <https://www.placer.ca.gov/DocumentCenter/View/9708/Plan-Document-PDF>. Accessed October 29, 2019.

Placer County Flood Control and Water Conservation District. 1993. *Auburn Ravine, Coon, and Pleasant Grove Creeks Flood Mitigation*. Prepared by: CH2MHill. Available: <https://www.placer.ca.gov/1604/Flood-Control>. Accessed October 31, 2019.

Placer County Flood Control and Water Conservation District. 2011. *Update to the Dry Creek Watershed Flood Control Plan*. Available: <https://www.placer.ca.gov/1640/Dry-Creek-Watershed-Plan>. Accessed October 29, 2019.

Placer County Water Agency. 2006. *Integrated Water Resources Plan*. Prepared by: Brown and Caldwell, Rancho Cordova, CA.

Placer County. 2006. *Pleasant Grove and Curry Creek Ecosystem Restoration Plan*. Prepared by: Foothills Associates. Available: <https://www.placer.ca.gov/3487/Pleasant-Grove-Curry-Creek>. Accessed October 29, 2019.

Placer County. 2017. *Evaluation of Potential Groundwater Recharge Areas in West Placer County, California*. Prepared by: GEI Consultants. Available: https://westplacergroundwater.com/wp-content/uploads/2017/11/Groundwater-Recharge-Review_FINAL20171031.pdf. Accessed October 31, 2019.

State Water Resources Control Board. 2012. *National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated With Construction and Land Disturbance Activities, Order No. 2012-006-DWQ*. Available: https://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2012/wqo2012_0006_dwq.pdf. Accessed October 30, 2019.

State Water Resources Control Board. 2013. *National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000004, Waste Discharge Requirements (WDRs) for Storm Water Discharges from Small Municipal Separate Storm Sewer Systems (MS4s), Order No. 2013-0001-DWQ*. Available: https://www.waterboards.ca.gov/water_issues/programs/stormwater/phase_ii_municipal.html. Accessed: October 30, 2019.

State Water Resources Control Board. 2015. *Statewide General Permit for Storm Water Discharges Associated with Industrial Activities, Order 2014-0057-DWQ (Industrial General Permit)*. Available: https://www.waterboards.ca.gov/water_issues/programs/stormwater/igp_20140057dwq.shtml. Accessed October 31, 2019.

State Water Resources Control Board. 2017. *2014 and 2016 California Integrated Report*. Available: https://www.waterboards.ca.gov/water_issues/programs/tmdl/integrated2014_2016.shtml. Accessed: October 30, 2019.

SWRCB. *See* State Water Resources Control Board.

U.S. Natural Resources Conservation Service. 2018. Web Soil Survey. Available: <https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>. Accessed October 26, 2019.

U.S. Natural Resources Conservation Service. 2018. Web Soil Survey. Available: <https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>. Accessed October 26, 2019.

West Placer County Groundwater Sustainability Agency. 2019. GSP FAQs. Available: <https://westplacergroundwater.com/faq/#what-is-the-wpgsa-s-plan-for-preparing-the-gsp->. Accessed October 30, 2019.

7.17 AESTHETICS

California Department of Transportation. 2017. State Scenic Highway Program, California Scenic Highways. Available: <https://www.arcgis.com/home/item.html?id=f0259b1ad0fe4093a5604c9b838a486a>. Accessed October 23, 2019.

Caltrans. *See* California Department of Transportation.

City of Roseville. 2016. *Roseville 2035 General Plan*. Available: https://www.roseville.ca.us/government/departments/development_services/planning/general_plan_development_guidelines. Accessed October 28, 2019.

City of Roseville. 2005. *Roseville Creek and Riparian Management and Restoration Plan*. Prepared by: Foothill Associates. Available: https://www.roseville.ca.us/government/departments/development_services/planning/citywide_planning_documents. Accessed October 24, 2019.

City of Roseville. 2008a. *Community Design Guidelines*. Available: https://www.roseville.ca.us/government/departments/development_services/planning/citywide_planning_documents. Accessed October 24, 2019.

City of Roseville. 2008b. *Bicycle Master Plan*. Available: https://www.roseville.ca.us/government/departments/development_services/planning/citywide_planning_documents. Accessed October 24, 2019.

City of Roseville. 2011. *Open Space Preserve Overarching Management Plan*. Prepared by: ECORP Consulting, Inc. Available:
https://www.roseville.ca.us/government/departments/development_services/planning/citywide_planning_documents. Accessed October 24, 2019.

7.18 ENERGY

California Energy Commission. 2019a. Total System Electric Generation. Available at:
https://ww2.energy.ca.gov/almanac/electricity_data/total_system_power.html. Accessed February 2020.

California Energy Commission. 2019b. Electricity Consumption by Entity (Roseville Electric). Available at:
<http://ecdms.energy.ca.gov/elecbyutil.aspx>. Accessed October 2019.

California Energy Commission. 2019c. 2018 Power Content Label – City of Roseville. Available at:
https://www.energy.ca.gov/sites/default/files/2020-01/2018_PCL_City_of_Roseville.pdf. Accessed February 2020.

California Energy Commission. 2019d. Natural Gas Consumption by Entity (Pacific Gas and Electric). Available at:
<https://ecdms.energy.ca.gov/gasbyutil.aspx>. Accessed February 2020.

California Energy Commission. 2019e. Natural Gas Consumption by County (Placer County). Available at:
<https://ecdms.energy.ca.gov/gasbycounty.aspx>. Accessed February 2020.

California Energy Commission. 2019f. Diesel Fuel Data, Facts, and Statistics. Available at:
https://ww2.energy.ca.gov/almanac/transportation_data/diesel.html. Accessed February 2020.

California Energy Commission. 2019g California Gasoline Data, Facts, and Statistics. Available at:
https://ww2.energy.ca.gov/almanac/transportation_data/gasoline/. Accessed February 2020.

CEC. *See* California Energy Commission.

City of Roseville. 2016. *Roseville 2035 General Plan*. Available:
https://www.roseville.ca.us/government/departments/development_services/planning/general_plan_development_guidelines. Accessed October 28, 2019.

City of Roseville 2019. City of Roseville Electric Utility 2018 Annual Report. Available at:
https://www.roseville.ca.us/UserFiles/Servers/Server_7964838/File/Government/Departments/Roseville%20Electric%20Utility/Annual%20Report/Electric_AnnualReport_2018_Web.pdf. Accessed February 2020.

Fehr & Peers Associates. 2020. Existing and Future Conditions traffic data for the City of Roseville General Plan Update. Roseville, CA.

Pacific Gas and Electric (PG&E). 2019. PG&E Overview. Available at
http://www.pgecorp.com/corp_responsibility/reports/2017/bu01_pge_overview.html. Accessed February 2020.

PG&E. *See* Pacific Gas & Electric Company.

Sacramento Area Council of Governments. 2019. 2020 Metropolitan Transportation Plan/Sustainable Communities Strategy. Available: <https://www.sacog.org/2020-metropolitan-transportation-plansustainable-communities-strategy-update>. Accessed January 2020.

SACOG. *See* Sacramento Area Council of Governments

U.S. EIA. *See* U.S. Energy Information Administration.

U. S. Energy Information Administration. 2016. Carbon Dioxide Emissions Coefficients. Available: https://www.eia.gov/environment/emissions/co2_vol_mass.php. Accessed February 2020.

U.S. Energy Information Administration. 2020a. California Energy Profile. Available at <https://www.eia.gov/state/?sid=CA> (or <https://www.eia.gov/state/print.php?sid=CA#47>). Accessed February 2020.

U.S. Energy Information Administration. 2020b. California State Energy Profile Analysis. Available at: <https://www.eia.gov/state/analysis.php?sid=CA>. Accessed February 2020.

7.19 OTHER CEQA CONSIDERATIONS

City of Roseville. 2010 (May). *Sierra Vista Specific Plan Final Environmental Impact Report—Section 4.7, Geology, Soils, and Seismicity*. Available: https://www.roseville.ca.us/government/departments/development_services/planning/specific_plans_planning_areas/sierra_vista_specific_plan. Accessed October 21, 2019.

City of Roseville. 2015 (July). Campus Oaks Addendum and Initial Study of Environmental Significance. Campus Oaks Master Plan Amendment – General Plan Amendment, Rezone, Development Agreement Amendments – File #PL14-037 and File #PL14-0374. Available: <https://roseville.ca.us/cms/One.aspx?portalId=7964922&pageId=8775121>. Accessed November 1, 2019.

City of Roseville. 2016. Amoruso Ranch Specific Plan Environmental Impact Report. Prepared by the City of Roseville with assistance from Analytical Environmental Services.

City of Roseville. 2017 (February). CEQA-Plus Initial Study/Mitigated Negative Declaration for the City of Roseville Pleasant Grove Wastewater Treatment Plant Expansion and Energy Recovery Project (SCH # 2016122040). Available: https://ww2.energy.ca.gov/business_meetings/2019_packets/2019-04-10/Item_17b_CITY_OF_ROSEVILLE/CEQA%20Information/06_Roseville_ERP_PGWWTP_Final_IS-MND_Feb_2017.pdf. Accessed November 13, 2019.

City of Roseville. 2018 (May). Community Solar Project Initial Study/Mitigated Negative Declaration.

DOC. *See* California Department of Conservation.

EIA. *See* U.S. Energy Information Administration.

PCWA. *See* Placer County Water Agency.

Placer County Water Agency. 2005 (June). Foothill Phase II Water Treatment Plant and Pipeline Final EIR. State Clearinghouse No. 2004102002.

SACOG. *See* Sacramento Area Council of Governments.

Sacramento Area Council of Governments. 2020a. Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) Draft Environmental Impact Report.

Sacramento Area Council of Governments. 2020b. Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS).

U.S. EIA. U.S. Energy Information Administration.

U.S. Energy Information Administration. 2020. California State Energy Profile Analysis. Available at: <https://www.eia.gov/state/analysis.php?sid=CA>. Accessed February 2020.

West Yost Associates. 2016. *City of Roseville 2015 Urban Water Management Plan*. Available: https://roseville.ca.us/UserFiles/Servers/Server_7964838/File/Government/Departments/Environmental%20Utilities/Water/City%20of%20Roseville%20Final%202015%20UWMP.pdf. Accessed February 14, 2020.

7.20 ALTERNATIVES

CAL FIRE. *See* California Department of Forestry and Fire Protection.

California Department of Forestry and Fire Protection. 2008. *Placer County—Very High Fire Hazard Severity Zones In LRA*. Available: <https://osfm.fire.ca.gov/divisions/wildfire-prevention-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/>. Accessed October 16, 2019.

cbec eco engineering, inc. and CDM Smith. 2018. *West Placer Stormwater Quality Design Manual*. Available: <https://www.placer.ca.gov/DocumentCenter/View/1610/West-Placer-Storm-Water-Quality-Design-Manual-PDF>. Accessed December 31, 2019.

Central Valley Regional Water Quality Control Board. 2018. *The Water Quality Control Plan (Basin Plan) for the Sacramento and San Joaquin River Basins*. Available: https://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/#basinplans. Accessed October 29, 2019.

Central Valley RWQCB. *See* Central Valley Regional Water Quality Control Board.

City of Roseville. 2004. *Stormwater Management Program*. Prepared by: Kennedy/Jenks Consultants. Available: https://www.waterboards.ca.gov/water_issues/programs/stormwater/swmp/roseville_swmp.pdf. Accessed October 21, 2019.

- City of Roseville. 2008. *Community Design Guidelines*. Available: https://www.roseville.ca.us/government/departments/development_services/planning/citywide_planning_documents. Accessed October 24, 2019.
- City of Roseville. 2010 (May). *Sierra Vista Specific Plan Final Environmental Impact Report—Section 4.7, Geology, Soils, and Seismicity*. Available: https://www.roseville.ca.us/government/departments/development_services/planning/specific_plans_planning_areas/sierra_vista_specific_plan. Accessed October 21, 2019.
- City of Roseville. 2011a. *Stormwater Quality BMP Guidance Manual for Construction*. Available: https://www.roseville.ca.us/UserFiles/Servers/Server_7964838/Image/Government/Departments/Development%20Services/Engineering%20Land%20Development/Stormwater%20Design%20Inspection/BMP_Guidance.pdf. Accessed October 28, 2019.
- City of Roseville. 2011b. *Open Space Preserve Overarching Management Plan*. Prepared by: ECORP Consulting, Inc. Available: https://www.roseville.ca.us/government/departments/development_services/planning/citywide_planning_documents. Accessed October 24, 2019.
- City of Roseville. 2016. *Roseville 2035 General Plan*. Available: https://www.roseville.ca.us/government/departments/development_services/planning/general_plan_development_guidelines. Accessed February 4, 2020.
- City of Roseville. 2019. *Design and Construction Standards*. Available: https://www.roseville.ca.us/government/departments/development_services/engineering_land_development/construction_management_inspection/design_construction_standards. Accessed October 24, 2019.
- Montgomery Watson Harza. 2007. *Western Placer County Groundwater Management Plan*. Available: <https://water.ca.gov/LegacyFiles/urbanwatermanagement/2010uwmps/Roseville,%20City%20of/Appendix%20E%20Groundwater%20Management.pdf>. Accessed October 31, 2019.
- PCCP. *See* Placer County Conservation Program.
- PCFCWCD. *See* Placer County Flood Control and Water Conservation District.
- Placer County Conservation Program. 2018. *Western Placer County Habitat Conservation Plan/Natural Community Conservation Plan*. Prepared by ICF International, Sacramento, CA.
- Placer County Flood Control and Water Conservation District. 1993. *Auburn Ravine, Coon, and Pleasant Grove Creeks Flood Mitigation*. Prepared by: CH₂MHill. Available: <https://www.placer.ca.gov/1604/Flood-Control>. Accessed October 31, 2019.
- Placer County. 2017. *Evaluation of Potential Groundwater Recharge Areas in West Placer County, California*. Prepared by: GEI Consultants. Available: https://westplacergroundwater.com/wp-content/uploads/2017/11/Groundwater-Recharge-Review_FINAL20171031.pdf. Accessed October 31, 2019.

- Sacramento Area Council of Governments (SACOG). 2019. 2020 Metropolitan Transportation Plan/Sustainable Communities Strategy. Available: <https://www.sacog.org/2020-metropolitan-transportation-plansustainable-communities-strategy-update>. Accessed January 2020.
- Sacramento Area Council of Governments (SACOG). 2020. Geographic Information Systems (GIS) shapefiles maintained by SACOG. Available: <https://www.sacog.org/regional-gis-clearinghouse>.
- State Water Resources Control Board. 2012. *National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated With Construction and Land Disturbance Activities, Order No. 2012-006-DWQ*. Available: https://www.waterboards.ca.gov/board_decisions/adopted_orders/water_quality/2012/wqo2012_0006_dwq.pdf. Accessed October 30, 2019.
- SWRCB. *See* State Water Resources Control Board.
- United States Fish and Wildlife Service. 2005. Recovery Plan for Vernal Pool Ecosystems of California and Southern Oregon. Portland, Oregon.
- USFWS. *See* United States Fish and Wildlife Service.
- West Yost Associates. 2016. *City of Roseville 2015 Urban Water Management Plan*. Available: https://roseville.ca.us/UserFiles/Servers/Server_7964838/File/Government/Departments/Environmental%20Utilities/Water/City%20of%20Roseville%20Final%202015%20UWMP.pdf. Accessed February 14, 2020.
- Zhu, Y., W. C. Hinds, S. Kim, and S. Shen. 2002. Study of Ultrafine Particles Near a Major Highway with Heavy-duty Diesel Traffic. In *Atmospheric Environment* 36:4323–4335.

8 LIST OF PREPARERS

8.1 CITY OF ROSEVILLE

Greg Bitter Planning Manager
Lauren Hocker Senior Planner
Gina McColl Associate Planner
Marc Stout City Engineer
Mark Johnson Senior Engineer
Terri Shirhall Environmental Coordinator
Michelle Sheidenberger Assistant City Attorney

8.2 AECOM

Matthew Gerken, AICP Project Manager
Wendy Copeland Senior Environmental Scientist
Jenifer King Senior Environmental Scientist
Issa Mahmodi Noise and Vibration Specialist
Chris Shields Noise Analyst
Suzanne McFerran Air Quality/Greenhouse Gas Emissions Specialist
Jody Fessler Senior Biologist
Jasmine Wurlitzer Biologist
Richard Deis, RPA Senior Archaeologist
Chandra Miller Architectural Historian
Lisa Clement GIS Specialist
Vivian Gadde Graphic Artist
Deborah Jew Document Specialist

8.3 FEHR AND PEERS

Ron Millam, AICP Principal
John Gard Principal
Rodney Brown Associate

This page intentionally left blank