

California Public Utilities Commission

Gorman-Kern River 66 kV Project

Draft Initial Study/Mitigated Negative Declaration

November 2024

717 Market Street, Suite 400
San Francisco, CA 94103
650-373-1200
www.panoramaenv.com

PANORAMA ENVIRONMENTAL, INC.

California Public Utilities Commission

Gorman-Kern River 66 kV Project

Draft Initial Study/Mitigated Negative Declaration

November 2024

Prepared for:

California Public Utilities Commission

505 Van Ness Avenue

San Francisco, CA 94102

Prepared by:

Panorama Environmental, Inc.

717 Market Street, Suite 400

San Francisco, CA 94103

www.panoramaenv.com

PANORAMA ENVIRONMENTAL, INC.

Table of Contents

1 Introduction 1-1

1.1 Overview of the Proposed Project 1-1

1.2 Environmental Review Process 1-1

1.3 Agency and Use of this Document 1-3

1.4 Document Organization and Reader's Guide 1-11

2 Project Description 2-1

2.1 Project Overview 2-1

2.2 Proposed Project 2-12

2.3 Right-of-Way, and Easements 2-20

2.4 Project Construction 2-21

2.5 Applicant-Proposed Measures 2-58

2.6 Electromagnetic Fields and CPUC EMF Analysis/Mitigation Requirements 2-69

3.1 Aesthetics 3.1

3.1.1 Definitions 3.1-1

3.1.2 Environmental Setting 3.1-4

3.1.3 Proposed Project Setting 3.1-4

3.1.4 Applicable Regulations, Policies and Standards 3.1-20

3.1.5 Applicant Proposed Measures 3.1-24

3.1.6 Environmental Analysis 3.1-25

3.1.7 References 3.1-54

3.2 Agriculture and Forestry Resources 3.2-1

3.2.1 Environmental Setting 3.2-1

3.2.2 Applicable Regulations, Plans, and Standards 3.2-8

3.2.3 Applicant Proposed Measures 3.2-11

3.2.4 Environmental Analysis 3.2-12

3.2.5 References 3.2-17

3.3 Air Quality Resources 3.3-1

3.3.1 Environmental Setting 3.3-1

TABLE OF CONTENTS

3.3.2 Applicable Regulations, Policies and Standards 3.3-12
3.4.3 Applicant Proposed Measures and CPUC Environmental Measures 3.3-16
3.4.4 Environmental Analysis 3.3-17
3.3.5 References 3.3-33

3.4 Biological Resources 3.4-1
3.4.1 Definitions 3.4-1
3.4.2 Approach to Data Collection 3.4-2
3.4.3 Environmental Setting 3.4-6
3.4.4 Applicable Regulations, Policies and Standards 3.4-26
3.4.5 Applicant Proposed Measures 3.4-36
3.4.6 Environmental Analysis 3.4-42
3.4.7 References 3.4-83

3.5 Cultural Resources 3.5-1
3.5.1 Definitions 3.5-1
3.5.2 Environmental Setting 3.5-3
3.5.3 Applicable Regulations, Policies and Standards 3.5-10
3.5.4 Applicant Proposed Measures 3.5-13
3.5.5 Environmental Analysis 3.5-16
3.5.6 References 3.5-20

3.6 Energy 3.6-1
3.6.1 Environmental Setting 3.6-1
3.6.2 Applicable Regulations, Policies, and Standards 3.6-3
3.6.3 Applicant Proposed Measures 3.6-9
3.6.4 Environmental Analysis 3.6-10
3.6.5 References 3.6-12

3.7 Geology, Soils and Paleontology 3.7-1
3.7.1 Environmental Setting 3.7-1
3.7.2 Applicable Regulations, Policies and Standards 3.7-34
3.7.3 Applicant Proposed Measures 3.7-38
3.7.4 Environmental Analysis 3.7-39
3.7.5 References 3.7-50

3.8 Greenhouse Gas Emissions 3.8-1
3.8.1 Environmental Setting 3.8-11

TABLE OF CONTENTS

3.8.2 Applicable Regulations, Policies and Standards 3.8-4
3.8.3 Applicant Proposed Measures 3.8-10
3.8.4 Environmental Analysis 3.8-11
3.8.5 References 3.8-16

3.9 Hazards and Hazardous Materials 3.9-1
3.9.1 Environmental Setting 3.9-1
3.9.2 Applicable Regulations, Policies, and Standards 3.9-8
3.9.3 Applicant Proposed Measures 3.9-15
3.9.4 Environmental Analysis 3.9-21
3.9.5 References 3.9-31

3.10 Hydrology and Water Quality 3.10-1
3.10.1 Environmental Setting 3.10-1
3.10.2 Applicable Regulations, Policies and Standards 3.10-15
3.10.3 Applicant Proposed Measures 3.10-23
3.10.4 Environmental Analysis 3.10-27
3.10.5 References 3.10-36

3.11 Land Use and Planning 3.11-1
3.11.1 Environmental Setting 3.11-1
3.11.2 Applicable Regulations, Policies and Standards 3.11-7
3.11.3 Applicant Proposed Measures 3.11-11
3.11.4 Environmental Analysis 3.11-11
3.11.5 References 3.11-23

3.12 Mineral Resources 3.12-1
3.12.1 Environmental Setting 3.12-1
3.12.2 Applicable Regulations, Policies, and Standards 3.12-6
3.12.3 Applicant Proposed Measures 3.12-7
3.12.4 Environmental Analysis 3.12-8
3.12.5 References 3.12-9

3.13 Noise 3.13-1
3.13.1 Noise Concepts 3.13-1
3.13.2 Groundborne Vibration Concepts 3.13-3
3.13.3 Environmental Setting 3.13-3
3.13.4 Applicable Laws, Regulations, and Policies 3.13-14

3.13.5 Applicant Proposed Measures 3.13-20
3.13.6 Environmental Analysis 3.13-20
3.13.7 References 3.13-32

3.14 Population and Housing 3.14-1
3.14.1 Environmental Setting 3.14-1
3.14.2 Applicable Regulations, Policies and Standards 3.14-4
3.14.3 Applicant Proposed Measures 3.14-6
3.14.4 Environmental Analysis 3.14-6
3.14.5 References 3.14-8

3.15 Public Services 3.15-1
3.15.1 Environmental Setting 3.15-1
3.15.2 Applicable Regulations, Policies and Standards 3.15-7
3.15.3 Applicant Proposed Measures 3.15-10
3.15.4 Environmental Analysis 3.15-11
3.15.5 References 3.15-15

3.16 Recreation 3.16-1
3.16.1 Environmental Setting 3.16-1
3.16.2 Applicable Regulations, Policies and Standards 3.16-8
3.16.3 Applicant Proposed Measures 3.16-8
3.16.4 Environmental Analysis 3.16-8
3.16.5 References 3.16-11

3.17 Transportation 3.17-1
3.17.1 Environmental Setting 3.17-1
3.17.2 Applicable Regulations, Policies and Standards 3.17-11
3.17.3 Applicant Proposed Measures 3.17-13
3.17.4 Environmental Analysis 3.17-14
3.17.5 References 3.17-25

3.18 Tribal Cultural Resources 3.18-1
3.18.1 Definitions 3.18-1
3.18.2 Environmental Setting 3.18-1
3.18.3 Applicable Regulations, Policies and Standards 3.18-6
3.18.4 Applicant Proposed Measures and CPUC Measures 3.18-10
3.18.5 Environmental Analysis 3.18-12

3.18.6 References 3.18-16

3.19 Utilities and Service Systems 3.19-1

3.19.1 Environmental Setting 3.19-1

3.19.2 Applicable Regulations, Policies and Standards 3.19-7

3.19.3 Applicant Proposed Measures 3.19-10

3.19.4 Environmental Analysis 3.19-11

3.19.5 References 3.19-17

3.20 Wildfire 3.20-1

3.20.1 Environmental Setting 3.20-1

3.20.2 Applicable Regulations, Policies and Standards 3.20-9

3.20.3 Applicant Proposed Measures 3.20-14

3.20.4 Environmental Analysis 3.20-16

3.20.5 References 3.20-22

3.21 Mandatory Findings of Significance 3.21-1

3.21.1 Summary of Impacts 3.21-1

3.21.2 References 3.21-22

5 Report Preparation Personnel 5.1

5.1 List of Preparers 5.1

5.1.1 Lead and Participating Agencies 5.1

List of Tables

Table 1.3-1 Anticipated Permits and Approvals 1-5
Table 2-1 Number of Existing Structures to be Removed or Modified 2-11
Table 2-2 Proposed Project Components per Segment 2-12
Table 2-3 Structures to be Installed per Segment 2-14
Table 2-4 Substation Modifications 2-19
Table 2-5 Work Area Disturbance 2-25
Table 2-6 Potential Staging Area Locations 2-27
Table 2-7 Types, Uses, and Volumes of Hazardous Materials 2-44
Table 2-8 Construction Equipment and Workforce 2-46
Table 2-9 Vehicle Miles Traveled during Project Construction 2-56
Table 2-10 Applicant-Proposed Measures 2-59
Table 3.1-1 Aesthetic Resource Terms and Definitions 3.1-1
Table 3.1-2 Landscape Units Summary 3.1-7
Table 3.1-3 Summary of Representative Viewpoints and KOP Photographs 3.1-14
Table 3.1-4 USFS Scenery Management System Scenic Integrity Objectives 3.1-19
Table 3.1-5 Visual Quality and View Response 3.1-25

TABLE OF CONTENTS

Table 3.1-6	Guidelines for Determining Adverse Visual Impact Significance	3.1-26
Table 3.1-7	Summary of Proposed Project Impacts to Aesthetic Resources	3.1-28
Table 3.1-8	Visual Impact Analysis	3.1-29
Table 3.2-1	Summary of Proposed Project Impacts to Agriculture and Forestry Resources	3.2-12
Table 3.3-1	Air Basin and Jurisdiction by Proposed Project Segments	3.3-1
Table 3.3-2	Air Quality Data Summary (2020–2022)	3.3-10
Table 3.3-3	State and National Ambient Air Quality Standards and Attainment Status	3.3-12
Table 3.3-4	Applicant Proposed Measures	3.3-17
Table 3.3-5	CPUC Environmental Measures	3.3-17
Table 3.3-6	SCAQMD Air Quality Significance Thresholds	3.3-18
Table 3.3-7	SCAQMD Air Quality Localized Significance Thresholds	3.3-19
Table 3.3-8	EKAPCD Air Quality Significance Thresholds	3.3-20
Table 3.3-9	SJVAPCD Air Quality Significance Thresholds	3.3-20
Table 3.3-10	Staging Areas Near Sensitive Receptors	3.3-22
Table 3.3-11	Summary of Proposed Project Impacts to Air Quality	3.3-23
Table 3.3-12	Proposed Project Consistency with Applicable Air Quality Plan Measures	3.3-25
Table 3.3-13	Estimated Construction Annual Air Pollution Emissions within SJVAB	3.3-29
Table 3.3-14	Estimated Construction Annual Air Pollution Emissions within EKAB	3.3-29
Table 3.3-15	Estimated Uncontrolled Construction Annual Emissions within SCAB	3.3-30
Table 3.3-16	Staging Areas Near Sensitive Receptors	3.3-32
Table 3.4-1	Vegetation Communities in the BSA	3.4-7
Table 3.4-2	Special Status Species in Proposed Project BSA	3.4-11
Table 3.4-3	Wetlands and Riparian Areas within the BSA	3.4-21
Table 3.4-4	Native Trees in the Proposed Project BSA and Work Areas	3.4-21
Table 3.4-5	Applicant Proposed Measures for Biological Resources Impacts	3.4-37
Table 3.4-6	Summary of Proposed Project Impacts to Biological Resources	3.4-42
Table 3.4-7	Temporary and Permanent Impacts on Natural Communities and Riparian Areas.	3.4-75
Table 3.5-1	Archaeological Resource Descriptions	3.5-7
Table 3.5-2	Direct API NRHP/CRHR Listed, Determined Recommended Eligible Resources	3.5-9
Table 3.5-3	Applicant Proposed Measures	3.5-14
Table 3.5-4	CPUC Environmental Measures	3.5-15
Table 3.5-5	Summary of Proposed Project Impacts to Cultural Resources	3.5-16
Table 3.6-1	Applicant Proposed Measures Relevant to Energy Impact Analysis	3.6-9
Table 3.6-2	Summary of Proposed Impacts to Energy	3.6-10
Table 3.7-1	Mapped Geologic Units in the Proposed Project Region	3.7-1
Table 3.7-2	Mapped Soil Units and Soil Properties.	3.7-3
Table 3.7-3	Major Active Faults in the Proposed Project Region	3.7-21
Table 3.7-4	Paleontological Sensitivity of Geologic Units in Proposed Project Area	3.7-30
Table 3.7-5	Applicant Proposed Measures for Geology, Soils, and Paleontological Resources	3.7-38
Table 3.7-6	Summary of Proposed Project Impacts to Geology, Soils and Paleontology	3.7-40
Table 3.8-1	California Greenhouse Gas Emissions, 2014 to 2020	3.8-3
Table 3.8-2	Summary of Proposed Project Impacts to Greenhouse Gas Emissions	3.8-12
Table 3.8-3	Proposed Project GHG Emissions	3.8-14
Table 3.9-1	Hazardous Sites within 0.25 Mile of the Project	3.9-4
Table 3.9-2	Applicant Proposed Measures for Hazardous Material Impacts	3.9-16
Table 3.9-3	CPUC Environmental Measures	3.9-19

TABLE OF CONTENTS

Table 3.9-4	Summary of Proposed Project Impacts to Hazards and Hazardous Material	3.9-21
Table 3.10-1	Creeks and Canals within the Proposed Project Area	3.10-4
Table 3.10-2	Dams in the Proposed Project Vicinity	3.10-10
Table 3.10-3	Applicant Proposed Measures for Hydrology and Water Quality	3.10-23
Table 3.10-4	Summary of Proposed Project Impacts to Hydrology and Water Quality	3.10-27
Table 3.11-1	Local Jurisdictions and Management Agencies in the Proposed Project Area	3.11-1
Table 3.11-2	Land Use Categories by Segment in the Proposed Project Study Area (acres)	3.11-2
Table 3.11-3	Local Zoning Designations by Segment in Proposed Project Study Area (acres)	3.11-5
Table 3.11-4	Summary of Proposed Project Impacts to Land Use and Planning	3.11-12
Table 3.11-5	Land Use Plans, Policies, and Regulations Consistency Analysis	3.11-14
Table 3.12-1	Mineral Resource Zone Classification Categories	3.12-2
Table 3.12-2	Mineral Resource Areas within 1 mile of the Proposed Project	3.12-5
Table 3.12-3	Active Mineral Resource Recovery Sites within 1 mile of the Proposed Project	3.12-5
Table 3.12-4	Summary of Proposed Project Impacts to Mineral Resources	3.12-8
Table 3.13-1	Typical Noise Levels in the Environment	3.13-2
Table 3.13-2	Existing Typical Land Use Noise Levels in Proposed Project Vicinity	3.13-4
Table 3.13-3	Noise-sensitive Receptors within 1,000 feet of the Proposed Project	3.13-7
Table 3.13-4	Protective Noise Levels Recommended by U.S. EPA	3.13-14
Table 3.13-5	Groundborne Vibration Impact Thresholds	3.13-15
Table 3.13-6	Maximum Noise Limitations for Mobile Construction Equipment	3.13-19
Table 3.13-7	Maximum Noise Limitations for Stationary Construction Equipment	3.13-19
Table 3.13-8	Applicant Proposed Measures for Noise Impacts	3.13-20
Table 3.13-9	Summary of Proposed Project Impacts to Noise	3.13-22
Table 3.13-10	Typical Noise Levels from Construction Equipment	3.13-23
Table 3.13-11	Construction Noise Near School and Residences	3.13-25
Table 3.13-12	Established Noise Standards for Construction Near Residential Structures.	3.13-27
Table 3.13-13	Vibration Levels from Construction Equipment	3.13-31
Table 3.14-1	Population Estimates	3.14-1
Table 3.14-2	Housing Estimates	3.14-2
Table 3.14-3	Construction Labor Estimates	3.14-4
Table 3.14-4	Housing Determination by Segment	3.14-4
Table 3.14-5	Summary of Proposed Project Impacts to Population and Housing	3.14-6
Table 3.15-1	Fire Stations in Proximity to the Proposed Project	3.15-2
Table 3.15-2	Police Departments and Sheriff's Office Stations in Proximity to the Project	3.15-5
Table 3.15-3	Schools in Proximity to the Proposed Project	3.15-6
Table 3.15-4	Applicant Proposed Measures Relevant to Public Services Analysis	3.15-10
Table 3.15-5	Summary of Proposed Project Impacts to Public Services	3.15-12
Table 3.16-1	Summary of Proposed Project Impacts to Recreation	3.16-9
Table 3.17-1	Existing Highways	3.17-1
Table 3.17-2	Existing Roadways	3.17-2
Table 3.17-3	Existing Airports	3.17-4
Table 3.17-4	Bus Routes and Frequencies	3.17-10
Table 3.17-5	Applicant Proposed Measures	3.17-14
Table 3.17-6	Summary of Proposed Project Impacts to Transportation	3.17-15
Table 3.17-7	Applicable Transportation Programs, Plans, and Policies	3.17-18
Table 3.18-1	Tribes Contacted During Native American Coordination	3.18-5

Table 3.18-2 Applicant Proposed Measure 3.18-9
Table 3.18-3 CPUC Environmental Measures 3.18-11
Table 3.18-4 Summary of Proposed Project Impacts to Tribal Cultural Resources 3.18-13
Table 3.19-1 Landfills in Proximity to the Proposed Project 3.19-7
Table 3.19-2 Applicant Proposed Measures Relevant to Utilities and Service Systems 3.19-11
Table 3.19-3 CPUC Environmental Measure 3.19-11
Table 3.19-4 Summary of Proposed Impacts to Utilities and Service Systems 3.19-12
Table 3.20-1 Wildfire Occurrences Along the Proposed Project Alignment 3.20-3
Table 3.20-2 Environmental Setting by Segment 3.20-8
Table 3.20-3 Applicant Proposed Measures 3.20-14
Table 3.20-4 CPUC Environmental Measures 3.20-15
Table 3.20-5 Summary of Proposed Project Impacts to Wildfires 3.20-17
Table 3.21-1 Summary of Proposed Project Impacts for Mandatory Findings of Significance 3.21-1
Table 3.21-2 Cumulative Projects List 3.21-5
Table 5.1-1 Consultant Team 5-1
Table 5.1 1 Subcontractor Teams 5-2

List of Figures

Figure 2-1 Project Location 2-3
Figure 2-2 Segment 1 2-4
Figure 2-3 Segment 2 2-5
Figure 2-4 Segment 3 2-6
Figure 2-5 Segment 4 2-8
Figure 2-6 Segment 5 2-9
Figure 2-7 Existing Utility System 2-10
Figure 2-8 Typical Proposed Structure Design 2-16
Figure 2-9 Typical Proposed Structure Design 2-17
Figure 2-10 Typical Proposed Structure Design 2-18
Figure 2-11 New Easements Required 2-22
Figure 2-12 Staging Areas 2-30
Figure 2-13 Vault and T-Pull Box Details 2-37
Figure 3.1-1 Landscape Units and Key Observation Point Locations 3.1-6
Figure 3.1-2 Law of Reflection 3.1-27
Figure 3.1-3 KOP 1a (original) 3.1-31
Figure 3.1-4 KOP 1b (simulation) 3.1-32
Figure 3.1-5 KOP 2a (original) 3.1-33
Figure 3.1-6 KOP 2a (simulation) 3.1-34
Figure 3.1-7 KOP 3a (original) 3.1-35
Figure 3.1-8 KOP 3b (simulation) 3.1-36
Figure 3.1-9 KOP 6a (original) 3.1-37
Figure 3.1-10 KOP 6b (simulation) 3.1-38
Figure 3.1-11 KOP 8a (original) 3.1-39
Figure 3.1-12 KOP 8b (simulation) 3.1-40
Figure 3.1-13 KOP 11a (original) 3.1-41
Figure 3.1-14 KOP 11b (simulation) 3.1-42

Figure 3.1-15 KOP 15a (original) 3.1-43
Figure 3.1-16 KOP 15b (simulation) 3.1-44
Figure 3.1-17 KOP 17a (original) 3.1-45
Figure 3.1-18 KOP 17b (simulation) 3.1-46
Figure 3.2-1 Farmland and Forest Land 3.2-3
Figure 3.2-2 Agricultural Zoning for the Proposed Project Area 3.2-4
Figure 3.2-3 Williamson Act Land 3.2-5
Figure 3.3-1 Air Basins and Air Districts 3.3-2
Figure 3.3-2 Sensitive Receptors in the Proposed Project Vicinity 3.3-7
Figure 3.3-3 Sensitive Receptors in the Proposed Project Vicinity 3.3-8
Figure 3.3-4 Sensitive Receptors in the Proposed Project Vicinity 3.3-9
Figure 3.4 1 Critical Habitat within the Proposed Project Vicinity 3.4-24
Figure 3.4-2 Preserve Areas within the Proposed Project Vicinity 3.4-27
Figure 3.4-3 Significant Ecological Areas within the Proposed Project Vicinity 3.4-27
Figure 3.7-1 Mapped Geologic Units in the Proposed Project Area 3.7-9
Figure 3.7-2 Soil Units in the Proposed Project Area (Map 1 of 4) 3.7-10
Figure 3.7-3 Soil Units in the Proposed Project Area (Map 2 of 4) 3.7-11
Figure 3.7-4 Soil Units in the Proposed Project Area (Map 3 of 4) 3.7-12
Figure 3.7-5 Soil Units in the Proposed Project Area (Map 4 of 4) 3.7-13
Figure 3.7-6 Landslide Susceptibility (Map 1 of 3) 3.7-18
Figure 3.7-7 Landslide Susceptibility (Map 2 of 3) 3.7-19
Figure 3.7-8 Landslide Susceptibility (Map 3 of 3) 3.7-20
Figure 3.7-9 Major Earthquake Faults in the Proposed Project Region 3.7-23
Figure 3.7-10 Major Earthquake Faults in the Proposed Project Area (Map 1 of 2) 3.7-24
Figure 3.7-11 Major Earthquake Faults in the Proposed Project Area (Map 2 of 2) 3.7-25
Figure 3.9-1 Gas Pipelines in the Proposed Project Vicinity 3.9-7
Figure 3.10-1 Regional Water Quality Control Boards 3.10-2
Figure 3.10-2 Watersheds within the Proposed Project Area 3.10-5
Figure 3.10-3 Surface Waters in the Proposed Project Area 3.10-7
Figure 3.10-4 FEMA Flood Hazard Zones 3.10-11
Figure 3.10-5 Dam Failure Inundation Areas 3.10-12
Figure 3.10-6 Groundwater Basins and GSAs in the Proposed Project Area 3.10-14
Figure 3.11-1 Land Use Categories within the Proposed Project Study Area 3.11-3
Figure 3.11-2 Significant Ecological Area 3.11-8
Figure 3.12-1 Mining and Mineral Resources in the Proposed Project Vicinity 3.12-3
Figure 3.12-2 Active Wells in the Project Vicinity 3.12-4
Figure 3.13-1 Nearest Residential Sensitive Receptor by Proposed Project Segment (Map 1/5) .. 3.13-8
Figure 3.13-2 Nearest Residential Sensitive Receptor by Proposed Project Segment (Map 2/5) .. 3.13-9
Figure 3.13-3 Nearest Residential Sensitive Receptor by Proposed Project Segment (Map 3/5) 3.13-10
Figure 3.13-4 Nearest Residential Sensitive Receptor by Proposed Project Segment (Map 4/5) 3.13-11
Figure 3.13-5 Nearest Residential Sensitive Receptor by Proposed Project Segment (Map 5/5) 3.13-12
Figure 3.15-1 Public Services in Proximity to the Proposed Project 3.15-3
Figure 3.16-1 Parks and Recreational Areas in the Vicinity of the Proposed Project 3.16-3
Figure 3.16-2 Preserves in the Vicinity of the Proposed Project 3.16-4
Figure 3.17-1 Regional Roadway Network 3.17-5
Figure 3.17-2 Airport Facilities 3.17-6

Figure 3.17-3 Bicycle Routes, Public Transit, and Railroads 3.17-7
Figure 3.19-1 Telecommunication Lines in Proximity to the Proposed Project. 3.19-2
Figure 3.19-2 Gas Pipelines in the Vicinity of the Proposed Project 3.19-3
Figure 3.20-1 40 Scott and Burgan Fire Behavior Fuel Model 3.20-4
Figure 3.20-2 Fire Hazard Severity Zones and CPUC Fire Threat Areas 3.20-5
Figure 3.20-3 Wildland Urban Interface Areas 3.20-7
Figure 3.21-1 Cumulative Project Locations 3.21-7

List of Appendices

Appendix A Project Detail Maps
Appendix B EMF Field Management Plan
Appendix C Air Quality and Greenhouse Gas Supporting Information
Appendix D Biological Resource Supporting Information
Appendix E Cultural Resources Supporting Information

This page is intentionally left blank.

Acronyms and Abbreviations

2045 CAP	2045 Climate Action Plan
AADT	annual average daily traffic
AB	Assembly Bill
AC	alternating current
ACCC	aluminum conductor composite core
ACSR	aluminum conductor steel-reinforced
ADSS	all-dielectric self-supporting
APM	applicant proposed measure
APE	area of potential effect
API	area of potential impact
ASML	above sea level
ASTM	American Society for Testing Methods
AVEK	Antelope Valley East Kern Water Agency
BAT	best available technologies
biogas	biomethane
BMP	best management practice
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CalGEM	California Geologic Energy Management Division
CAL FIRE	California Department of Forestry and Fire Protection
Cal OES	California Governor's Office of Emergency Services
Caltrans	California Department of Transportation
CA MUTCD	California Manual on Uniform Traffic Control Devices
CARB	California Air Resources Board
CATTCH	California Temporary Traffic Control Handbook
CBC	California Building Code
CCAP	Community Climate Action Plan
CCR	California Code of Regulations

ACRONYMS AND ABBREVIATIONS

CDP	census-designated place
CDFW	California Department of Fish and Wildlife
CDOC	California Department of Conservation
CDPR	California Department of Pesticide Regulation
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CH2	methane
CHP	California Highway Patrol
CPUC	California Public Utilities Commission
CESA	California Endangered Species Act
CGS	California Geological Survey
CPN	Calpine Pipeline Network
CO	Carbon Monoxide
CNEL	Community Noise Equivalent Level
CRMP	Cultural Resource Management Plan
CSD	Community Services District
CUPA	Certified Unified Program Agency
CVRWQCB	Central Valley Regional Water Control Board
CWA	Clean Water Act
dB	decibel
DPM	Diesel Particulate Matter
DTSC	California Department of Toxic Substances Control
DWR	Department of Water Resources
ECC	emergency communication center
EISA	Energy Independence and Security Act
EKAPCD	Eastern Kern Air Pollution Control District
EMFs	electromagnetic fields
EO	executive order
EOC	emergency operations center
EPA	U.S. Environmental Protection Agency
ESA	environmentally sensitive area
FAA	Federal Aviation Administration

FBFM40	40 Scott and Burgan Fire Behavior Fuel Model
FEIR	Final Environmental Impact Report
FEMA	Federal Emergency Management Agency
FESA	Federal Endangered Species Act
FHSZ	Fire Hazard Severity Zone
FHWA	Federal Highway Administration
FIFRA	Federal Insecticide, Fungicide, and Rodenticide
FRA	Federal Railroad Administration
FRA	Federal Responsibility Area
FTA	Federal Transit Administration
GHG	greenhouse gas
GIS	geographic information system
GO	general order
GPS	global positioning system
GWh	gigawatt hours
GSA	groundwater sustainability agencies
GSP	groundwater sustainability plans
HAP	hazardous air pollutants
HFC	hydrofluorocarbons
HFTD	high fire threat district
HMBP	Hazardous Materials Business Plan
HMMP	Hazardous Materials Management Plan
HMTA	Hazardous Materials Transportation Act
hp	horsepower
HRP	Habitat Restoration Plan
I	Interstate
IEEE	Institute of Electrical and Electronics Engineers
ISTEA	Intermodal Surface Transportation Efficiency Act
JPA	joint protection area
KCFD	Kern County Fire Department
KCSO	Kern County Sheriff's Office
KCWA	Kern County Water Agency
KMRC	Kern County Medical Reserve Corps
KOP	key observation point

ACRONYMS AND ABBREVIATIONS

LACM	National History Museum of Los Angeles County
LASD	Los Angels Sheriff's Department
LACFD	Los Angeles County Fire Department
LARWQCB	Los Angles Regional Water Quality Control Borad
LPNF	Los Padres National Forest
LRA	Local Responsibility Area
LST	Lattice Steel Tower
LWS	light-weight steel
LU	landscape unit
MCL	Maximum Contaminant Level
MDAB	Mojave Desert Air Basin
MHMP	Multi-jurisdiction Hazard Mitigation Plan
MMRP	Mitigation Monitoring and Reporting Plan
MLC	mineral land classification
mph	miles per hour
MRZ	mineral resource zone
MS4	municipal separate storm sewer system
msl	mean sea level
MUTCD	Manual of Uniform Traffic Control Devices
N_2O	nitrous oxide
NAHC	Native American Heritage Commission
NAAQS	National Ambient Air Quality Standards
NCP	National Contingency Plan
NEHRP	National Earthquake Hazards Reduction Program
NESC	National Electrical Safety Code
NHTSA	National Highway Traffic Safety Administration
NOT	Notice of Termination
NPDES	National Pollution Discharge Elimination System
NPL	National Priorities List
NRCS	National Resources Conservation Service
O3	Ozone
O&M	operations and maintenance
OHGW	overhead ground wire
OHP	Office of historic preservation

OPGW	optical ground wire
OPR	Office of Planning and Research
OSHA	Occupational Health and Safety Administration
PEA	Proponents Environmental Assessment
PERP	Portable Equipment Registration Program
PFYC	Potential Fossil Yield Classification
PFC	perfluorocarbon
PG&E	Pacific Gas and Electric Company
PPV	peak particle velocity
PRC	Public Resources Code
PSD	prevention of significant deterioration
PUC	Public Utilities Code
Qfg	terrace fanglomerate
Qls	landslide debris
Qoa	older alluvium
RACT	Reasonably Availible Control Technology
RCRA	Resource Conservation and Recovery Act
REL	Referrence Exposure Levels
RHNA	regional housing needs assessment
ROSB	CPUC Railroad Operations and Safety Branch
ROS	Recreation Opportunity Spectrum
ROW	right-of-way
RPS	Renewable Portfolio Standard
RWQCB	Regional Water Quality Control Board
SARA	Superfund Amendments and Reauthorization Act
SEA	Significant Ecological Area
SB	Senate Bill
SB X1-2	Senate Bill 2 of the First Extraordinary Session
SCAB	South Coast Air Basin
SCAQMD	South Coast Air Quality Management District
SCE	Southern California Edison
SEMS	Standard Emergency Management System
SH_6	sulfur hexafluoride

SFHA	Special Flood Hazard Area
SHMA	Seismic Hazard Mapping Act
SHMP	State Hazard Mitigation Plan
SIP	State Implementation Plan
SIO	scenic integrity objective
SJVAB	San Joaquin Valley Air Basin
SJVAPCD	San Joaquin Valley Air Pollution Control District
SLF	Sacred Lands File
SMARA	Surface Mining and Reclamation Act of 1975
SMS	Scenery Management System
SNF	Sequoia National Forest
SO_2	sulfur dioxide
SoCalGas	Southern California Gas
SoKR	South of Kern River
SPCC	Spill Prevention, Control, and Countermeasure
SR	State Route
SR-99	State Route 99
SRA	State Responsibility Area
SWP	State Water Project
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
TCMP	Traffic Control Management Plan
TSCA	Federal Toxic Substances Control Act
TAC	toxic air contaminant
TSP	tubular steel pole
UCMP	University of California Museum of Paleontology
UPRR	Union Pacific Railroad
U.S.	United States
USACE	United States Army Corp of Engineers
USDOT	U.S. Department of Transportation
USGS	United States Geological Survey
USFS	United States Forest Service
USFWS	United States Fish and Wildlife Service
VHFHSZ	very high fire hazard severity zone

VMTs	vehicle miles traveled
WEAP	Workers Environmental Awareness Training Program
WEG	wind erodibility group
WUI	wildland–urban interface

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298

DRAFT

Mitigated Negative Declaration

SOUTHERN CALIFORNIA EDISON

TRANSMISSION LINE RATING REMEDIATION GORMAN-KERN RIVER 66 KV PROJECT

APPLICATION NO. A.22-02-014

Project Information

Title:	Transmission Line Rating Remediation Gorman-Kern River 66 kV Project
Location:	Kern County and Los Angeles County, California
Lead Agency Contact:	Eric Chiang, Project Manager California Public Utilities Commission Energy Division 505 Van Ness Avenue, 4th Floor San Francisco, California 94102 Eric.Chiang@cpuc.ca.gov
Applicant Contacts:	Lauren Goschke 2244 Walnut Grove Avenue Post Office Box 800 Rosemead, California 91770 Telephone: (626) 302-4906 E-mail: Lauren.P.Goschke@sce.com

Introduction

Pursuant to California Public Utilities Commission (CPUC) General Order 131-D, Southern California Edison (SCE) filed an application (A.22-02-014) with the CPUC on February 28, 2022, for a Permit to Construct the Transmission Line Rating Remediation Gorman-Kern River 66 kV Project (Proposed Project). The application included the Proponent's Environmental Assessment (PEA), prepared by SCE pursuant to CPUC's Rules of Practice and Procedure Rule 2.4 (compliance with the California Environmental Quality Act [CEQA]). The CPUC prepared this Mitigated Negative Declaration (MND) and supporting Initial Study (IS) as a result of SCE's application for the Proposed Project.

Pursuant to CEQA (California Public Resources Code § 21000 et seq.) the CPUC must prepare an IS for the Proposed Project to determine if any significant adverse effects on the environment would result from project implementation. The IS uses the significance criteria outlined in Appendix G of the State CEQA Guidelines (14 CCR § 15000 et seq.). If the IS for the project indicates that a significant adverse impact could occur, the CPUC would be required to prepare an Environmental Impact Report.

According to CEQA Guidelines Article 6 (Negative Declaration Process) and section 15070 (Decision to Prepare a Negative Declaration or Mitigated Negative Declaration), a public agency shall prepare, or have prepared a proposed negative declaration or mitigated negative declaration (MND) for a project subject to CEQA when:

(a) The Initial Study shows that there is no substantial evidence, in light of the whole record before the agency, that the project may have a significant effect on the environment; or

(b) The Initial Study identifies potentially significant effects, but:

(1) Revisions in the project plans or proposals made by, or agreed to by the applicant before a proposed mitigated negative declaration and initial study are released for public review, would avoid the effects or mitigate the effects to a point where clearly no significant effects would occur; and

(2) There is no substantial evidence, in light of the whole record before the agency, that the project as revised may have a significant effect on the environment.

Based on the analysis in the IS, it has been determined that all project-related environmental impacts could be reduced to a less-than-significant level with the incorporation of minor revisions to the Proposed Project and feasible mitigation measures (MMs), which SCE has agreed to implement should CPUC approve the project. Therefore, adoption of an MND will satisfy the requirements of CEQA. Applicant proposed measures (APMs) identified in SCE's PEA, as revised in coordination with CPUC, and MMs included in this MND are designed to reduce or eliminate the potentially significant environmental impacts described in the IS. The analysis in the IS explains when a measure described in this document has been incorporated

into the project, as a specific project design feature, APM, or MM. MMs are structured in accordance with the criteria in CEQA Guidelines section 15370.

Project Description

The Proposed Project would be located in Kern County and Los Angeles County and would involve rebuilding 65.3 miles of existing 66 kV subtransmission circuits by removing and replacing existing subtransmission towers and poles; removing and replacing existing conductor; installing optical ground wire; and modifying existing substations facilities associated with the powerline. No new subtransmission lines or substations would be constructed as part of the Proposed Project. SCE's stated objectives of the Proposed Project are to ensure compliance with CPUC G.O. 95 standards and address reliability concerns related to the condition of existing infrastructure on the affected subtransmission lines. Construction of the proposed project is preliminarily scheduled to begin in 2026. The construction start date would depend on CPUC approval and would last approximately 23 months.

Alternatives

The purpose of an alternatives analysis pursuant to CEQA is to identify options that would feasibly attain the project's objectives while reducing the significant environmental impacts resulting from the proposed project. CEQA does not require the inclusion of an alternatives analysis in MNDs because the IS concludes that, with incorporation of MMs, all significant adverse impacts resulting from the Proposed Project could be mitigated to less-than-significant levels. Therefore, no alternatives analysis needs to be provided in the IS.

Environmental Determination

The CPUC prepared this IS to determine if the Proposed Project would result in any significant adverse effects on the environment. The analysis presented in the IS is based on the significance criteria in Appendix G of the CEQA Guidelines. The IS relies on information in SCE's PEA filed on February 28, 2022; SCE's responses to deficiency reports and data requests; the CPUC's independent analysis; and other environmental analyses.

SCE's PEA identified measures (APMs) to address potentially significant impacts, and these AMPs are considered to be part of the description of the Proposed Project. Based on the IS analysis, additional MMs are identified for adoption to ensure that impacts of the Proposed Project would be less than significant. The additional MMs either supplement or supersede (i.e., replace) the APMs. In some cases, the APMs identified in SCE's PEA have been revised or excluded from the IS analysis. SCE has agreed to implement all of the MMs as part of the

Proposed Project. Implementation of the MMs below would either avoid potentially significant impacts identified in the IS or reduce them to less-than-significant levels.

A Mitigation Monitoring and Reporting Program (MMRP), included in Section 4 of the IS/MND, has been prepared to ensure that the APMs and MMs are properly implemented. The plan describes specific actions required to implement each measure, including information on the timing of implementation and performance standards. Following project approval, CPUC would prepare and implement a Mitigation Monitoring, Compliance, and Reporting Program to ensure compliance with MMs and that the Proposed Project is implemented as stated in the CPUC-approved Project Description and the adopted MMRP.

Mitigation Measures

Agriculture and Forestry Resources

MM Agriculture-1: Farmland Construction Impact Mitigation.

SCE shall implement the following measures for temporarily disturbed Farmland:

- The applicant shall photo or video document the conditions of temporary work pads within Farmland (i.e, meeting the definition of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance as defined by the Farmland Mapping and Monitoring Program of the California Resources Agency) prior to construction to define the existing conditions of the Farmland areas.
- The applicant shall return all temporary disturbance areas in Farmlands to pre-construction conditions after the completion of construction. The applicant shall photo or video document the post-construction condition to verify it matches pre-construction conditions.
- In areas containing crops or irrigation infrastructure used to maintain crops that must be removed to gain access to temporary work areas for construction purposes, SCE will provide compensation to farmers and/or landowners for replacement of the removed crops and/or irrigation infrastructure.
- If topsoil is removed from an area to accommodate temporary construction activities, it shall be restored to preconstruction conditions within two months of the completion of construction.

Biological Resources

MM Biology-1: Avoidance and Minimization of Impacts on Special-Status Plants

SCE shall avoid, minimize or mitigate impacts on any state or federally listed or California Rare Plant Rank (CRPR) 1 or 2 plants that may be located on the project disturbance areas or surrounding buffer areas. This shall include known occurrences of Bakersfield cactus, Kern mallow, calico monkeyflower and Piute mountains navarretia, as well as new species or populations discovered during pre-construction surveys.

Pre-Construction Surveys. SCE shall obtain CPUC approval of a qualified botanist to perform pre-construction surveys for state or federally listed plant species and those with a California Rare Plant Rank (CRPR) of 1A, 1B, 2A, or 2B that have the potential to occur in the area. These surveys shall be performed utilizing CNPS or other accepted botanical survey protocol. Special-status plant surveys shall be conducted during the appropriate blooming period for each species and prior to construction activities for all work areas occurring off existing access roads in natural areas, including overland travel routes, and areas of existing roads that require modifications. The surveys shall include a floristic inventory and focused search for special-status plants with potential to occur in Project areas where suitable habitat is present. Special-status plant survey(s) shall be conducted within 1 year of construction mobilization.

The survey results shall be summarized in a report and provided to the CPUC no less than 30 days prior to commencement of construction. The survey report shall identify the botanists' names and qualifications, and a description of the survey dates, methods, and a description of the survey efforts, including a list of the species that were searched for, results of the plant inventory evaluation, and suitable habitat that was encountered. The report shall include maps (1: 3,000 scale) that identify final Project work areas and access routes and the extent of focused plant surveys that cover Project areas located in occupied habitat. Maps in the report shall identify point locations for individual plants and boundaries for plant populations. The report shall include specific recommendations for avoiding the plants.

Avoidance Measures. SCE shall mark all populations of special-status plants within the BSA as environmentally sensitive areas on maps that are provided to construction contractors working near environmentally sensitive areas (ESAs). All populations within 25 feet of a project work area and 20 feet of an access road shall be staked and flagged or fenced for avoidance by a qualified biologist or botanist prior to construction and shall be monitored by a qualified biologist or botanist during construction to ensure proper avoidance of the species. The project work areas shall be adjusted as needed to avoid any populations of special status plants that occur within the work area to the extent feasible. All stakes and flagging shall be removed no later than 30 days after construction is complete in the area. Information about special-status plants and avoidance requirements shall be included in the Workers Environmental Awareness Training Program (MM Biology-3). In the event of a discovery of previously undocumented species, the boundary of the occurrence will be flagged, avoided, and monitored as discussed above and the CPUC, CDFW, and/or USFWS will be notified if the species is state or federally listed.

If the special-status plant species cannot be avoided, SCE shall notify CPUC in writing, and SCE shall submit a Salvage and Replanting Plan to CPUC and CDFW for approval as described below. No state or federally listed plant species shall be salvaged or relocated without obtaining permit authorization from CDFW and/or USFWS, as required. SCE shall provide the CPUC with any permits and authorizations obtained from USFWS and CDFW. SCE shall relocate the species to areas within the easement that are outside of the long-term maintenance areas. If the species occurs in an area that is subject to temporary impacts, the species shall be included in the restoration of the site (see MM Biology-2).

Salvage and Replanting Plan. For impacts on state or federally listed or CRPR 1 or 2 plants that cannot be avoided, the qualified botanist shall prepare and implement a Salvage and Replanting Plan. The Salvage and Replanting plan would specify, at a minimum, the following:

- Location of the mitigation site(s) (extent of the plants within and adjacent to project areas).
- Procedures for procuring plants, such as transplanting or collecting seed from plants to be impacted, including storage locations and methods to preserve the plants.
- Procedures for propagating collected seed, including storage methods.
- Quantity and species of plants to be planted or transplanted.
- Planting procedures, including the use of soil preparation and irrigation.
- Schedule and action plan to maintain and monitor the mitigation site for a minimum 3-year period.
- Reporting procedures, including the contents of annual progress reports.
- List of criteria (e.g., growth, plant cover, survivorship) by which to measure success of the plantings.
- Contingency measures to implement if the plantings are not successful (i.e., weed removal, supplemental plantings, etc.).

SCE shall submit the plan to the CPUC for review and approval no less than 30 days prior to impacting or collecting special-status plants. At a minimum, the transplanted/created population(s) shall have approximately the same characteristics as the impacted population (within 10-percent density, total population number, and non-native/invasive). Seasonal population changes may be taken into account by identifying and documenting the characteristics of an appropriate representative reference site prior to impacting a population. Reference sites that will be used must be identified and described in the Salvage and Replanting Plan.

If CPUC or CDFW determines that the Salvage and Replanting Plan is not likely to be successful (due to the species' life form, habitat requirements, or other factors), then SCE shall provide compensation lands consisting of habitat occupied by the impacted CRPR 1 or 2 ranked plant occurrences at a 1:1 ratio of acreage for any occupied habitat affected by the project. Occupied habitat will be calculated on the project site and on the compensation lands as including each special-status plant occurrence. If compensation is required as a means of mitigating special-status plant impacts, it may be accomplished by purchasing credit in an established mitigation bank, acquiring conservation easements, or direct purchase and preservation of compensation lands. Compensation for these impacts may be "nested" or "layered" with compensation for habitat loss.

Annual Reporting. Annual salvage and replanting monitoring reports shall be submitted to CPUC for a period of 3 years after transplanting to ensure success of the transplanted populations. Where transplantation has not been successful under the criteria set forth in the performance standards below, compensation shall be provided to offset the loss of transplanted

special-status plants. Annual reports shall include, details of plants or propagules salvaged, stored, and transplanted (salvage and transplanting locations, species, number, size, condition, etc.); adaptive management efforts implemented (date, location, type of treatment, results, etc.); and evaluation of success of transplantation. Salvage status and success will be described in the annual report.

MM Biology-2: Habitat Restoration

SCE shall prepare and implement a Revegetation, Restoration, and Monitoring Plan that addresses procedures for quantifying habitat impacts from construction activities and revegetation and/or restoration requirements for applicable vegetation and soils resources. The plan shall also address the requirements for restoration in the following measures:

- Special-status plant populations (MM Biology-1).
- Blunt-nosed leopard lizard habitat (MM Biology-6)
- Burrowing owl (MM Biology-7)
- Sensitive natural plant communities including riparian woodland and shrubland habitat, blue oak and valley oak woodlands, California buckeye groves, wetlands (MM Biology 11)

The plan shall be developed upon completion of final design and submitted to the CPUC for review and approval no less than 60 days before commencement of construction.

All temporarily disturbed areas shall be restored to near pre-construction conditions to ensure permanent impacts do not occur in areas of temporary impacts as a result of the project. Pre-construction conditions, including vegetation cover estimates and percentage of Cal-IPC list invasive weeds (plants rated as "High" and "Moderate"), shall be documented for each project work area as described below in the Pre-Construction Report. The goal of the restoration shall be that habitat functions and values and species composition of the restored vegetation are comparable to those of nearby comparable vegetation within 3 years.

The plan shall identify corrective actions to implement (e.g., removal of invasive weeds, supplemental planting, etc.) if the performance standards defined in this measure are not achieved. Work sites that have been proven to meet the performance standard defined in this measure shall not require further monitoring and reporting.

MM Biology-3: Worker Environmental Awareness Program

All workers on the project site shall be required to attend a Worker's Environmental Awareness Training Program (WEAP). Training shall inform all construction personnel of the resource protection and avoidance measures as well as procedures to be followed upon the discovery of environmental resources. WEAP training materials will include avoidance and minimization measures being implemented to protect biological resources, cultural resources, and paleontological resources, and the management of hazardous materials. WEAP training will also discuss terms and conditions of any permits or agreements, information on federal and state environmental laws, and consequences and penalties for violation or noncompliance with

these laws, regulations, and project permits. Workers will be informed about the presence, identification, life history, and habitat requirements of the special-status species that have a potential to occur in the project area. The WEAP training program will be provided to the CPUC at least 30 days prior to construction for CPUC verification that all mitigation measures and topics are addressed. SCE will be responsible for maintaining WEAP training logs. At a minimum, the logs will contain the name, company, and date of training. These logs will be made available to the CPUC within a month after training is completed. The WEAP training will include, at a minimum, the following topics so crews will understand their obligations:

- ESA and other delineated boundaries (e.g., work areas) and how to recognize/avoid exclusion areas and sensitive habitat and specific avoidance or minimization measures for sensitive species and habitats
- Housekeeping (e.g., trash management and equipment cleaning)
- Safety, hazardous materials, and fire management, including hazardous substance spill prevention and containment measures
- Work stoppage
- Communication protocol
- Consequences of non-compliance
- Stormwater Pollution Prevention Plan (SWPPP) procedures
- How to identify cultural resources; avoidance requirements and procedures to be followed if unanticipated cultural resources are discovered during construction; disciplinary actions that may occur when historic preservation laws and project proponent policies are violated
- How to identify paleontological resources, including types of fossils that could occur in the project area and types of lithologies in which the fossils could be preserved; avoidance requirements and procedures to be followed if a fossil is discovered during construction; penalties for disturbing paleontological resources
- Review of mitigation and avoidance measures

MM Biology-4: Crotch's Bumble Bee Avoidance Procedure

Focused Survey: Focused surveys shall be conducted in accordance with CDFW's Survey Considerations for CESA Candidate Bumble Bee Species (CDFW 2023) the season immediately prior to ground disturbing activities are scheduled to occur. A minimum of three Crotch bumble bee focused surveys shall be conducted at 2-to-4-week intervals during the colony active period (April through August) when Crotch's bumble bees are most likely to be detected. Non-lethal, photo voucher surveys shall be completed by a biologist who holds a Memorandum of Understanding to capture and handle Crotch's bumble bee (if nesting and chilling protocol is to be utilized) or by a CDFW approved biologist experienced in identifying native bumble bee species (if surveys are restricted to visual surveys that will provide high-resolution photo documentation for species verification). The surveyor shall walk through all areas of suitable habitat focusing on areas with floral resources. Surveys shall be completed at a minimum of one person-hour of searching per three acres of suitable habitat during suitable weather conditions (sustained winds less than 8 mph, mostly sunny to full sun, temperatures between 65 and 90

degrees Fahrenheit) at an appropriate time of day for detection (at least an hour after sunrise and at least two hours before sunset, though ideally between 9:00 AM and 1:00 PM).

Pre-Construction Survey: Nesting surveys shall be conducted with focus on detecting active nesting colonies within one week and 24-hours immediately prior to ground disturbing activities. If an active Crotch bumble bee nest is detected, an appropriate no disturbance buffer zone (including foraging resources and flight corridors essential for supporting the colony) shall be established by a qualified biologist in consultation with CDFW around the nest to reduce the risk of disturbance or accidental take. Nest avoidance buffers may be removed at the completion of the flight season and/or once the qualified biologist deems the nesting colony is no longer active and CDFW has provided concurrence of that determination. If no nests are found but the species is present, a full-time qualified biological monitor shall be present during vegetation removal or ground disturbing activities that are scheduled to occur during the queen flight period (February through March), colony active period (March through September), and/or gyne flight period (September through October). Because bumble bees move nest sites each year, three preconstruction nesting surveys shall be required during each subsequent year of construction, regardless of the previous year's findings, whenever vegetation removal and ground disturbing activities are scheduled to occur during the flight season (February through October). SCE may relocate Crotch's bumble bees out of the work area only if a CESA incidental take permit has been obtained and any relocation follows the terms of the incidental take permit.

Compensatory Mitigation: Compensatory mitigation for permanent direct impacts to suitable Crotch's bumble bee habitat shall be offset through compensatory mitigation, which may include, but is not necessarily limited to, on-site or off-site habitat preservation, enhancement, restoration, and/or creation at a ratio of no less than 1:1.

MM Biology-5: Pre-Construction Surveys for Special-Status Wildlife and Construction Monitoring and Avoidance Procedures

Biologist Approval and Qualifications. A qualified biologist(s) will be pre-approved by the CPUC prior to conducting biological surveys and monitoring for the project. Qualified biologists are defined as individuals with a bachelor's degree or above in a biological science field and demonstrated field experience. Approved and qualified biologists shall conduct required surveys and monitoring for special-status species and active nests. Qualified avian biologists are defined as individuals with demonstrated field expertise in ornithology, in particular, nesting behavior and nest detection. Monitoring biologists conducting avian nest checks shall have demonstrated experience surveying or monitoring nesting birds. Qualified botanists are defined as individuals with demonstrated field expertise in botany. Qualified herpetologists are defined as individuals with demonstrated experience with California reptile and amphibian species. Biologists qualified for construction monitoring shall hold at minimum 1 to 2 years of construction-related biological monitoring experience. Biologists qualified as a lead biological monitor shall have 5 or more years of related experience.

Pre-Construction Surveys. A CPUC-approved qualified biologist (i.e., a biologist with the requisite education and experience to address special-status species and biological resources with potential to occur in the project area) shall conduct a pre-construction survey for special-status wildlife species known to occur or with the potential to occur in all work areas located within suitable habitat for special-status species. In those situations where the qualified biologist cannot make a definitive species identification, the qualified biologist shall make a determination based on the available evidence and professional expertise. The pre-construction survey shall be conducted no earlier than 7 days prior to surface disturbance in each work area. The results of the pre-construction survey will be documented by the qualified biologist in a pre-construction survey report(s). The pre-construction survey report(s) shall be submitted to the CPUC for review and approval and the results shall be submitted to CDFW and USFWS as required by any other regulatory permits or approvals. The pre-construction survey report(s) will include the following:

- Special status species encountered, including potential breeding sites such as dens, burrows, nests, or aquatic habitat
- Type, location, and size of Project impact areas
- Date, time, and weather conditions during survey, and surrounding land uses
- Evaluation of type and quality of habitat
- Map or GIS of survey area and of work area

Monitoring: Where pre-construction surveys indicate the presence of sensitive species within 200 feet of a work area or sensitive habitats within 50 feet of a work area, a CPUC approved biologist(s) shall conduct biological monitoring during construction activities in proximity to the sensitive species or habitats. Extended monitoring buffers for sensitive species may be applied per the conditions of other APMs or mitigation measures. Where special-status species (e.g., amphibians, reptiles, birds, mammals, and bat roosts), sensitive natural communities, riparian areas, or wetlands may occur, unless otherwise determined absent through pre-construction surveys, a qualified biological monitor shall monitor construction activities to ensure that any unplanned or unpermitted impacts to special-status species, sensitive natural communities, riparian habitat, and wetlands are avoided.

Resource Avoidance: Prior to construction or access in any area containing or potentially containing special-status species habitats, sensitive natural communities, riparian areas, or wetlands, the biological monitor shall mark or otherwise delineate the limits of special-status species habitat, sensitive natural communities, riparian areas, and wetlands for avoidance, and where necessary, post signs at access route entrances to inform workers of special access considerations (i.e., seasonal restrictions, biological monitor escort, etc.). Resource markings and signs shall be maintained and repaired as needed and as directed by the biological monitor. All stakes and flagging are removed no later than 30 days after construction is complete.

The biological monitor shall have full authority to halt construction, once safe to do so, if a sensitive resource/species has or may be impacted. The biological monitor may relocate wildlife out of harm's way, if appropriate to protect the species (additional protections or permits would

be required prior to relocation of any state or federally listed threatened or endangered species). The biological monitor shall revisit each active work site at least once a week to inspect the work area for the presence of biological resources and verify that all avoidance measures (e.g., flagging or fencing) are in place.

MM Biology-6: Blunt-nosed leopard lizard Compensatory Mitigation

SCE shall submit a report to USFWS, CDFW, and CPUC documenting (i) the total area of temporary and permanent impacts in blunt-nosed leopard lizard suitable habitat, (ii) the total area of habitat restoration that would offset the temporary and permanent impact, and (iii) the total area of temporary and permanent impact that is not offset by habitat restoration, which would require compensatory mitigation. The report shall be submitted to USFWS, CDFW, and CPUC at least 60 days prior to construction in suitable habitat.

Where impacts cannot be fully offset by habitat restoration, compensatory mitigation shall be provided to offset the permanent and temporary loss of suitable habitat for blunt-nosed leopard lizard. Mitigation for permanent impacts will be provided at a minimum ratio of 1:1 and temporary impacts at a ratio of 0.5:1, unless a higher ratio is required by authorizations issued under FESA for blunt-nosed leopard lizard. Compensatory mitigation shall include either:

- Purchase of mitigation credits from an agency-approved mitigation bank.
- Protection of habitat through acquisition of fee-title or conservation easement and funding for long-term management of the habitat. Title to lands acquired in fee will be transferred to CDFW and conservation easements will be held by an entity approved in writing by the applicable regulatory agency. In circumstances where SCE protects habitat through a conservation easement, the terms of the conservation easement will be subject to approval of the applicable regulatory agencies, and the conservation easement will identify applicable regulatory agencies as third-party beneficiaries with a right of access to the easement areas.

Compensatory mitigation shall be required and approved by the USFWS and appropriate agency (as needed) prior to activities within blunt-nosed leopard lizard suitable habitat.

MM Biology-7: Tehachapi Slender Salamander and Kern County Slender Salamander Compensatory Mitigation

SCE shall submit a report to USFWS, CDFW, and CPUC documenting (i) the total area of temporary and permanent impacts in Tehachapi slender salamander and Kern Canyon slender salamander habitat, (ii) the total area of habitat restoration that would offset the temporary and permanent impact, and (iii) the total area of temporary and permanent impact that is not offset by habitat restoration, which would require compensatory mitigation. The report shall be submitted to USFWS, CDFW, and CPUC at least 60 days prior to construction in Tehachapi slender salamander and Kern Canyon slender salamander habitat.

Where impacts cannot be fully offset by habitat restoration, compensatory mitigation shall be provided to offset the permanent loss of habitat. Mitigation for permanent impacts will be provided at a minimum ratio of 1:1. Compensatory mitigation shall involve protection of habitat through acquisition of fee-title or conservation easement and funding for long-term management of the habitat. Conservation easements will be held by an entity approved by CDFW.

MM Biology-8: Nesting Bird Management

Nesting Bird Management Plan. SCE shall prepare a Nesting Bird Management Plan (NBMP) in coordination with CPUC. The NBMP shall describe methods to minimize potential project effects to nesting birds and avoid any potential for unauthorized take. Project-related disturbance including construction and pre-construction activities shall not proceed within 300 feet of active nests of common bird species or 500 feet of active nests of raptors and tricolored blackbirds until approval of the NBMP by CPUC in consultation with CDFW and USFWS.

NBMP Content. The NBMP shall include: (1) definitions of default nest avoidance buffers for each species or group of species, depending on characteristics and conservation status for each species; (2) a notification procedure for buffer distance reductions should they become necessary; (3) a rigorous monitoring protocol, including qualifications of monitors, monitoring schedule, and field methods, to ensure that any project-related effects to nesting birds will be minimized; and (4) a protocol for documenting and reporting any inadvertent contact or effects to birds or nests.

The paragraphs below describe the NBMP requirements in further detail.

Background. The NBMP shall include the following:

- A summary of applicable state and federal laws and regulations, including definition of what constitutes a nest or active nest under federal law.
- A procedure for amendment of the NBMP, should there be changes in applicable state or federal regulations, and requirement for CDFW review of any NBMP amendment.
- A list of bird species potentially nesting on or near the ROW or other work areas, indicating approximate nesting seasons, nesting habitat, typical nest locations (e.g., ground, vegetation, structures, etc.), tolerance to disturbance (if known) and any conservation status for each species.
- A list of the types of project activities (construction, operations, and maintenance) that may occur during nesting season, with a short description of the noise and physical disturbance resulting from each activity.

Clearing of any vegetation, site preparation in open or barren areas, or other project related activities that may adversely affect breeding birds shall be scheduled outside the nesting season, as feasible.

Pre-construction nest surveys. Pre-construction nest surveys will be conducted prior to any construction activities scheduled during the breeding period. For this project, the breeding period will be defined as January 1 through September 15. The NBMP shall describe the proposed field methods, survey timing, and qualifications of field biologists. The avian biologists conducting the surveys shall be experienced bird surveyors and familiar with standard nest-locating techniques such as those described in Martin and Guepel (1993). Nest surveys will focus on visual searches for nest locations and observations of bird activities and movement to detect nesting activity (e.g., carrying nest materials or food, territorial displays, courtship behavior). Surveys shall be conducted in accordance with the following guidelines:

Surveys shall cover all potential nesting habitat within the ROW or other work areas within 500 feet of these areas for raptors and 300 feet for non-raptors.

Pre-construction surveys shall be conducted for each work area, no longer than 10 days prior to the start of construction activity. On the first day of construction at any given site, a qualified Avian Biologist will perform a pre-construction "sweep" to identify any bird nests or other resources that may have appeared since the 10-day survey.

SCE shall provide the CPUC a report describing the findings of the pre-construction nest surveys, including the time, date, and duration of the survey; identity of the surveyor(s); a list of species observed; and electronic data identifying nest locations and the boundaries of buffer zones. The electronic data set will be updated following each preconstruction nest survey throughout the nesting season. The format and contents of this report will be described in the draft NBMP and will be subject to review and approval by CPUC.

Nest Buffers and Acceptable Activities. Nest buffers shall be delineated on the work site, to consist of clearly visible marking and signage. Buffer locations shall be communicated to the construction contractor and shall remain in effect until formally discontinued (when each nest is no longer active). Measures to ensure nesting buffers are observed shall include direct communication and decision protocol to stop work within buffer areas. In some cases, active nests may be found while work is underway. Therefore, a protocol shall be implemented for stopping ongoing work within the buffer area, securing the work site, and removing personnel and equipment from the buffer.

Buffer distances from active nests shall be implemented to avoid take or adverse effects to nests. Buffers shall be based on the specific nature of the bird species and conservation status, and other pertinent factors. Buffer distances shall be defined specific to each species relative level of tolerance of human activity. If no information is available to specify a buffer distance for a species, then a 300 foot buffer shall apply as a standard buffer distance for migratory birds, and 500 feet of active nests of raptors and 1,000 feet of active nests of tricolored blackbirds. All applicable avoidance measures, including buffer distances, must be continued until nest monitoring (below) confirms that the nestlings have fledged and dispersed, or the nest is no longer active. For each special-status species potentially nesting within or near project work

areas, the NBMP shall specify applicable buffers and any additional nest protection measures, specialty monitoring, or restrictions on work activities, if needed.

The NBMP shall identify acceptable work activities within nest buffers (e.g., pedestrian access for inspection or BMP repair) including conditions and restrictions, and any monitoring required. The NBMP shall include pictorial representation showing buffer distances for ground buffers, vertical helicopter buffers, and horizontal helicopter buffers for nests near the ground and nests in towers.

Nest Buffer Modification or Reduction. At times, SCE or its contractor may propose buffer distances different from those approved in the NBMP. Buffer adjustments shall be reviewed and recommended by a qualified avian biologist, who has been approved by CPUC in consultation with the CDFW and USFWS. The NBMP shall provide a procedure and timing requirements for notifying CPUC, CDFW, and USFWS of any planned adjustments to nest buffers. Separate and distinct procedures will be provided for special-status birds. The NBMP will list the information to be included in buffer reduction notifications in a standardized format.

Nest deterrents. The NBMP shall describe any proposed measures or deterrents to prevent or reduce bird nesting activity on project equipment or facilities, such as buoys, visual or auditory hazing devices, bird repellents, securing of materials, vehicles, and equipment. It shall also include timing for installation of nest deterrents and field confirmation to prevent effects to any active nest; guidance for the contractor to install, maintain, and remove nest deterrents according to product specifications; and periodic monitoring of nest deterrents to ensure proper installation and functioning and prevent injury or entrapment of birds or other animals. In the event that an active nest is located on project facilities, materials or equipment, SCE will avoid disturbance or use of the facilities, materials, or equipment (e.g., by red-tag) until the nest is no longer active.

Communication. The NBMP shall specify the responsibilities of construction monitors in regard to nests and nest issues and specify a direct communication protocol to ensure that nest information and potential adverse impacts to nesting birds can be promptly communicated from nest monitors to construction monitors, so that any needed actions can be taken immediately.

The NBMP shall specify a procedure to be implemented following accidental disturbance of nests, including wildlife rehabilitation options. It also shall describe any proposed measures, and applicable circumstances, to prevent take of precocial young of ground-nesting birds such as killdeer or quail. Finally, the NBMP will specify a procedure for removal of inactive nests, including verification that the nest is inactive and a notification/approval and approval process prior to removal.

Monitoring. SCE shall be responsible for monitoring the implementation, conformance, and efficacy of the avoidance measures (above). The NBMP shall include specific monitoring measures to track any active bird nest within or adjacent to project work areas, bird nesting

activity, project-related disturbance, and outcome of each nest. For nests with reduced buffers, SCE shall monitor each nest until nestlings have fledged and dispersed or until the nest becomes inactive. Nests with default buffers do not require further monitoring once construction work is completed in the area. New nests discovered after work completion in an area will not require monitoring. In addition, monitoring shall include pre-construction surveys, daily sweeps of work areas and equipment, and any special monitoring requirements for particular activities (tree trimming, vegetation removal, etc.) or particular species (noise monitoring, etc.). Nest monitoring shall continue throughout the breeding season during each year of the project's construction activities.

Reporting. Throughout the construction phase of the project, nest locations, project activities in the vicinity of nests (including helicopter routes), and any adjustments to buffer areas shall be updated and available to CPUC monitors on a daily basis in the Field Reporting Environmental Database (FRED). All buffer reduction notifications and prompt notifications of nest-related non-compliance and corrective actions will be made via email to CPUC monitors. In addition, the NBMP shall specify the format and content of nest data to be provided in regular monitoring and compliance reports. At the end of each year's nest season, SCE will submit an annual NBMP report to the CPUC, CDFW, and USFWS

MM Biology-9: Burrowing Owl

Conduct Surveys and Avoidance for Burrowing Owl. Burrowing owl surveys shall be conducted by a qualified biologist in accordance with the most current CDFW guidelines (CDFG 2012; or updated guidelines should they become available). SCE shall implement buffers for active burrowing owl burrow within or adjacent to a work area. The buffer for active burrowing owl nesting sites shall be in accordance with CDFW guidelines (CDFG 2012) and shall be as follows:

- From April 1-August 15, buffers shall be 300 feet for low levels of disturbance (i.e., vehicles, worker presence), and 500 feet for moderate to high levels of disturbance (i.e., demolition, grading, tree felling, helicopter use)
- From August 16-October 15, buffers shall be 600 feet for low and moderate levels of disturbance (i.e., vehicles, worker presence, tree felling, grading), and 1,500 feet for high levels of disturbance (i.e., helicopter use)
- From October 16-March 31, buffers shall be 150 feet for low levels of disturbance (i.e., vehicles, worker presence), 300 feet for moderate levels of disturbance (i.e., grading, tree felling), and 1,500 feet for high levels of disturbance (i.e., helicopter use)

Binocular surveys may be substituted for protocol field surveys on private lands adjacent to the project site only when SCE has made reasonable attempts to obtain permission to enter the property for survey work but was unable to obtain such permission.

If active burrowing owl burrows are located within project work areas, they shall be avoided to the greatest extent possible through work exclusion buffers as described above. Monitoring of

active burrowing owl nests shall occur in all buffer areas as defined above, and other methods to reduce disturbance (such as visual or sound barriers) shall be employed depending on the type and level of work being conducted to prevent the need for relocation. Other measures shall include eliminating actions that reduce burrowing surrogates (e.g., ground squirrels), and the WEAP (MM Biology-3) shall include measures to reduce the potential for the introduction or attraction of predator species, such as litter control.

In any cases where active burrows could not be adequately avoided, as determined by a qualified biologist, through exclusion buffers and project activities could result in substantial indirect disturbance, direct physical disturbance, or destruction of burrows that are located within certain project work areas (i.e., facility footprints, areas that require grading, etc.), SCE may passively relocate the owls, as described below and per the conditions of any required CESA incidental take permit. Passive relocation shall only be considered if work cannot take place due to active nest, such as grading over burrows. No passive relocation of burrowing owls shall be permitted during breeding season, unless a qualified biologist verifies through noninvasive methods that an occupied burrow is not occupied by a mated pair, and only upon authorization by CDFW. Any passive burrowing owl relocation shall address:

- **Replacement Burrows**. For each burrowing owl that will be passively relocated, if fewer than two suitable unoccupied burrows are available within 600 feet of the affected project work site, then SCE shall construct at least two replacement burrows within 600 feet of the affected project work site, or in suitable locations within 0.25 mile when suitable locations within 600 feet are not available. Burrow replacement sites shall be in areas of suitable habitat for burrowing owl nesting, and subject to minimal human disturbance and access. The Burrowing Owl Exclusion Plan shall be prepared that would describe measures to ensure that burrow installation or improvements will not affect sensitive species habitat or any burrowing owls already present in the relocation area. The Burrowing Owl Exclusion Plan shall provide guidelines for creation or enhancement of at least two natural or artificial burrows for each active burrow within the project disturbance area, including a discussion of timing of burrow improvements, specific location of burrow installation, and burrow design. Design of the artificial burrows shall be consistent with CDFW guidelines (CDFG, 2012; or more current guidance as it becomes available) and the Burrowing Owl Exclusion Plan shall be approved by the CPUC and CDFW.
- **Methods.** An occupied burrow may not be disturbed during the nesting season (generally, but not limited to, February 1 to August 31), unless a qualified biologist determines, by non-invasive methods, that it is not occupied by a mated pair. Passive relocation will include installation of one-way doors on burrow entrances that will let owls out of the burrow but will not let them back in. Once owls have been passively relocated, burrows will be carefully excavated by hand and collapsed by, or under the direct supervision, of a qualified biologist.

Monitoring and Reporting. SCE shall monitor the replacement burrow site(s), and provide monitoring reports consistent with CDFW guidance (CDFG 2012). The objective shall be to manage the relocation area for the benefit of burrowing owls, with the specific goal of maintaining the functionality of the burrows for a minimum of two years. Monitoring will be conducted after the burrowing owl passive relocation process is complete, up until the onset of ground disturbance due to construction to ensure that owls do not re-establish themselves. The artificial burrows or enhanced replacement burrows will be monitored for a period that will be defined in the site-specific relocation plan to determine if they are being used by owls. Monitoring reports shall be available to the CPUC.

MM Biology-10: Golden Eagle Avoidance and Minimization

Avoid and minimize impacts. All project activities located within areas identified as habitat (as described in the TLRR Habitat and Sensitive Species Report for the GKR Project) shall implement the following avoidance and minimization measures.

- Golden eagle nest surveys will be performed when construction activities are scheduled to occur in or near golden eagle nesting habitat from January 1-August 31 to determine if any eagle nests are active within a 1-mile radius. Ground-based or helicopter-based survey methods will be developed in coordination with USFWS and will be consistent with current USFWS survey guidelines, or as recommended by USFWS.
- For construction activity, should an active golden eagle nests be present, the nest shall receive a 1-mile buffer if in line of sight, 0.5-mile buffer if no line of sight—with USFWS concurrence.

Buffers and buffer modifications for golden eagles will be addressed in the Project Nesting Bird Management Plan (Mitigation Measure Biology-8).

MM Biology-11: Swainson's Hawk

Swainson's hawk nest surveys shall be performed by a CPUC-approved qualified biologist in areas of suitable habitat prior to construction activities scheduled to occur during the Swainson's hawk nesting season (from March 1-July 31). Surveys shall be conducted within 0.5 miles of suitable nesting habitat for Swainson's hawk to determine if any Swainson's hawk nests are active within a 0.5-mile radius of the construction area. Suitable habitat for Swainson's hawk is defined as the following:

- Nesting habitat includes trees within mature riparian forest or corridors, lone oak trees and oak groves, and mature trees near fields.
- If any active nests are located, the following shall apply:
  - An active nest shall receive a 0.5-mile buffer between March 1 and July 31. Buffer zones may be adjusted in consultation with CDFW and approved by CPUC, and must be protective of the species nesting behavior with continued monitoring of the nest by a qualified biologist.

- Do not remove Swainson's hawk nest trees unless tree avoidance is infeasible. Removal of any tress that are used by Swainson's hawk for nesting shall only occur only outside of the Swainson's hawk nesting season during the timeframe of August 1 (after a qualified biologist has confirmed the nest to be inactive) and the last day in February.

For hawks found injured during project-related activities on the project site, SCE shall consult with CPUC and CDFW for immediate relocation to an agency-approved raptor recovery center.

MM Biology-12: American Badger

A qualified biologist shall conduct a pre-construction survey for active American badger dens within 7 days prior to grading or vegetation clearing in work areas, or use of overland access routes. The pre-construction survey area shall be required for potentially suitable habitat for American badger (e.g., grasslands and woodlands) located within 250 feet of work areas where grading or land vegetation clearing may occur and within or immediately adjacent to overland access routes. SCE shall submit the survey results to CPUC prior to construction.

SCE may use cameras to determine if dens are active. If active dens are identified at any time during construction, the dens shall be flagged and avoided to the greatest extent possible through work exclusion buffers. A 250-foot work restriction buffer shall be established around active maternal dens. For non-maternal dens, a 50-foot work restriction buffer shall be established around active dens. Smaller buffers may be established through consultation with CDFW. If any cases where an active den cannot be adequately avoided (i.e., the den is located within the facility footprints or active work area), SCE will implement passive exclusion techniques by sealing the den after animals have vacated (e.g., one way doors). SCE shall obtain any required permits prior to implementing any den exclusions.

A qualified biologist shall inspect construction activities near active American badger dens on a weekly basis to ensure the work restriction buffers are implemented appropriately and active dens are avoided.

MM Biology-13: San Joaquin Kit Fox Habitat

Prior to construction within San Joaquin kit fox habitat, compensatory habitat mitigation shall be provided to offset the loss of suitable habitat for San Joaquin kit fox. Mitigation for permanent impacts will be provided at a minimum ratio of 1:1. Compensatory mitigation shall include either:

- Purchase of mitigation credits from an agency-approved mitigation bank.
- Protection of habitat through acquisition of fee-title or conservation easement and funding for long-term management of the habitat. Title to lands acquired in fee will be transferred to CDFW and conservation easements will be held by an entity approved in writing by the applicable regulatory agency. In circumstances where SCE protects habitat through a conservation easement, the terms of the conservation easement will be subject to approval of the applicable regulatory

agencies, and the conservation easement will identify applicable regulatory agencies as third-party beneficiaries with a right of access to the easement areas.

Compensatory mitigation shall be acquired and approved by USFWS (as needed) prior to activities within San Joaquin kit fox suitable habitat

MM Biology-14: Tipton Kangaroo Rat Avoidance and Minimization

Pre-construction Survey/Construction Monitoring. Prior to initial ground-disturbing activities, a qualified (permitted Tipton kangaroo rat) biologist will conduct habitat assessment surveys within areas identified as potentially suitable habitat for Tipton kangaroo rat to determine suitability Prior to project activities SCE will provide a map of potentially suitable habitat for Tipton kangaroo rat along the project alignment.

Conduct surveys and avoidance for Tipton kangaroo rat. Prior to the start of construction, within potentially suitable habitat for Tipton kangaroo rat (TKR), SCE shall conduct focused surveys to determine if there are any active burrows with possible TKR sign (burrows, scat, etc.) within 100 feet of proposed ground disturbing activities. All surveys shall be conducted by a qualified biologist who holds the appropriate USFWS and CDFW permits to conduct trapping surveys for TKR. Trapping Plans shall approved by CDFW and USFWS prior to any trapping activities. If TKR sign is present, and SCE cannot avoid potentially suitable burrows then SCE shall conduct focused protocol trapping surveys according to accepted protocols to determine presence or absence of TKR.

If TKR are present, then SCE shall take additional measures to prevent or minimize take, such as flagging for avoidance and establishment of 30' avoidance buffers. Under the direction of a qualified biologist, cover boards to prevent burrow collapse may also be used to allow for work area access. Other avoidance measures may be required, subject to authorization by USFWS and CDFW. If TKR are absent, no measures shall be required.

Construction activities shall avoid suitable TKR habitat to the extent feasible. All requirements will be followed for any take authorizations granted by USFWS and/or CDFW. A qualified biologist will monitor construction activities within occupied habitat.

Avoid and Minimize Impacts. All project activities located within areas identified as occupied TKR habitat shall implement the following avoidance and minimization measures:

- **Limited Operating Period.** SCE shall restrict work to daylight hours, except during an emergency or critical construction activity, in order to avoid nighttime activities when TKR may be present on access roads. No night lighting will be used within TKR habitat except during an emergency or critical construction activities.
- **Trash disposal.** Trash and food items will be contained in closed containers and removed daily to reduce attracting predators.
- **Pets Prohibited.** Employees will not bring pets or other animals to the GKR Project area, unless the animal is ADA compliant.

- **Vehicle Travel.** During construction-related activities, motor vehicles will be limited to maintained roads, designated routes, and areas identified as being permanently or temporarily affected by construction within the Project footprint. Motor vehicle speeds along Project routes and access roads within habitat for TKR will not exceed 15 miles per hour.

Trapped Animal Prevention. All auger holes, trenches, pits, or other steep-sided excavations that may pose a hazard to TKR will be either constructed with escape ramps (earthen or wooden) or securely covered when unattended to prevent entrapping animals. At the start and end of each workday, and just before backfilling, all excavations will be inspected for trapped animals. Any TKR found will be allowed to escape unimpeded. If a TKR is trapped and does not leave on its own, a qualified biologist will move the animal according to agency authorizations, if there is no agency authorization, the TKR shall not be moved (unless in imminent danger) until the relevant agency has been contacted and further guidance has been received.

Cover and Inspect Construction Materials. All construction pipes, culverts, or similar structures with a diameter of approximately 1 inch or greater that are stored for one or more overnight periods will be thoroughly inspected for TKR before the pipe is subsequently buried, capped, otherwise used or moved in any way. If a TKR is discovered inside construction material and does not leave on its own, the materials shall not be moved until the relevant agency has been contacted and further guidance has been received. Any kangaroo rat found will be allowed to escape unimpeded.

MM Biology-15: Bat Avoidance and Minimization

Pre-construction Surveys. A qualified bat biologist will conduct surveys before the start of construction to identify active bat roosting or maternity colonies within or adjacent to project impact areas in trees, rock outcrops, caves, and mines with bat roost potential. A one-night visual emergence survey during acceptable weather conditions (e.g., no rain or high winds, night temperatures >45F) may be employed to determine presence. Alternatively, the roost can be physically examined if conditions permit (e.g., remote cameras or lift equipment).

High-value habitat features (large tree cavities, crevices, bark fissures, basal hollows, loose or peeling bark, larger snags, palm trees with intact thatch, mines, rock outcrops, buildings, etc.) will be identified and the area around these features searched for bats and bat sign (guano, culled insect parts, staining, etc.). Riparian woodland, orchards, and stands of mature broadleaf trees shall be considered potential habitat for solitary foliage roosting bat species, such as the solitary western red bat and western yellow bat.

If no roosts (maternity, wintering, or otherwise) are present, tree trimming/removal may continue as planned. If an active roost has been identified or lasiurine bats are present, removal of trees around the roost would be conducted between September 15 - October 30, and February 15 - April 15, which corresponds to time periods when bats are active, not in torpor, and not caring for non-mobile young.

Removal of trees requires the following two-step process prior to trimming/removal:

- On Day 1 under the supervision of a qualified bat biologist, Step 1 would include branches and limbs with no cavities removed by hand (e.g., using chainsaws). This would create a disturbance (noise and vibration) and physically alter the tree. Bats roosting in the tree would either abandon the roost immediately (rarely) or, after emergence, would avoid returning to the roost.
- On Day 2, Step 2 of the tree removal may occur, which would be removal of the remainder of the tree. Trees that are only to be trimmed and not removed would be processed in the same manner; if a branch with a potential roost must be removed, all surrounding branches would be trimmed on Day 1 under supervision of a qualified bat biologist and then the limb with the potential roost would be removed on Day 2.

Construction Monitoring. If a colonial or solitary maternity roost was located, tree/structure removal will be avoided between April 15 and August 15 (the maternity period) to avoid impacts to active maternity roosts (reproductively active females and dependent young). If bats are present, but no dependent young bats are present within the structure for removal, an eviction plan shall be prepared by a qualified biologist and submitted to CPUC and CDFW for review. A qualified biologist will determine the appropriate no disturbance buffer area around active nest(s) and provisions for buffer exclusion areas. Unless restricted by the qualified biologist, construction vehicles will be allowed to move through a buffer area with no stopping or idling. The qualified biologist will determine, evaluate, and modify buffers as appropriate based on species tolerance and behavior, the potential disruptiveness of construction activities, and existing conditions. Furthermore, the roost will be monitored to determine activity. Roost monitoring will be conducted by qualified biological monitors with knowledge of bat behavior under the direction of a CDFW qualified bat biologist. The qualified biological monitor will observe and document implementation of appropriate buffer areas around active roosts(s) during project activities.

MM Biology-16: Compensatory Mitigation for Sensitive Natural Communities, Riparian, and Wetlands

The project shall avoid and/or minimize impacts on waters, wetlands, sensitive habitats, and riparian habitats including ephemeral waters that occur within the Project area to the maximum extent feasible. All grading, fill, staging of equipment, infrastructure construction or removal, and all other construction activities shall be designed, sited, and conducted outside of state and federally jurisdictional waters, wetlands, and riparian habitat to the maximum extent feasible.

The implementation of appropriate Best Management Practices (BMPs) (e.g., silt fencing, straw wattles, secondary containment, avoiding fueling in close proximity to waters, etc.) shall be utilized to ensure that indirect impacts to waters, wetlands and riparian areas are avoided or minimized to the maximum extent feasible. BMPs are also necessary to reduce the risk of an unintended release of sediments or other materials into jurisdictional waters. New and upgraded roadways will use at-grade type stream crossings where possible. Stockpiled and

bermed sediment will be redistributed or removed from the site so as not to cause water impoundment or induce hydromodification. New poles will be sited outside stream channels to the extent possible.

Permanent impacts on sensitive natural communities, riparian habitat, and wetlands shall be compensated through on-site or off-site enhancement or establishment of equivalent or higher value sensitive natural community, riparian areas, or wetlands. Permanent impacts on sensitive natural communities, riparian areas, or wetlands habitat shall be compensated through enhancement of comparable vegetation communities, riparian habitat, or wetlands at a minimum 2:1 ratio (enhancement: impact) or creation of comparable habitat at a minimum 1:1 ratio. Mitigation credits may be purchased from a USACE, CDFW, and/or RWQCB-approved mitigation bank if on-site mitigation is not feasible.

If SCE conducts mitigation through habitat enhancement or creation, a sensitive natural community, riparian and wetland mitigation plan shall be prepared at least 30 days prior to permanent impacts that address the following parameters:

- Baseline conditions within the mitigation site
- Proposed mitigation site conditions
- Mitigation methods (e.g., habitat creation or enhancement)
- Planting plan
- Methods for invasive weed control
- Methods to establish the desired mitigation site conditions
- Maintenance, including trash removal, invasive weed removal, and repair of any damage to the mitigation site
- •Adaptive management procedures
- Monitoring methods

The enhanced or created sensitive natural community, riparian, and wetland habitats shall meet the following performance criteria:

- Minimum of 70 percent vegetated cover with the target vegetation community that is being mitigated for (sensitive natural community, riparian, or wetlands)
- Less than 3 percent invasive weed cover
- Wetland hydrology and soil conditions in the compensatory wetland mitigation areas

Annual monitoring shall be conducted for the mitigation of habitats and shall include surveys for native vegetation cover, photo documentation at defined photo-monitoring locations, and monitoring for invasive species and any other habitat stressors. Monitoring will be conducted for the first 5 years or until performance criteria are met. If performance criteria are not met after 5 years, additional mitigation shall be provided so that all permanent impacts are fully mitigated.

An annual report shall be submitted by January 31st following the reporting year. The annual report shall provide the results of annual habitat monitoring, recommendations for any

corrective actions needed to meet success criteria, and a description of any corrective actions taken in the previous reporting year. The annual monitoring report shall be submitted to CPUC and CDFW, RWQCB, and USACE as appropriate

MM Biology-17: Protected Tree Removal Mitigation

Removal of oak trees and protected trees within the San Andreas SEA will be minimized to what is required to implement the Project. For removal of any protected trees within the San Andreas SEA, oak trees greater than 6 inches dbh, or oak trees with multiple trunks with a cumulative dbh greater than 12 inches, SCE will provide replacement plantings for the protected trees or oak trees at a 3:1 ratio with three trees planted for each tree removed. Prior to tree planting, a restoration consultant shall evaluate the planting area(s) to ensure the location has adequate soil and hydrologic conditions to support successful planting of the tree species. Monitoring of replacement trees including tree health and height shall be conducted annually for a period of three years after mitigation planting with annual monitoring reports submitted to the CPUC by January 31 of each year. Maintenance shall be conducted at the tree planting sites for three years to ensure effectiveness of the tree replacement efforts. If replacement trees are not successful, additional trees shall be planted to replace the trees that have died or are not growing. Alternatively, SCE may mitigate through off-site compensation of oak woodland habitats and off-site compensation of SEA protected trees, as applicable or nest mitigation with other agencies mitigation. Off-site compensation may include the permanent protection of an off-site population of oak trees or protected trees with preservation of four oak trees or otherwise protected trees for every oak tree or protected tree removed.

Cultural Resources

MM Cultural-1:

SCE will prepare and submit for approval a Cultural Resource Management Plan (CRMP) to guide all cultural resource management activities during project construction. Management of cultural resources will follow all applicable federal and state standards and guidelines for the management of historic properties/historical resources, including as identified or determined through the Section 106 review process. The CRMP will be submitted to the CPUC for review and approval at least 90 days prior to the start of construction. The CRMP will be prepared by a qualified archaeologist who meets the Secretary of Interior's standards for archaeology and include, but not be limited to, the following sections:

- **Cultural Resources Management Plan:** The CRMP will define and map all known NRHP- and CRHR-eligible properties in or within 100 feet (30.5 meters) of the proposed project APE/API. A cultural resources protection plan will be included that details how NRHP- and CRHR-eligible properties will be avoided and protected during construction. Avoidance and preservation of the resources in place, including, but not limited to, planning and construction to avoid the resources and protect the cultural and natural context is the preferred method of mitigation and shall be implemented wherever feasible. Measures will include, at a

minimum, designation and marking of Environmentally Sensitive Areas (ESAs), archaeological monitoring, personnel training, and reporting. The plan will also detail which avoidance measures will be used, where and when they will be implemented, and how avoidance measures and enforcement of ESAs will be coordinated with construction personnel.

- **Cultural Resource Monitoring and Field Reporting**: The CRMP will detail procedures for archaeological monitoring and Tribal participation, define the reporting matrix, and establish criteria for when the monitoring effort should increase or decrease if monitoring results indicate that a change is warranted. The CRMP will also include guidelines for monitoring in areas of high sensitivity for the discovery of buried NRHP- and/or CRHR eligible cultural resources, burials, cremations, tribal cultural resources, or sacred sites.
- **Unanticipated Discovery Protocol:** The CRMP will detail procedures for temporarily halting construction, defining work stoppage zones, notifying stakeholders (e.g. agencies, Native Americans, utilities), and assessing NRHP and/or CRHR eligibility in the event unanticipated discoveries are encountered during construction. It will include methods, timelines for assessing NRHP and/or CRHR eligibility, formulating mitigation plans, and implementing treatment. Mitigation and treatment plans for unanticipated discoveries will be reviewed by tribal stakeholders and approved by the CPUC, prior to implementation.
- **Data Analysis and Reporting:** The CRMP will detail methods for data analysis in a regional context, reporting of results within one year of completion of field studies, curation of artifacts and data (maps, field notes, archival materials, recordings, reports, photographs, and analysts' data) at a facility that is approved by CPUC, and dissemination of reports to appropriate repositories.

Geology, Soils, and Paleontological Resources

MM Geology-1: Geotechnical Hazards

Where geotechnical hazards are found to occur, including risk of fault rupture, seismic ground shaking, liquefaction, and landslides, appropriate engineering design and construction measures shall be incorporated into the final project designs, as deemed appropriate by a California licensed Geotechnical Engineer or Certified Engineering Geologist. Design measures that would mitigate seismic and landslide-related impacts shall include, but are not limited to, retaining walls, removal of unstable materials, and avoidance of highly unstable areas. If highly plastic clay soil is unexpectedly encountered at shallow depths during subsequent soil investigations or during construction, the potential for soil expansion shall be evaluated and accounted for in design and construction.

Disturbed and engineered slopes shall be monitored by qualified construction personnel on an occasional basis (bi-monthly or as needed) until the slope is fully stabilized and no longer poses an increased risk of failure or erosion as compared to similar undisturbed slopes in the immediate vicinity.

More detailed studies to quantify the potential for landslides and rockfall in areas with high landslide susceptibility, as well as shallow groundwater and liquefiable soils, should be considered during a subsequent stage of design. The analysis should consider the effect of earthquake-related ground motions. The studies should recommend measures to mitigate or eliminate the hazard, which may include:

- Moving the Project alignment or structure locations.
- Use of longer spans and/or different structures to avoid placing structures in higher hazard areas.
- Founding structures on deep foundations adequate to withstand the hazard.
- Mitigating the potential for landslide on the slope.
- Fences, screens, or other barriers to protect structures from rockfall or landslides.

MM Geology-2: Structures within Alquist- Priolo Fault Zones

SCE shall adhere to recommendations outlined in the Geotechnical Investigation Report to prevent damage to structures from fault ruptures. Structures located directly on or adjacent to a fault may be at a higher risk for damage during a seismic event due to surface rupture of the fault. The following measures shall be considered to reduce the potential for damage due to fault rupture for structures located within the Alquist-Priolo zones or structures that will span Alquist-Priolo zones:

- Move the structures so that they are not located in Alquist-Priolo zones or away from active fault traces if structures must be placed in an Alquist-Priolo zone.
- The alignment could be modified so that fault crossings are perpendicular to the fault to reduce the potential change in loading on the structure(s) and lines.
- Structures capable of spanning across faults and/or fault zones could be used to reduce the potential for foundation damage or failure.
- Use more robust structures and/or structure foundations (including ground improvement) near faults to reduce the potential for damage due to changes in structure loading from fault movement.

If specific structures must be located within Alquist-Priolo zones, additional fault studies may be needed to confirm structure foundations do not span an active surface fault

Hydrology and Water Quality

MM Hydrology-1: Culvert and Bridge Design

SCE shall design any repaired or replaced culverts and bridges to meet the standards outlined in the Kern County Development Standards for Drainage (Kern County Public Works, Division Four). At a minimum, all culverts shall be a minimum of 18 inches in diameter and designed to avoid any increase in flooding or erosion on adjacent stream banks or slopes. Design features for both culverts and bridges shall include those that prevent impediment of flood waters, including both 10-year and 100-year events. The culvert and/or bridge designs shall be provided to Kern County for review, and any approvals shall be obtained prior to construction. Any Kern

County comments or approvals for the culvert or bridge design shall be submitted to the CPUC for record keeping.

MM Hydrology-2: Structures within Flood Hazard Zones

SCE shall adhere to recommendations outlined in the Geotechnical Investigation Report to prevent damage to structures from flooding. A detailed scour analysis should be performed during design for each structure to be placed in a location with a potential for contact with surface water – inside or outside of the floodplain. The ground surface should be sloped away from each proposed structure to the extent practical. Structure foundations that will be exposed to channelized surface water may need:

- To be supported on a deep foundation that extends beyond the depth of potential scour; or
- Armoring or other soil reinforcement at the ground surface to lower the potential for foundation undermining.

Noise

MM Noise-1: Coordination with El Tejon School

At least 90 days prior to construction at El Tejon School, SCE shall coordinate with El Tejon School to schedule power line construction activities within 1,000 feet of the school to occur when school is not in session (e.g., during holiday or summer breaks). The power line construction activities include roadwork, TSP foundation, TSP haul, TSP assembly, TSP erection, LWS pole haul, LWS pole assembly, LWS pole installation, existing pole removal, existing lattice structure/TSP removal, guard structure installation, and guard structure removal. If power line construction activities within 1,000 feet of El Tejon School need to occur when school is in session, SCE shall provide instructions to El Tejon School on how to reduce impacts of the noise at El Tejon School during construction activities, such as closure of doors and windows, and scheduling of school activities that would minimize effects of construction noise when school is in session.

MM Noise-2: Resident Notification and Noise Suppression Measures for construction noise

For construction within Los Angeles County expected to exceed 75 dB at sensitive receptors, SCE shall notify affected residences within 1,000 feet of construction areas at least 10 days in advance of the construction activity. SCE shall also employ noise-control techniques to reduce construction noise exposure in proximity of sensitive receptors. Noise control techniques shall include:

- Construction equipment shall use noise reduction features (e.g., mufflers and engine shrouds) that are no less effective than those originally installed by the manufacturer.

- Stationary noise sources (e.g., generators, pumps) and staging areas shall be shielded from adjacent noise-sensitive receptors by an enclosure, temporary sound walls, or acoustic blankets. Where feasible, sound walls or acoustic blankets shall have a height of no less than 8 feet, a Sound Transmission Class (STC) of 27 or greater, and a surface with a solid face from top to bottom without any openings or cutouts.
- Construction traffic and helicopter flight shall be routed away from residences and schools, where feasible.
- Unnecessary construction vehicle use and idling time shall be minimized to the extent feasible, such that if a vehicle is not required for use immediately or continuously for safe construction activities, its engine should be shut off.
- Offer temporary relocation to residents within 500 feet of nighttime construction areas.

MM Noise-3: Helicopter Noise Control Strategy

As part of the final Helicopter Use Plan, SCE shall include a helicopter noise control strategy that identifies the established helicopter flight corridors and minimum transit elevations above ground level to minimize impact to noise-sensitive receptors on the ground

Recreation

MM Recreation-1: Fort Tejon State Park

SCE shall notify the Fort Tejon State Park of the location, timing, and duration of all construction activities within the Fort Tejon State Park parking area at least 60 days prior to construction in the area. SCE shall also post notices within the parking area at least 14 days prior to planned construction activities. The notices shall notify the location, date, and time of any impacted access to the parking area and potential alternative parking locations.

During construction within the Fort Tejon State Park parking area, SCE shall utilize flaggers to maintain safe vehicle and pedestrian access to the parking area to the extent feasible.

SCE shall photo document the existing condition of all work areas within the Fort Tejon State Park parking area. SCE shall repair any damage to pavement or other facilities within the Fort Tejon State Park parking area to pre-construction conditions. SCE shall photo document the post-construction conditions of the parking area after construction is complete.

Transportation

MM Tranportation-1: Transit Notification

Notification shall be given to the relevant local transit agency no less than 60 days prior to construction within 20 feet of any bus stop or detours of any bus route. The notification shall include the following:

- The location and timing of construction activities within proximity to the bus stop

- The location and timing of road closures along the bus route(s) and proposed detours
- The affected bus route(s) and bus stop(s)

Name and contact information for a responsible individual who can address any questions and meet with the transit agency to resolve any conflicts with bus operations

MM Transportation-2: Roadway Damage

SCE shall conduct a Pre-Construction Road Condition Assessment along roadways adjacent to all staging areas to document any existing roadway damage to the asphalt or concrete curbs. SCE shall submit photos and coordinates of any existing roadway damage to the CPUC, Caltrans, and Kern County no less than 30 days prior to construction.

If roadways adjacent to staging areas are damaged by construction activities, the damaged area(s) shall be documented and repaired no more than 60 days following construction activities. If the damage could cause a substantial transportation hazard, the location shall be marked appropriately and repaired within 48 hours. Any roadway damages shall be repaired to pre-project conditions and following applicable Caltrans and Kern County repair standards.

MM Traffic-3: Notify Emergency Personnel of Road Closures

SCE shall notify local emergency personnel (i.e., fire departments, police departments, ambulance, and paramedic services) at least 1 week prior to lane or road closures. The notice shall include location(s), date(s), time(s), and duration of closure(s) and a contact number for SCE Project personnel.

Tribal Resources

MM Tribal-1: Native American Monitoring

Interested Tribes shall be invited to conduct Native American monitoring during all ground-disturbing activities associated with portions of or the entirety of Segment 3 of the project. A Native American monitor shall be invited to be onsite daily to coordinate with the archaeological monitors and to provide tribal perspectives in the event a discovery occurs. The Native American monitor shall be free to visit different activity areas throughout the course of a given day, notwithstanding any limitations based on safety concerns. Native American monitors shall be afforded a minimum of 1 weeks' notice prior to the commencement of project-related ground-disturbing activities. During project activities, Native American monitors shall be provided with weekly work forecasts to facilitate scheduling of monitors. Because project implementation activities are often unpredictable, there may be changes in work activities. Native American monitors shall be notified by the Construction Contractor of any scheduling changes as soon as possible. The Construction Contractor will use daily field meetings, telephone, and email as methods of communicating work schedules. Native American monitors shall be alerted at the end of each workday whether work activities will be taking place the following day. If cultural resources are encountered, the Native American monitor will have the

authority to request that ground-disturbing activities cease within 60 feet of discovery and a qualified archeologist meeting Secretary of Interior standards, as well as the Native American monitor shall assess the find.

SCE shall, in good faith, consult with the Tribes on the disposition and treatment of any Tribal Cultural Resource encountered during all ground disturbing activities.

Findings

The IS was prepared to identify the potential impacts on the environment from construction and operation of the SCE Gorman-Kern River 66kV Project and to evaluate the significance of these impacts. Based on the IS and the Findings listed below, the Lead Agency (CPUC) has determined that the Proposed Project would not have a significant effect on the environment.

- With the implementation of the incorporated APMs and MMs, the Proposed Project would not significantly degrade the quality of the environment.
- With the implementation of the above MMs, both short-term and long-term environmental impacts associated with the Proposed Project would be less than significant.
- When potential impacts associated with implementing the proposed project are considered cumulatively, the incremental contribution of the project-related impacts is insignificant.
- Based on the IS, there is no evidence that implementing the Proposed Project would have significant impacts on people.

Eric chiang

11/8/24

Eric Chiang, Project Manager
California Public Utilities Commission
Energy Division

Date

Environmental Determination

Environmental Factors Potentially Affected

The environmental factors checked below would be potentially affected by the proposed project, involving at least one impact that is potentially significant but that can be reduced to "less than significant with implementation of mitigation" as indicated by the checklist on the following pages:

☐ Aesthetics	☒ Agriculture and Forestry Resources	☐ Air Quality
☒ Biological Resources	☒ Cultural Resources	☐ Energy
☒ Geology, Soils, and Paleontological Resources	☐ Greenhouse Gas Emissions	☒ Hazards and Hazardous Materials
☒ Hydrology and Water Quality	☐ Land Use and Planning	☐ Mineral Resources
☒ Noise	☐ Population and Housing	☒ Public Services
☒ Recreation	☒ Transportation	☒ Tribal Resources
☒ Utilities and Service Systems	☒ Wildfire	☒ Mandatory Findings of Significance

Environmental Determination

On the basis of this initial evaluation I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared	☐
I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the applicant. A MITIGATED NEGATIVE DECLARATION will be prepared.	☒
I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT (EIR) is required.	☐
I find that the proposed project MAY have a "potentially significant impact" or "potentially significant impact unless mitigated" on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets, if the effect is a "potentially significant impact" or "potentially significant unless mitigated." An EIR is required, but it must analyze only the effects that remain to be addressed.	☐
I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required	☐

Eric chiang

Eric Chiang, Project Manager
Energy Division
California Public Utilities Commission

11/8/24

Date

1 Introduction

1.1 Overview of the Proposed Project

Southern California Edison (SCE), a regulated California utility, filed an application with the California Public Utilities Commission (CPUC) on February 28, 2022, for a Permit to Construct (PTC) the Gorman–Kern River Transmission Line Rating and Remediation Project (Proposed Project). The application was deemed complete by the CPUC on September 20, 2023.

Southern California Edison (SCE) is proposing to rebuild portions of their existing subtransmission system located in Kern County and Los Angeles County. The Proposed Project would involve replacing conductor and support structures along the existing Banducci–Kern River 66 kV subtransmission line, Frazier Park–Gorman 66 kV subtransmission line, and Gorman–Kern River 66 kV subtransmission line as well as modifying existing substations facilities associated with those lines.

This Initial Study/Mitigated Negative Declaration (IS/MND) has been prepared by the CPUC, as the Lead Agency under the California Environmental Quality Act (CEQA) to inform the Commission in their decision on whether to approve the PTC. This IS/MND will also inform the local, State, and federal agencies that must consider whether to issue a permit or approval for the proposed project.

1.2 Environmental Review Process

1.2.1 CEQA Process and Lead Agency

This IS/MND has been prepared pursuant to:

- CEQA (Public Resources Code [PRC] § 21000 et seq.);
- Amended Guidelines for Implementation of CEQA (CEQA Guidelines) (14 California Code of Regulations [CCR] § 15000 et seq.); and

- Rule 2.4 of the CPUC's Rules of Practice and Procedure on CEQA compliance.

One of the purposes of CEQA is to ensure informed governmental decisions by identifying ways to avoid or reduce environmental damage through feasible mitigation or project alternatives and to provide public disclosure (CEQA Guidelines § 15002 (a)(1–4)). The CPUC is the Lead Agency for review of the Proposed Project under CEQA because it has the principal responsibility for determining whether to approve or deny the Proposed Project (i.e., it must decide whether to approve or deny the PTC). Under CEQA, an IS/MND is prepared if there is no substantial evidence that a project may have a significant effect on the environment. As the Lead Agency, the CPUC determined that an IS/MND was the appropriate level of environmental review for the Proposed Project because all potentially significant environmental impacts can be avoided or mitigated to less-than-significant levels.

The CPUC has prepared this IS/MND to examine the direct and indirect environmental impacts associated with the Proposed Project and feasible mitigation that would reduce or avoid the Proposed Project's potentially significant effects prior to making a discretionary decision on the PTC application. This IS/MND does not make a recommendation regarding the approval or denial of the project.

The purpose of the IS/MND is to:

- Inform both the CPUC's decision makers and the public about the environmental effects of the Proposed Project;
- Give the public an opportunity to comment on potentially significant environmental issues;
- Describe the existing environmental conditions near the Proposed Project;
- Identify and analyze each potentially significant effect on the environment resulting from the Proposed Project; and
- Identify feasible measures to mitigate each potentially significant effect.

1.2.2 Environmental Analysis

This IS/MND analyzes the potential environmental impacts associated with the Proposed Project and identifies mitigation measures that could minimize or prevent those potential environmental impacts. The following environmental resources were

considered in evaluating the potential effects of the proposed project, in accordance with the CEQA Guidelines Checklist Appendix G:

3.1 Aesthetics
3.2 Agriculture and Forestry Resources
3.3 Air Quality
3.4 Biological Resources
3.5 Cultural Resources
3.6 Energy
3.7 Geology, Soils, and Paleontology
3.8 Greenhouse Gas Emissions
3.9 Hazards and Hazardous Materials
3.10 Hydrology and Water Quality
3.11 Land Use and Planning
3.12 Minerals
3.13 Noise
3.14 Population and Housing
3.15 Public Services
3.16 Recreation
3.17 Transportation
3.18 Tribal Resources
3.19 Utilities and Service Services
3.20 Wildfire
3.21 Mandatory Findings of Significance

1.3 Agency and Use of this Document

The following discussion summarizes the roles of the agencies and the intended uses of the MND.

1.3.1 CPUC Process

Pursuant to Article XII of the Constitution of the State of California, the CPUC is charged with the regulation of investor-owned public utilities, including SCE. This IS/MND includes descriptions and analyses of the environmental impacts that would result from implementation of the proposed project. The IS/MND will be considered by the CPUC, in conjunction with other information developed in the CPUC's formal record, prior action on SCE's application for a PTC to construct, operate, and maintain the Proposed Project. Should the CPUC decide to adopt the IS/MND, it must find that (1) the document reflects the Lead Agency's independent judgment and analysis and (2) there is no substantial evidence that the Proposed Project would have a significant effect

on the environment (CEQA Guidelines § 15074). The CPUC must also adopt a plan for mitigation monitoring and/or reporting when adopting an MND (see Section 4: Mitigation Monitoring and Reporting Program).

1.3.2 State and Trustee Responsible Agencies

Several other State agencies may rely on the information in this IS/MND to inform their decisions over issuance of specific permits related to project construction, operation, and maintenance. The California Department of Fish and Wildlife (CDFW) is a State Trustee Agency. The California Department of Transportation (Caltrans) and the Central Valley Regional Water Quality Control Board (CVRWQCB) are State Responsible Agencies because they would issue discretionary permits for the Proposed Project.

1.3.3 Other Federal Agencies

Federal agencies with potential review and/or permitting authority include the U.S. Army Corps of Engineers (USACE), the U.S. Fish and Wildlife Service (USFWS), the U.S. Forest Service (USFS) and the Federal Aviation Administration (FAA).

1.3.4 Other Permits and Approvals

No local discretionary (e.g., use) permits are required because the CPUC has preemptive discretionary jurisdiction over the construction, maintenance, and operation of SCE facilities in California. SCE must obtain all ministerial building and encroachment permits from local jurisdictions, and the CPUC's General Order (GO) 131-D requires SCE to comply with local building, design, and safety standards to the greatest degree feasible to minimize project conflicts with local conditions. The CPUC's authority does not preempt special districts, such as Air Quality Management Districts (AQMDs), or other State agencies or the federal government. SCE would participate in consultations with and obtain permits, approvals, and licenses from federal, State, and local agencies, as listed in Table 1.3-1, below.

Table 1.3-1 Anticipated Permits and Approvals

Agency	Permit	Regulation	Protected Resource	Trigger	Application Process	Timing
USACE	404 Permit	Clean Water Act (CWA)	Waters of the United States (including wetlands)	Placement of dredge or fill material into waters of the U.S., including wetlands. If project impacts less than 0.5 acres, a nationwide permit (NWP) is typically issued.	NWP: Prepare a preconstruction notification (PCN) along with the draft Corps' application (Engineer Form 4345). Information in the PCN includes, but is not limited to: results of wetland delineation including areas of waters of the U.S.; temporary and permanent impacts to waters of the U.S. and discussion of avoidance; construction techniques, timeline, and equipment that would be used; special status species that potentially occur in the project area, and discussion of mitigation (if applicable) to replace wetlands	NWP:Takes approximately nine months from the date of application submittal (depending on level of impacts and level of consultation required by other agencies). Initial review is 30 days, after which application is deemed complete or additional information is requested.
				If project would impact more than 0.5 acre, a regional or individual permit may be required.	Regional or Individual Permit: Same requirements as NWP plus preparation and submittal of 404(b)(1) alternatives analysis, which identifies the Least Environmentally Damaging Practicable Alternative (LEDPA). Public notice also required.	Regional or Individual Permit: An additional 3 to 6 months may be required on top of the nine months expected for an NWP. A 30-day public notice is also required to inform the

Agency	Permit	Regulation	Protected Resource	Trigger	Application Process	Timing
						public about the project before the Corps issues the permit.
U.S. Department of Agriculture (USDA) Forest Service	Special Use Permit	National Forest Management Act/NEPA	National Forest System lands	Use of federal lands managed by the USDA Forest Service for a transmission line. Typically constitutes a Major Federal Action, which in turn triggers NEPA analysis.	Special Use Permit Application: Prepare a special use application for consideration by the Forest Service. Prior to submitting a proposal, applicant is required to arrange a preapplication meeting at the local Forest Service office. Application typically includes project plan, operating plans, liability insurance, licenses/registrations, and other documents. If it is determined that NEPA is required, either an Environmental Assessment (EA) or Environmental Impact Statement (EIS) would be prepared.The NEPA document may be prepared jointly with the CEQA document.	Review of Special Use Permit applications is often dependent upon what level of NEPA analysis is required. An EA is typically 9 to 12 months, and EIS is generally 18 months. NEPA process may occur concurrently with CEQA process.
State Water Resources Control Board	Section 401 Water Quality Certification (WQC) and	Clean Water Act, Porter-Cologne Water Quality Control Act	Waters of the State	Potential impacts to state water quality standards	A request for 401 WQC is prepared and submitted by the RWQCB. Information required is	Preparation of the 401 WQC application is concurrent with preparation of Corps permit material.

Agency	Permit	Regulation	Protected Resource	Trigger	Application Process	Timing
(SWRCB)/ RWQCB)	Section 402 NPDES permit				nearly identical to information required for 404 Permit.	Issuance occurs approximately three to six months from the time the application is deemed complete, depending on the level of impacts to waters of the state. Since RWQCB is also required to review CEQA documents for consistency, permits cannot be issued until a Notice of Determination (NOD) is filed.
	Section 402 National Pollutant Discharge Elimination System (NPDES), Construction General Permit (CGP)	Clean Water Act	Waters of the U.S.	Required if a project will disturb 1 acre or more of soil.	The SWRCB CGP process requires developers to notify the SWRCB of the construction activity by providing a Notice of Intent, developing a SWPPP, and implementing water quality monitoring activities as required.	Once the Permit Registration Documents (PRDs) have been submitted to the SWRCB and the permit fee payment has been made, it takes approximately one week to obtain the Waste Discharger Identification Number

Agency	Permit	Regulation	Protected Resource	Trigger	Application Process	Timing
						(WDID). Soil-disturbing activities may not commence until the WDID is obtained.
California Department of Fish and Wildlife (CDFW)	Section 1602 Lake and Streambed Alteration Agreement (LSAA)	California Fish and Game Code (CFGC)	All perennial, intermittent, and ephemeral rivers, streams, and lakes in the state	Required if a project will: 1) substantially obstruct or divert the natural flow of a river, stream, or lake; 2) substantially change or use any material from the bed, channel, or bank of a river, stream, or lake; or 3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it can pass into a river, stream, or lake.	The information required for the LSAA application is nearly identical to the information required by the Corps, but a separate application and questionnaire are required.	The typical timeline for issuance of a LSAA is approximately 3 to 6 months from the time the application is deemed complete and depending upon the level of impact to CDFW jurisdiction. The initial review period for CDFW is 30 days, in which time the application will be deemed complete or incomplete. If the project is deemed incomplete, CDFG will provide a list of additional information necessary to complete the application. Once the

Agency	Permit	Regulation	Protected Resource	Trigger	Application Process	Timing
						application has been deemed complete, CDFW has 60 days to review the information and prepare the draft agreement. Once the draft agreement is issued, the project applicant must review, sign, and return it to CDFW for the agreement to be valid. Additionally, CDFW is required to review the CEQA document for consistency and, therefore, the NOD must be filed before the LSAA will be issued.
Federal Agency-USACE and USFS	Section 106 National Historic Preservation Act (NHPA)	National Historic Preservation Act	Cultural Resources	Required if there is a federal undertaking. Requires federal agencies to consider the effects on historic properties of projects	Information on cultural and historical resources gathered during the draft CEQA/NHPA document preparation. Submit Technical Report to Federal Agency(s).The information is then	Once SHPO has received the federal agencies determination, it has approximately 30 days to comment

Agency	Permit	Regulation	Protected Resource	Trigger	Application Process	Timing
				they carry out, assist, fund, permit, license, or approve. If a federal or federally assisted project has the potential to affect historic properties, a Section 106 review is required.	evaluated by the federal agency for Section 106 compliance. Federal agency makes a determination of effects and consults with tribes and the State Historic Preservation Office (SHPO) to obtain concurrence on determination of effects. If an adverse effect is identified, agency will resolve those effects through continual consultation and a Memorandum of Agreement (MOA).	and may request additional information. If the project is determined to have an adverse effect to historic properties, resolution of effects via an MOA can take 6 or more months.

1.3.5 Comments on the Draft IS/MND

This Draft IS/MND is being circulated to local, State, and federal agencies and to interested individuals who wish to review and comment on the report. Written comments may be submitted to the CPUC during the 30-day public review period. Written comments on the Draft IS/MND will be accepted via regular mail, fax, and e-mail. All comments received will be addressed in the Final IS/MND. Written comments should be submitted by U.S. mail, fax, or email to:

California Public Utilities Commission
Attn: Gorman-Kern River 66kV Project

c/o Panorama Environmental, Inc.
717 Market Street, Suite 400
San Francisco, CA 94103

KernRiverTLRR@panoramaenv.com

1.4 Document Organization and Reader's Guide

This IS/MND has been organized into the following sections:

- **Acronyms and Abbreviations.** This section follows the Table of Contents.
- **Section 1: Introduction.** Outlines the CEQA process and agency use of this IS/MND.
- **Section 2: Project Description.** Provides an in-depth description of the Proposed Project, including construction details and methods.
- **Section 3: Environmental Analysis.** Provides a discussion of existing conditions and analysis of potential environmental impacts of the Proposed Project and identifies mitigation measures to reduce potentially significant effects.
- **Section 4: Mitigation Monitoring and Reporting Program.** Provides a discussion of the CPUC's Mitigation Monitoring and Reporting Program (MMRP) requirements for the project if approved by the CPUC. This section includes mitigation measures that SCE must implement as part of the

project, actions required to implement these measures, monitoring requirements, and timing of implementation for each measure.

- **Section 5: Report Preparation.** Identifies the preparers of the IS/MND and the public agencies consulted during preparation of the IS/MND.
- **Appendix A: Project Detail Maps.** Provides detailed locations of all proposed project components on an aerial map base, including all unpaved access routes and staging yards.
- **Appendix B: Magnetic Field Management Plan**. Provides evaluation of magnetic fields along the Proposed Project alignment and possible magnetic field management measures.
- **Appendix C: Air Quality and Greenhouse Gas Supporting Information.** Provides the calculation spreadsheets and summary tables for emissions modeling as well as the Health Risk Assessment.
- **Appendix D: Biological Resources Supporting Information.** Includes special-status species tables and figures.
- **Appendix E: Cultural Resources Supporting Information.** Provides records of communication with Native American tribes and maps of cultural resource survey boundaries.

2 Project Description

2.1 Project Overview

This chapter describes the Proposed Project in detail, including the components to be installed or modified, the construction processes, and operations and maintenance (O&M) activities. The figures shown in this chapter identify project segments and staging yard locations and illustrate the various structure types. The locations of all project components (e.g., temporary work areas, access roads, guard structures, stringing sites) are provided in Appendix A, Project Components.

The Proposed Project is designed to remediate discrepancies and improve reliability. The Proposed Project would remediate discrepancies associated with existing subtransmission lines. Discrepancies are defined as potential clearance problems between an energized conductor and its surroundings (e.g., the structure, another energized conductor on the same structure, a different line, or the ground).

The project area is in unincorporated Kern County, unincorporated Los Angeles County, and the cities of Arvin and Bakersfield (Figure 2-1). The Proposed Project is divided into 5 segments discussed below and shown in Figure 2-2 through Figure 2-6.

1. Segment 1 spans approximately 20.4 miles from the existing Kern River 1 Hydroelectric Substation to and including Structure M20-T3 (a location referred to as "the T"). The existing structures in Segment 1 support portions of the Gorman-Kern River 1 and Banducci-Kern River 1 66 kV subtransmission lines.
2. Segment 2 spans approximately 26.5 miles from Structure M20-T3 to and including Structure M46-T6. The existing structures in Segment 2 support portions of the Gorman-Kern River 1 66 kV Subtransmission Line.
3. Segment 3 spans approximately 4.1 miles from Structure M46-T6 to the existing Gorman Substation. The existing structures in Segment 3 support portions of the Gorman-Kern River 1 and Frazier Park-Gorman 66 kV subtransmission lines.
4. Segment 4 spans approximately 11.3 miles from Structure M20-T3 to and including Structure M11-T3. The existing structures in Segment 4 support portions of the Banducci-Kern River 1 66 kV Subtransmission Line.
5. Segment 5 spans approximately 3 miles from Pole X7666E to the existing Banducci Substation. The existing structures in Segment 5 support portions of the Banducci-Kern River 1 66 kV Subtransmission Line, distribution circuitry, and telecommunications infrastructure.

2.1.1 Project Objectives

SCE identified the following project objectives:

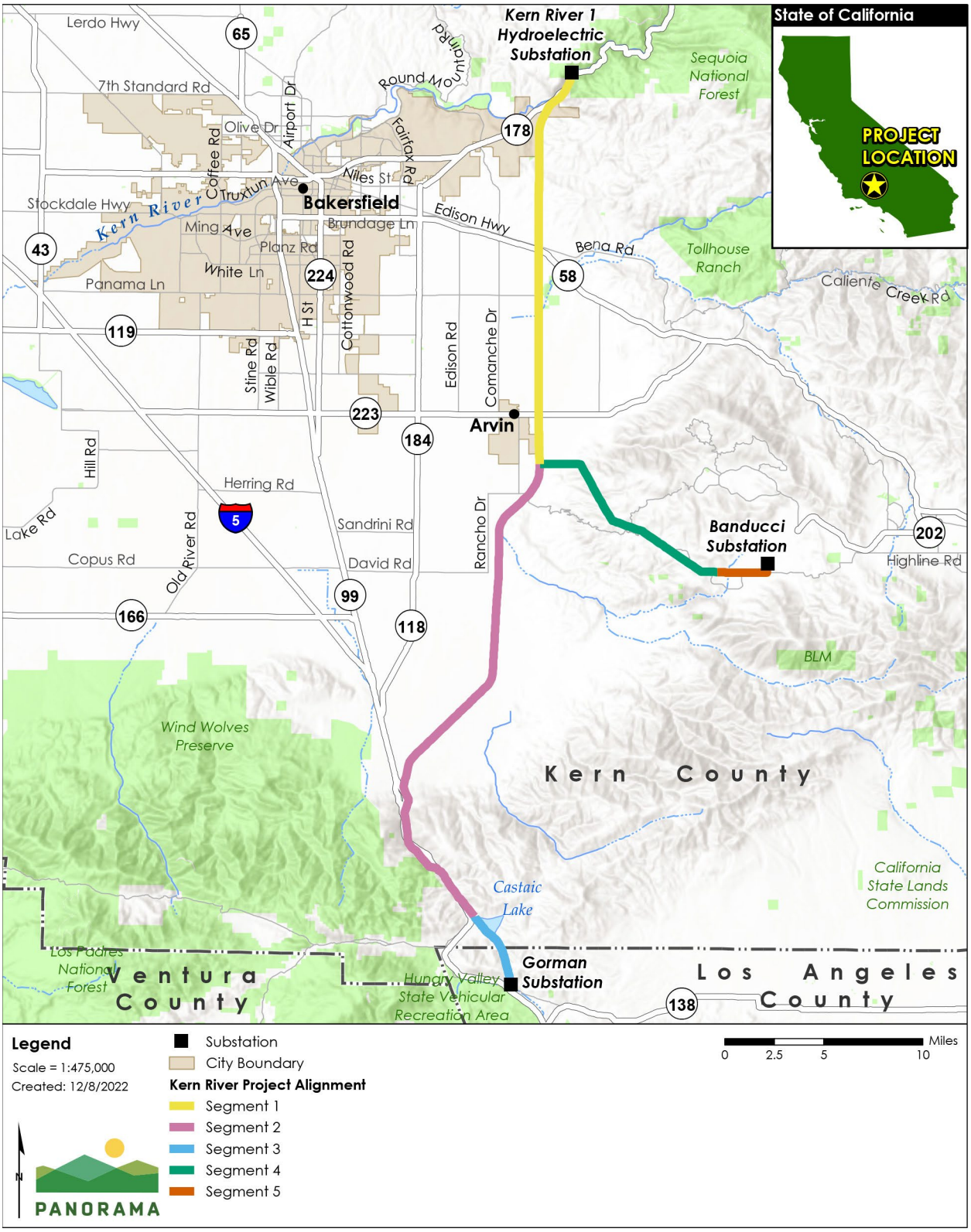
- Ensure compliance with CPUC G.O. 95 standards.
- Address reliability concerns related to the condition of existing infrastructure on the affected subtransmission lines.

2.1.2 Existing System Infrastructure

The existing utility system includes the following subtransmission lines and substations, as shown in the system diagram (Figure 2-7):

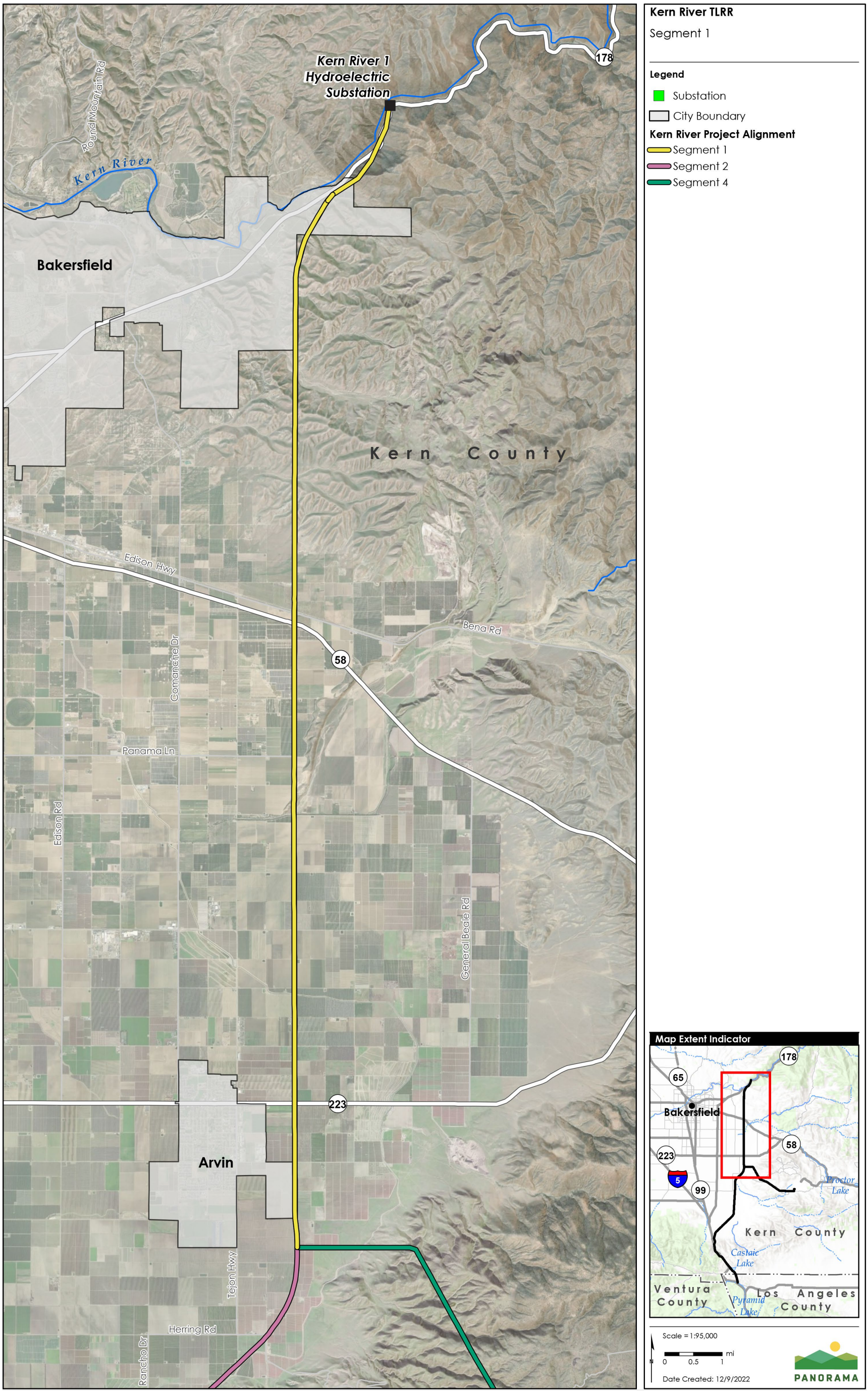
- Banducci-Kern River 1 66-kV subtransmission line
- Frazier Park-Gorman 66-kV subtransmission line
- Gorman-Kern River 1 66-kV subtransmission line
- Banducci 66-kV substation
- Frazier Park 66-kV substation
- Gorman 66-kV substation
- Kern River 1 hydroelectric 66-kV substation

Figure 2-1 Project Location



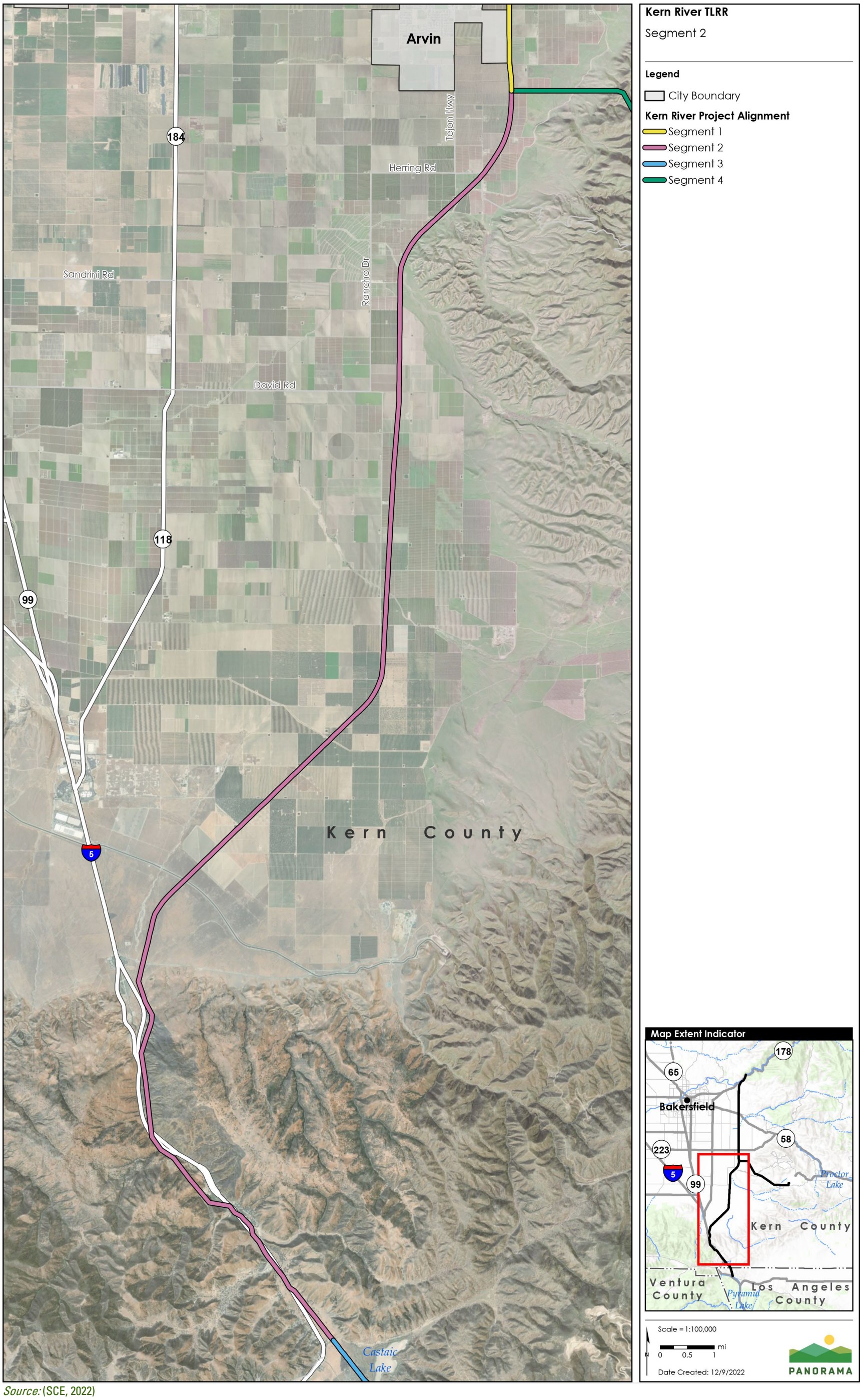
Source: (SCE, 2022)

Figure 2-2 Segment 1



Source: (SCE, 2022)

Figure 2-3 Segment 2



Source: (SCE, 2022)

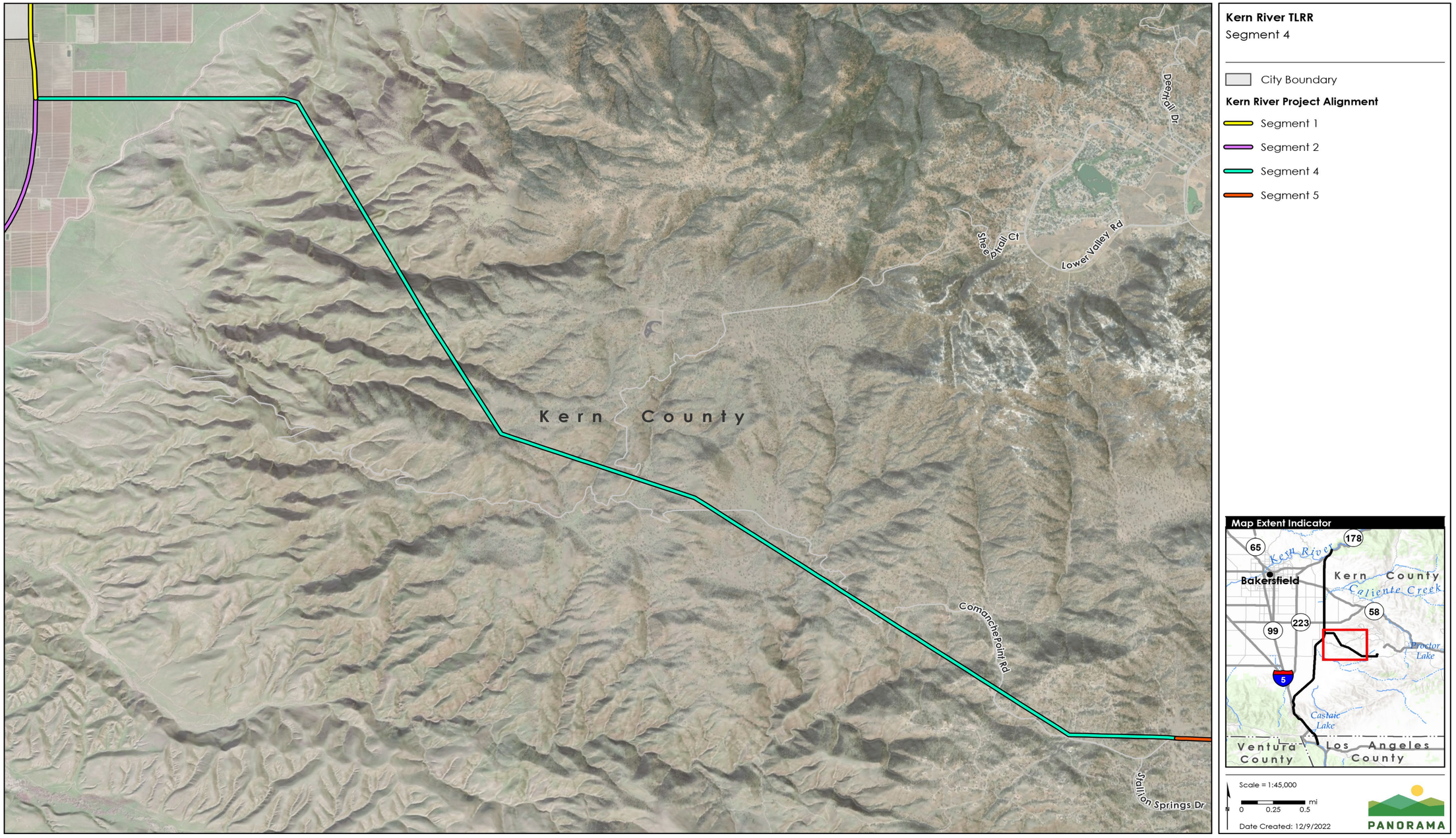
Figure 2-4 Segment 3



Source: (SCE, 2022)

This page is intentionally blank.

Figure 2-5 Segment 4



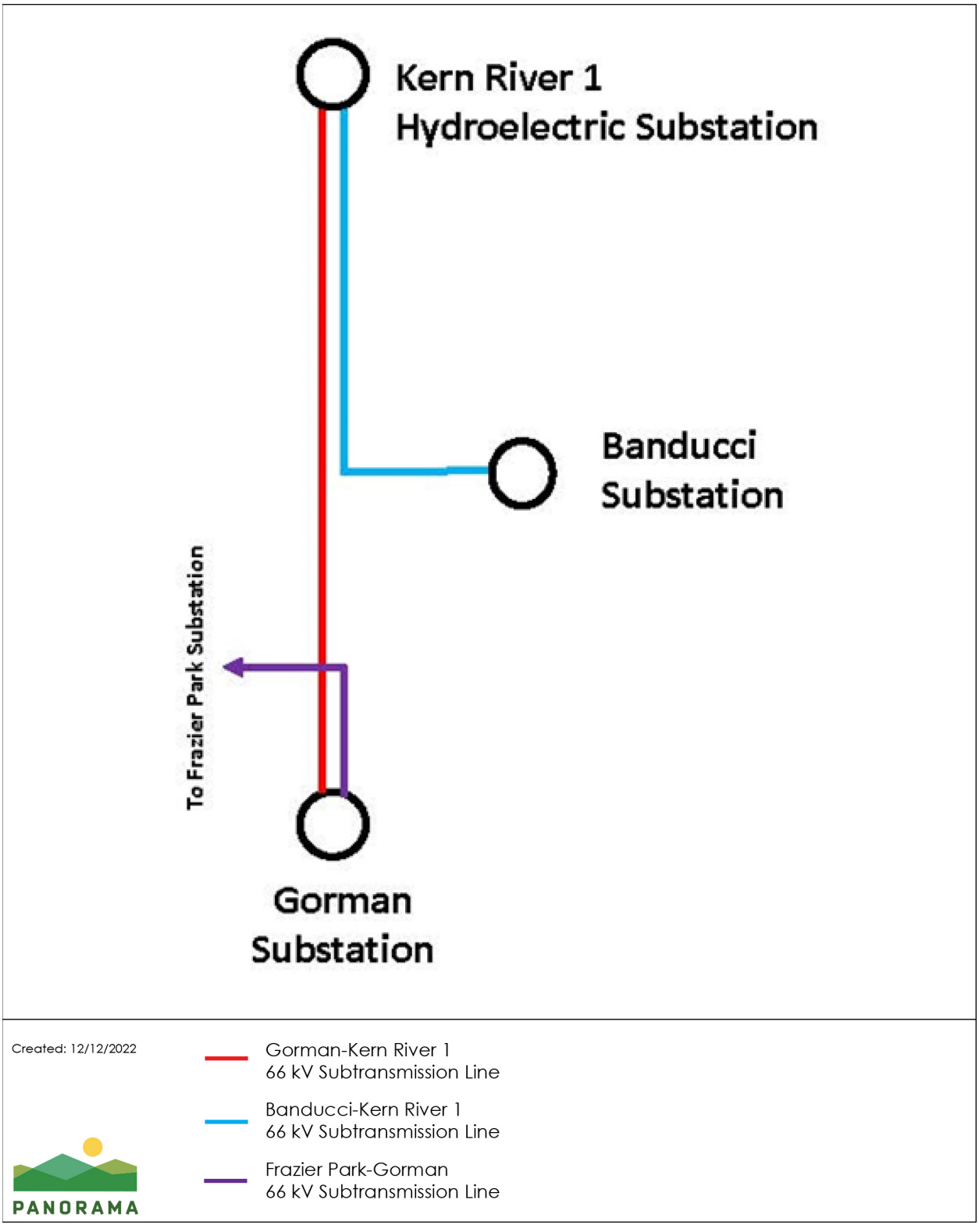
Source: (SCE, 2022)

Figure 2-6 Segment 5



Source: (SCE, 2022)

Figure 2-7 Existing Utility System



Source: (SCE, 2022)

2.1.3 Existing Facilities

The quantities and types of structures to be removed or modified within each subtransmission line segment are listed in Table 2-1

Table 2-1 Number of Existing Structures to be Removed or Modified

Project Type	Number of Structures Removed	Number of Structures Modified	Approximate Height Above Ground, Existing and Modified Structures (ft)
Segment 1			
Lattice steel tower (LST)	117	6	29 to 95
Wood H-frame	38	0	51 to 71
Two-pole structure	1	0	66
Segment 2			
LST/tubular steel pole (TSP)	189	0	47 to 100
Wood H-frame	3	0	50 to 62
Wood structures	2	0	81 to 92
Segment 3			
LST	37	0	31 to 61
Wood H-frame	16	0	37 to 79
Two-pole structure	3	0	75 to 78
Wood structures	1	0	34
Segment 4			
LST	58	0	52 to 78
Wood H-frame	12	0	52 to 71
Three-pole structure	3	0	51 to 53
Segment 5			
Wood structures	2	4	50 to 60

Source: (SCE, 2022)

Notes:

Lattice Steel Tower (LST): self-supporting tower structure constructed from galvanized steel that has foundations

Tubular Steel Pole (TSP): self-supporting monopole structure constructed from galvanized steel that has a foundation

Wood H-frame: self-supporting or guyed H-frame structure constructed from two direct-buried wood structures, including a spar arm

Two- or three-pole structure: self-supporting or guyed structure constructed from two or three direct-buried wood structures

2.1.4 Area Served by the Existing Utility System

The existing infrastructure provides power to a portion of unincorporated Kern County, the city of Tehachapi, and the surrounding communities. The infrastructure also has the ability to provide power to communities directly served from the existing Gorman and Frazier Park substations, as needed. The Proposed Project would not provide service to any new users or areas.

2.2 Proposed Project

The Proposed Project includes the following major elements:

- rebuilding a substantial portion of the existing subtransmission lines;
- replacing/modifying individual existing structures and re-using individual existing subtransmission structures along portions of existing subtransmission lines; and
- minor modifications at existing substations.

Each project component is described in further detail next. Table 2-2 lists the components to be included in each project segment.

Table 2-2 Proposed Project Components per Segment

Segment	Description of Components
Segment 1	Approximately 154 structures would be removed and replaced with new structures. The double-circuit structures and conductors would be removed and replaced with new single-circuit structures and conductors. The following components would be installed in Segment 1: • 38 single-circuit TSPs • Two single-circuit TSP H-frames • 114 single-circuit LWS structures • One circuit (three wires) of new conductor on replacement structures along the 20.4-mile length of Segment 1 • 20.4 linear miles of OPGW on replacement and reused structures • Vaults or pull boxes to support the installation of OPGW/ADSS • Marker balls on overhead wire spans M0-T1 to M0-T2, M0-T2 to M1-T1, M1-T2 to M1-T3, M1-T3 to M1-T4, and M3-T5 to M3-T6 if required by FAA final determination In addition to the new structure installation, six existing LSTs would be re-used, and/or modified to support the installation of OPGW.
Segment 2	The structures and conductor in Segment 2 would be removed and replaced with new structures and conductor. The following components would be installed in Segment 2: • 46 single-circuit TSPs • Two single-circuit LWS structure H-frames • 147 single-circuit LWS structures • One circuit (three wires) of new conductor on replacement structures along the 26.5-mile length of Segment 2 • 26.5 linear miles of OPGW on replacement structures

Segment	Description of Components
Segment 3	The structures and conductor in Segment 3 would be removed and replaced with new structures and conductor. The following components would be installed in Segment 3: • 18 double-circuit TSPs • 29 double-circuit LWS structures • Two circuits (six wires) of new subtransmission conductor on replacement structures along the 4.1-mile length of Segment 3 • 4.1 linear miles of OPGW on replacement structures • Vaults or pull boxes to support the installation of OPGW/ADSS
Segment 4	The structures and conductor in Segment 4 would be removed and replaced with new structures and conductor. The following components would be installed in Segment 4: • 17 single-circuit TSPs • Two single-circuit TSP H-frames • 46 single-circuit LWS structures • Nine LWS H-frames • One circuit (three wires) of new subtransmission conductor on replacement structures along the 11.3-mile length of Segment 4 • 11.3 linear miles of OPGW on replacement structures • Marker balls between the following structures/spans, if required by FAA final determination: – 2145311E_2145312E to 2145308E_2145309E_21 45310E – 2145305E_2145306E_21 45307E to 2145303E_2145304E – 2145303E_2145304E to 2145301E_2145302E – 2145301E_2145302E to M3-T2 – M3-T3 to M3-T4 – M4-T3 to M4-T4 – M4-T4 to M4-T5 – M6-T1 to M6-T2
Segment 5	Two structures would be removed and replaced with new structures; no conductor or distribution circuit would be removed; however, the conductor and distribution circuit would be transferred to the two new structures. The following components would be installed: • Two new single-circuit structures and transfer of existing conductor to new structures; third-party infrastructure (e.g., telephone lines) also may be transferred or left in-place on existing structures • 3 linear miles of all-dielectric self-supporting (ADSS) fiber optic cable on replacement and existing structures • Vaults or pull boxes to support the installation of OPGW/ADSS The following components would be modified: – Insulators on three structures – Distribution underbuild on one structure

Source: (SCE, 2022)

2.2.1 Description of Project Components

Subtransmission Conductor

The new conductor would consist of Aluminum Conductor Composite Core (ACCC) and/or Aluminum Conductor Steel-Reinforced (ACSR) subtransmission conductor. The conductor would be non-specular and would have a diameter of approximately 0.81 inches for ACCC conductor or 1.196 inches for ACSR conductor.

Subtransmission Poles

Subtransmission structures to be installed as part of the Proposed Project would be dull galvanized tubular steel poles (TSPs) or light-weight steel (LWS) structures, which may include components such as down guys and span guys Table 2-3 shows the above-ground height, diameter, and foundation for each proposed subtransmission structure/pole to be installed in each segment. Typical details for the proposed structures are shown in Figure 2-8 through Figure 2-10.

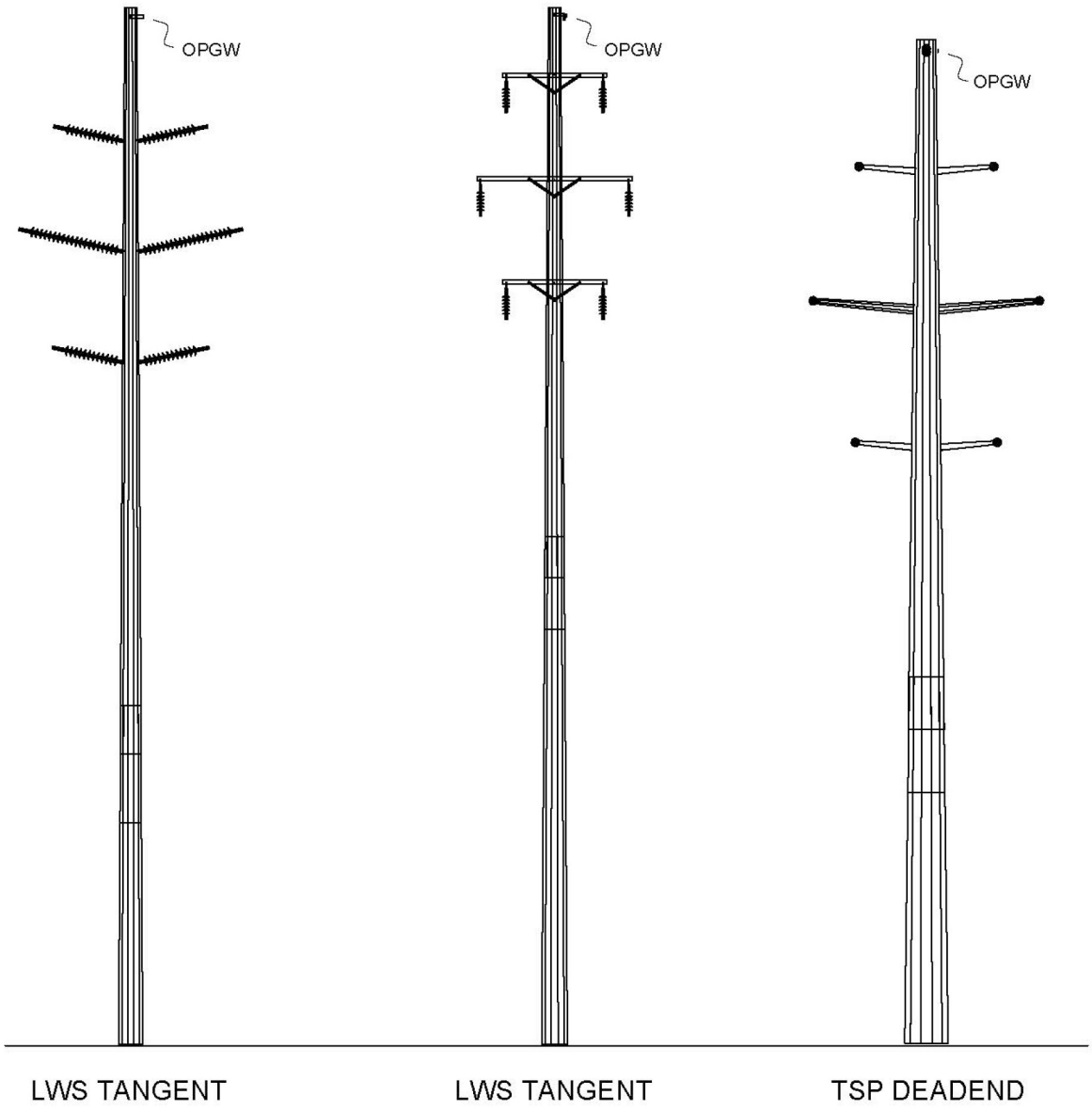
Table 2-3 Structures to be Installed per Segment

Pole Type	Proposed Approximate Number of Structures	Approximate Height Above Ground (feet)	Approximate Pole Diameter (feet)	Approximate Foundation Depth (TSPs) or Burial Depth (LWS structures) (feet)	Approximate Foundation Diameter (TSPs) or Auger Width (LWS structure) (feet)	Approximate Concrete Volume (cubic yards)
Segment 1						
TSP	38	50 to 100	2.4 to 3.7	10 to 30	3 to 4	1.8 to 7
TSP, H-frame	2	55 to 70	2.6 to 2.7	10 to 30	4 to 8	2.3 to 14
LWS structure	114	52 to 97	1.5 to 2.7	7 to 14	2 to 3	N/A
Segment 2						
TSP	46	60 to 105	2.0 to 4.3	9 to 13	4 to 8	2.3 to 14
LWS, H-frame	2	52 to 57	1.5 to 1.6	7 to 14	2 to 3	N/A
LWS structure	147	52 to 84	1.5 to 2.6	7 to 14	2 to 3	N/A
Segment 3						
TSP	18	65 to 90	2.8 to 3.6	9 to 11	4 to 8	2.1 to 5.1
LWS structure	29	66 to 106	1.8 to 3.0	7 to 14	2 to 3	N/A
Segment 4						
TSP	17	60 to 120	2.0 to 4.3	10 to 30	4-8	2.3 to 14
TSP, H-frame	2	50 to 65	2.1 to 2.8	10 to 30	4-8	2.3 to 14

Pole Type	Proposed Approximate Number of Structures	Approximate Height Above Ground (feet)	Approximate Pole Diameter (feet)	Approximate Foundation Depth (TSPs) or Burial Depth (LWS structures) (feet)	Approximate Foundation Diameter (TSPs) or Auger Width (LWS structure) (feet)	Approximate Concrete Volume (cubic yards)
LWS structure	46	61 to 106	1.5 to 3.0	7 to 14	2-4	N/A
LWS H-frame	9	52 to 84	1.5 to 2.6	7 to 14	2-3	N/A
Segment 5						
LWS structure	2	61	1.5	7 to 14	2	N/A

Source: (SCE, 2022)

Figure 2-8 Typical Proposed Structure Design

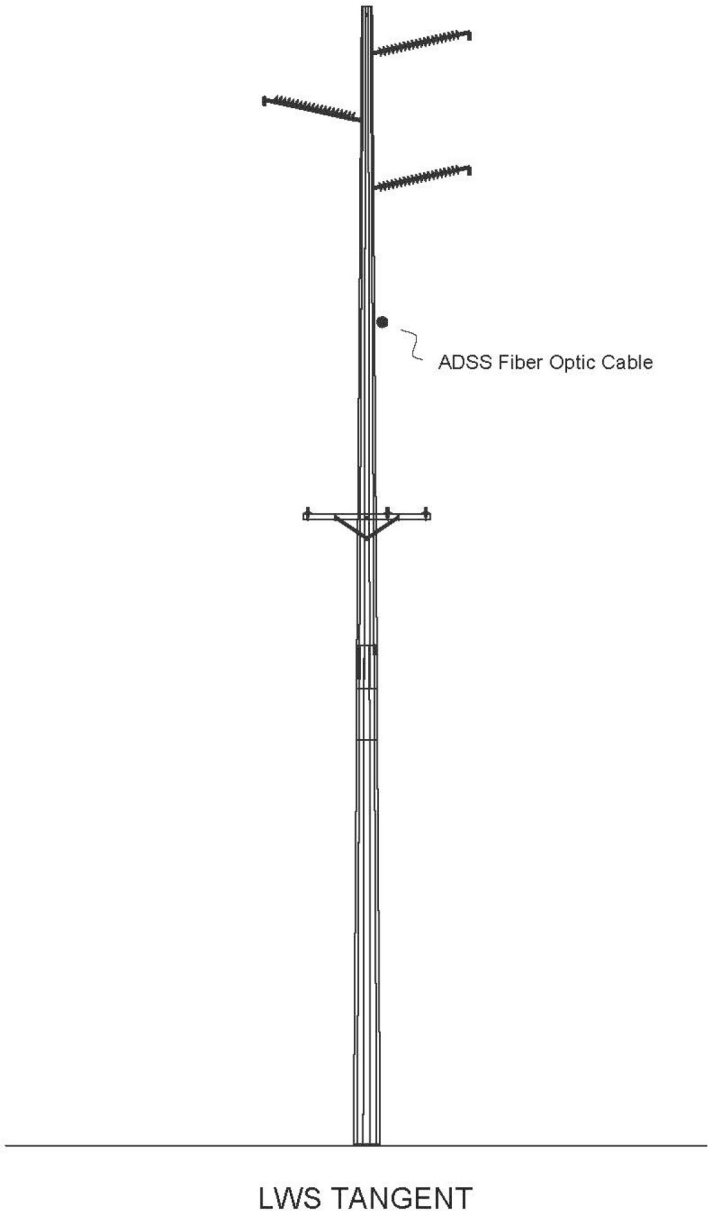


Created: 12/12/2022

PANORAMA

Source: (SCE, 2022)

Figure 2-9 Typical Proposed Structure Design

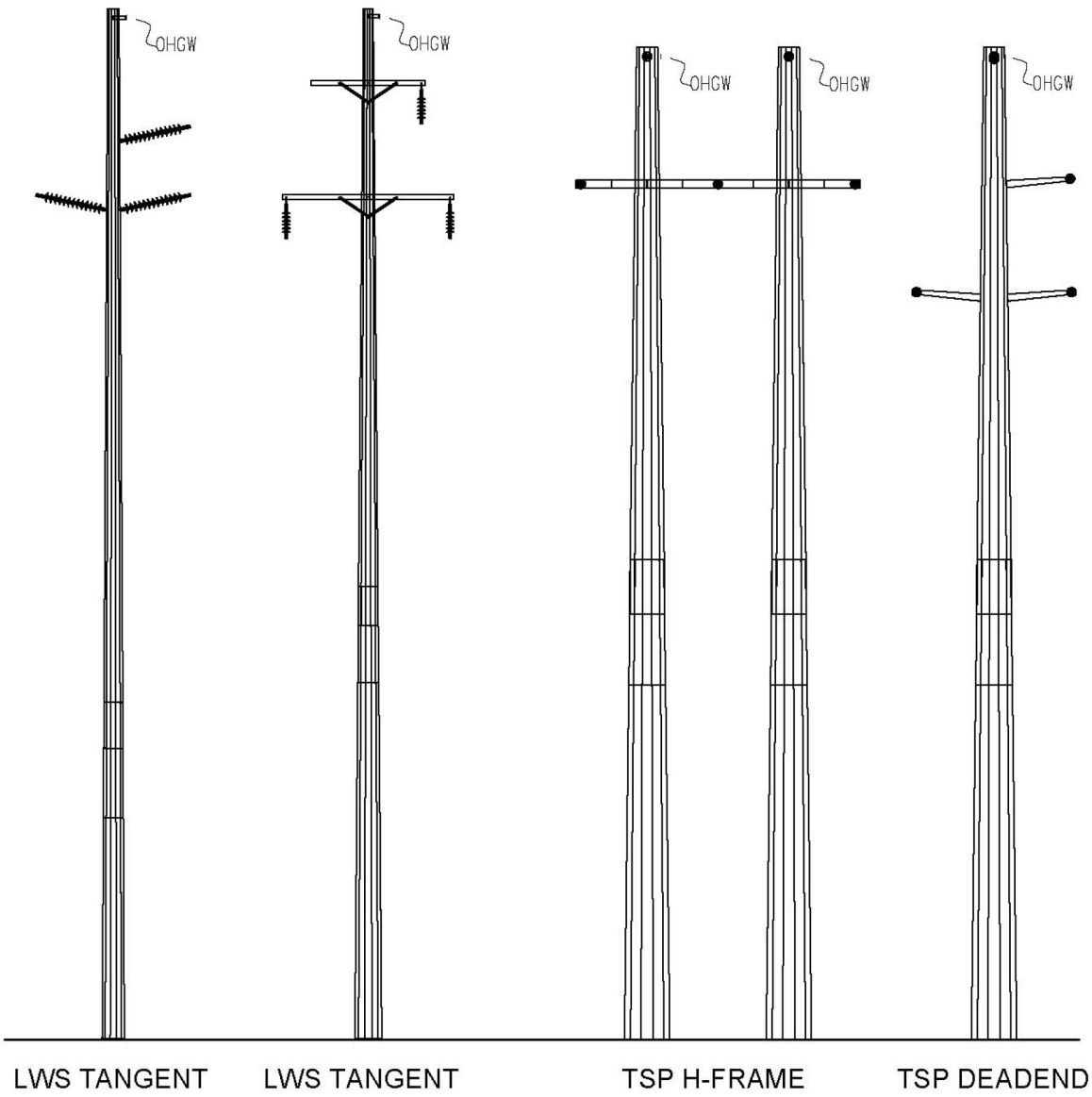


Created: 12/12/2022

PANORAMA

Source: (SCE, 2022)

Figure 2-10 Typical Proposed Structure Design



Created: 12/12/2022

PANORAMA

Source: (SCE, 2022)

Foundations

Concrete foundations and/or micropile foundations would be used for TSPs. Most LWS structures would be direct bury, with the structure installed directly in the ground at a depth of up to 30 feet. Steel, cardboard, slurry or plastic forms may be placed to stabilize the excavation walls before installation of the LWS structures.

TSP concrete foundations would be approximately 4 to 6 feet in diameter and would extend underground approximately 10 to 30 feet, with approximately 1 to 3 feet of concrete visible above the ground. Micropile foundations would be used where the substrate is rocky, and excavation would be difficult or would require blasting or rock breakers. Micropile foundations also would be used where access is limited, and concrete pile foundations cannot be constructed because of space constraints. The micropile foundations would consist of several small-diameter holes (approximately 7 to 10, 8-inch-diameter holes), arranged in a circular pattern, which would be drilled, grouted, and reinforced.

Optical Ground Wire and Fiber Optic Cable

Optical ground wire (OPGW) is the type of wire that would be installed at the top of each subtransmission structure, to provide lightening protection, grounding and communications. OPGW would replace traditional static/shield/earth wires on overhead subtransmission lines, with the added benefit of containing optical fibers that could be used for telecommunications. The OPGW would be non-specular and would have a diameter of 0.5 inch.

All-dialectric self-supporting (ADSS) fiber optic cable is non-metallic cable that is used for communications. ADSS cable would be installed below the conductor. The ADSS fiber optic cable would be non-specular and would have a diameter of 0.5 inch.

Marker Balls

Marker balls are visibility markers placed on overhead ground wire or OPGW to make the conductor crossings visible to aircraft pilots. Marker balls may be required on up to 13 conductor spans (along Segments 1 and 4). The use of marker balls would depend on the Federal Aviation Administration's (FAA) determination as to whether the structure would propose a hazard to air navigation.

2.2.2 Substation Modifications

The Proposed Project would include substation-related work, as shown in Table 2-4.

Table 2-4 Substation Modifications

Substation	Proposed Modifications
Banducci 66-kV Substation	• Replace conductor at existing positions at substation, which would include disconnecting and reconnecting. • Connect optical ground wire (OPGW) to the ground grid at the existing substation. • Install telecommunications equipment including new cable line within existing underground cable raceways and install new or replace existing infrastructure within existing control buildings or mechanical-electrical equipment rooms (MEERs).

Substation	Proposed Modifications
Gorman 66-kV Substation	• Replace conductor at existing positions at substations, which would include disconnecting and reconnecting. • Install new OPGW and make minor modifications to the existing terminal racks to accommodate the new OPGW. Connect the OPGW to the ground grid at the existing substations. • Install telecommunications equipment including new cable line within a new or existing underground cable raceway and install new or replace existing infrastructure within the control buildings or MEERs.
Kern River 1 Hydroelectric 66-kV Substation	• Replace conductor at existing positions at substations, which would include disconnecting and reconnecting. • Install new OPGW and make minor modifications to the existing terminal racks to accommodate the new OPGW. Connect the OPGW to the ground grid at the existing substations. • Install telecommunications equipment including new cable line within a new or existing underground cable raceway and install new or replace existing infrastructure within the control buildings or MEERs.

Source: (SCE, 2022)

2.3 Right-of-Way, and Easements

2.3.1 Existing Right of Way and Easements

The majority of the project alignment is within existing right-of-way (ROW) on private lands. Easements over private lands vary in width, from 13 to 100 feet. The existing ROW for the 0.4-mile-long portion of the project alignment within the Sequoia National Forest (SNF) is 100 feet wide, and the ROW for the 0.8-mile portion of the project alignment on the Los Padres National Forest (LPNF) is 50 feet wide. The existing easements on State lands, where present, range from 25 to 50 feet wide. Portions of the project alignment also cross county and city roadways. The Proposed Project would replace structures in close proximity to the existing facility alignment and would be able to use portions of the existing ROW for the proposed structures.

2.3.2 New/Modified Right of Way and Easements

SCE does not possess sufficient ROW or easements for approximately 7.4 miles of the project alignment, as shown in Figure 2-11[1]. SCE would seek to obtain up to a 70-foot ROW for the subtransmission lines where existing ROW is insufficient. However, the specific width of the required easements would be developed during the final engineering process.

[1] The length of the project where ROW is insufficient will be confirmed upon completion of land surveys during the final engineering process. The mileage provided is an approximation based upon GIS data.

New permanent easements over private lands would be obtained by SCE through negotiations with landowners. New permanent or modified ROWs may be obtained from the relevant public agency through that agency's designated process. All acquisitions would be finalized during final engineering, and no properties or parcels, or partial properties or parcels, would be acquired in fee. The parcels over which new easements would be acquired are shown in Figure 2-11

2.3.3 Temporary Rights-of-Way and Easements

Some off-alignment construction work areas may require a temporary construction easement, including staging areas and helicopter landing zones. SCE anticipates obtaining temporary ROWs for all the staging areas listed in Section 2.4.4. Most temporary construction areas would be within the existing ROWs or easements; use of these areas would be available to SCE without a temporary ROW. Where portions of temporary construction areas extend beyond the easement boundary, SCE would obtain a temporary construction easement or temporary entry permit from the landowner. Temporary ROWs on federal lands (if identified during final engineering) would be acquired from the U.S. Forest Service (USFS). On non-federal and State lands, SCE would work with the appropriate landowners to acquire any necessary temporary construction easements and/or temporary entry permits.

2.4 Project Construction

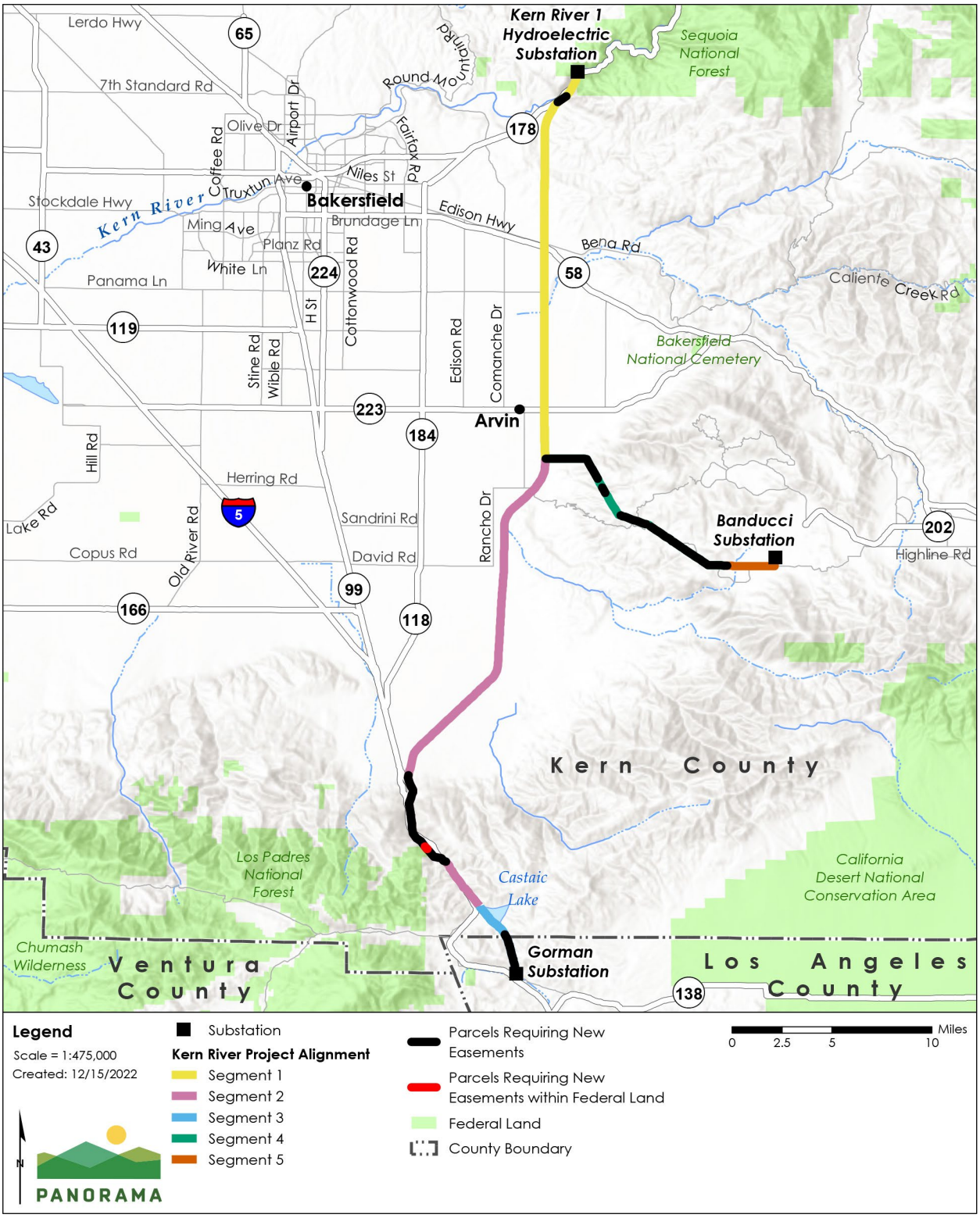
This section describes the construction activities associated with the following elements of the Proposed Project:

- Workers Environmental Awareness Training Program
- Construction Work Areas and Work Area Disturbance
- Construction Access
- Staging Areas
- Site Preparation
- Subtransmission Line Construction
- Substations
- Public Safety and Traffic Control
- Dust, Erosion, and Runoff Controls
- Water Use and Dewatering
- Hazardous Materials and Management
- Waste Generation and Management
- Fire Prevention and Response
- Workforce and Equipment
- Construction Schedule

2.4.1 Workers Environmental Awareness Training Program

SCE would prepare a Workers Environmental Awareness Training Program (WEAP). All project personnel would be required to attend the training, which would include the resource

Figure 2-11 New Easements Required



Source: (SCE, 2022)

protection and avoidance measures as well as procedures to be followed on discovery of environmental resources. The training would include, at a minimum, the following topics so that construction crews would understand their obligations: environmentally sensitive areas (ESAs) and other delineated boundaries (e.g., work areas); housekeeping (trash and equipment cleaning); safety, hazardous materials, and fire management; work stoppage; communications protocols; consequences of non-compliance; Storm Water Pollution Prevention Plan (SWPPP) procedures; and environmental resources procedures (e.g., biological, cultural, and paleontological).

2.4.2 Construction Work Areas and Work Area Disturbance

Project construction would be performed in the following work areas:

- helicopter landing zones and touchdown areas
- temporary work pads for facility installation, modification, or removal
- temporary guard structures
- temporary pull-and-tension/stringing sites
- splice sites for conductor and overhead ground wire removal and installation.

Each construction work area is described next.

Helicopter Landing Zones and Touchdown Areas

The activities that may be performed at any given helicopter landing zone (including touchdown areas) would include:

- dropping off or picking up construction crew members
- dropping off or picking up air-portable construction equipment
- assembling structure sections (e.g., installing cross-arms or hardware on a section of structure)
- lifting structure sections by helicopter
- disposing removed LSTs or LST sections
- dropping off or picking up conductor pull rope
- dropping off or picking up conductor
- loading and unloading structures, LST sections, and other material to and from trucks
- parking temporary vehicles and equipment

Additional activities could be performed at helicopter landing zones within a staging area, including helicopter fueling.

Temporary Work Pads for Facility Installation, Modification, or Removal

Temporary work pads, also referred to as construction work areas, would serve as temporary work areas for crews and where project-related equipment and/or materials would be placed at or near each structure location. The activities that may be performed at any given temporary work pad would include:

- installing TSPs, TSP H-frames, LWS structures and LWS H-frames

- removing existing structures (LSTs or poles)
- modifying LSTs
- removing conductor from existing structures
- installing conductor and OPGW/OHGW on replacement structures
- splicing conductors
- removing or trimming vegetation
- surface grading, leveling, and/or compacting
- benching
- parking temporary vehicles and equipment
- Installing foundations as required
- Installing temporary "Guard" Structures

Temporary Guard Structures

Guard structures are temporary facilities that typically would be installed at transportation, flood control, aqueducts, railroad crossings and utility crossings, including roads before conductor, OPGW/ADSS fiber optic cable removal or installation activities. These structures would be designed to support the conductor, OPGW, or ADSS fiber optic cable if it momentarily "sagged" below a conventional "sagging" height. Depending on the overall spacing of the conductors being installed, approximately one to five guard structures would be required on either side of a crossing. In some cases, the temporary guard structures could be substituted by using specifically equipped boom trucks or, at highway crossings, temporary netting could be installed if required. Guard structures would be installed at all crossings of electrical structures and roads where required. The guard structures would be removed after the conductor is secured into place. For highway crossings, SCE would work closely with the State of California Department of Transportation (Caltrans) to secure the necessary permits to install new conductors and remove existing conductors and install OPGW and remove ground wire.

Conductor Pulling and Tensioning

Conductor Pulling and Tensioning locations are areas where equipment necessary for removal of existing conductor and OPGW are required. These same areas will be used for installation of new conductors and OPGW/ADSS fiber optic cable.

Each conductor, OPGW, or ADSS fiber optic cable removal or installation operation would consist of a "Puller" at one end of the pulling section and at the other end would be a conductor trailer including a "tensioner." "Pulling Sections" could include just one or multiple spans. "Wire pull" is the term used to describe the length of any given continuous wire installation process between two selected points along the line. Pulling-and-tensioning sites may be used for splicing and field snubbing of the conductors. Field Snubs are areas located usually in the middle of a "span" and are used to temporarily secure the conductors while the Puller or Tensioner can be turned 180 degrees to "Pull" or "Pay Out" conductor in the opposite direction.

Splice Sites for Conductor and Overhead Ground Wire Removal

Before removal of existing conductor, existing "Line Splices" will require to be removed and replaced with "Pulling Socks". Because existing line Splices, which join the conductor ends together should not travel through the rollers used during conductor removal activities. At each existing "Line Splice" location, construction crews using bucket trucks will remove the existing Line Splice and install temporary "Pulling Sock(s)".

Summary of Land Disturbance

Areas of project disturbance are summarized in Table 2-5.

Table 2-5 Work Area Disturbance

Work Area	Quantity	Preferred Size (feet)	Temporary Disturbance (acres)	Permanent Disturbance (acres)
Staging Areas	36	Varies	134	0
Helicopter Landing Zones and Touchdown Areas	2	Varies	1.27	0
Temporary Work Pads for Facility Installation Modifications, or Removal				
Install TSP	119	200 by 150	81.9	7.1
Install TSP H-frame	4	200 by 150	2.8	.4
Install LWS structure	338	200 by 100	155.2	16.9
Install LWS H-frame	11	200 by125	6.3	.7
Remove existing structure	477	22 by 150	25.1	0
Modify LST	6	200 by 100	2.8	0
Modify existing structure	4	75 by 75	.5	0
Excavation and associated equipment work areas	370	Varies	.2	0
Temporary guard structures	194	75 by 75	25.1	0
Pull-and-tension/stringing sites	290	400 by 150	399.4	0
Splice sites, conductor and overhead ground wire installation	2	400 by 100	1.8	0
Total Disturbance Areas			**833 acres**	**25.1 acres**
Existing Permanent Disturbance Area to be abandoned and considered no longer permanently disturbed				**44.9 acres**
Net Disturbance Area			**833 acres**	**-19.8 acres**

Source: (SCE, 2022)

2.4.3 Construction Access

During construction, the project area would be accessed by unpaved access and spur roads, overland routes, helicopters, unpaved public roads, and paved public roads. Access roads would be roads running between structure sites and serving as the main transportation routes along the subtransmission line alignments. Spur roads would be roads leading from access roads and terminating at one or more structure sites. Construction activities to establish access to the project area are described next.

Modifications to Existing Access Roads and Spur Roads

Approximately 84 miles of existing access and spur roads would be used for project construction. All existing access and spur roads are expected to require rehabilitation work, including regrading and repairing the existing roadbeds. Access and spur roads would be cleared of vegetation; blade-graded to remove potholes, ruts, and other surface irregularities; and re-compacted to provide a smooth and dense riding surface, capable of supporting heavy construction equipment. As part of the rehabilitation, vegetation within and along the existing road prism may be trimmed and/or removed to prevent vegetation from intruding into the roadway. In some locations, road base (crushed rock), temporary plating, or matting may be placed within the existing road prism. This road base, temporary plating, or matting may be laid to compensate for soft soils. Road base, plating, or matting would be removed at the end of construction. This activity may be repeated as required during project implementation.

Before the start of construction, some of the existing 84 miles of access and spur roads may require more extensive rehabilitation. The extent and scope of this rehabilitation is unknown at this time, because field conditions along the project alignment are subject to change. More extensive rehabilitation could include:

- widening of the existing roadbed at curves and other locations, and
- installing new or repairing existing drainage structures, such as wet crossings, water bars, over-side drains, and pipe culverts, to allow construction traffic use as well as to prevent road damage from uncontrolled water flow.

Where existing access or spur roads cross culverted waterways, temporary plating or matting may be laid over the roadway, to protect the culverts and support the movement of heavy construction equipment. Plating or matting also may be placed in other locations, depending on surface conditions at the time of construction.

Overland Access Routes

Approximately 2.4 miles of new overland access routes would be used during project construction. No grading or gravel placement would occur in these areas. The overland access routes would be approximately 14 feet wide. Establishment of overland access routes would involve trimming vegetation while leaving the root structure intact, or vehicles would drive over the extant vegetation (overland travel). In some locations, temporary matting may be placed on the ground surface to facilitate access to a work location. No blading, grading, or gravel placement would occur on overland access routes.

Helicopter Access

Light, medium, and heavy helicopters may be used during project construction. Helicopters would be used to support construction in areas where access is limited (e.g., no suitable access or spur road, limited construction area to facilitate on-site construction activities, and/or environmental constraints exist to accessing a construction work area with standard construction vehicles and equipment) or where helicopter-supported construction would provide environmental, cost, and schedule savings compared to surface construction.

Helicopter takeoff and landing areas typically include helicopter landing zones and staging areas, and public and private airports or airstrips. SCE also anticipates using the staging areas listed in Table 2-6 as helicopter staging areas. Helicopter refueling generally would occur off-site at local airports and at the staging areas; in some instances, helicopter refueling could occur at locations along the project alignment that are not identified as staging areas.

Flight paths would be determined immediately before construction by the helicopter contractor. Flight paths would be filed with the appropriate authorities. When operated, helicopters generally would be flown only during daytime hours (the period from 30 minutes before sunrise to 30 minutes after sunrise).

2.4.4 Staging Areas

SCE anticipates using multiple staging areas listed in Table 2-6 and shown in Figure 2-12. The size of each of the identified staging areas and the total acreage associated with staging areas are shown in Table 2-6. Details of each substation are provided in Appendix A, Project Components.

Table 2-6 Potential Staging Area Locations

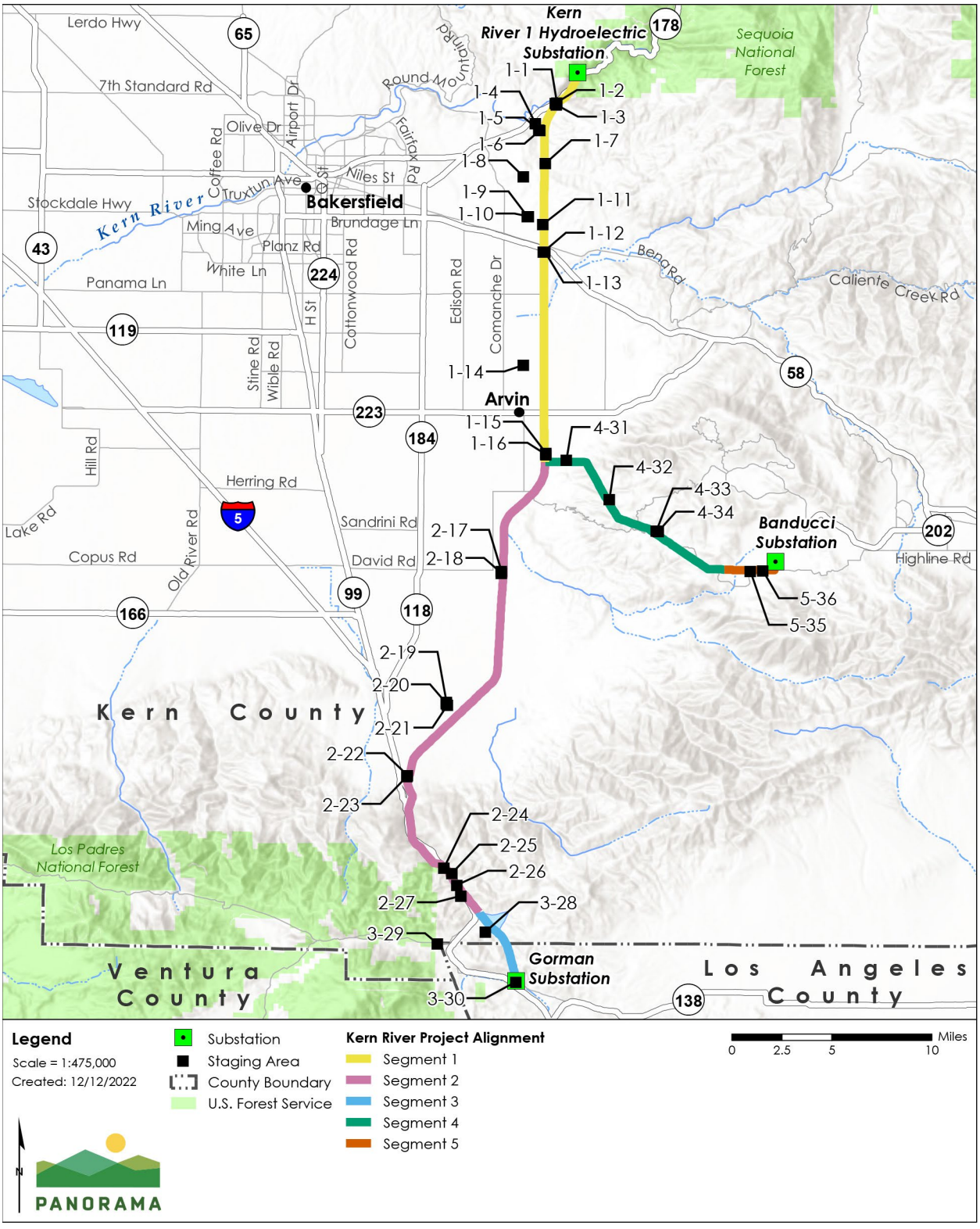
Staging Area Name	Location	Condition	Approx. Area (acres)	Project Component
1-1	Kern Canyon Road	Grassland	4.0	Segment 1
1-2	Kern Canyon Road	Grassland	3.5	Segment 1
1-3	Kern Canyon Road	Ruderal/Disturbed	2.2	Segment 1
1-4	Kern Canyon Road	Disturbed	0.9	Segment 1
1-5	Kern Canyon Road	Disturbed/Grassland	1.8	Segment 1
1-6	Kern Canyon Road	Disturbed/Grassland	5.0	Segment 1
1-7	Breckenridge Road	Disturbed	4.2	Segment 1
1-8	Breckenridge Road	Disturbed/Grassland	4.9	Segment 1
1-9	Bakersfield-Tehachapi Highway	Disturbed	4.9	Segment 1
1-10	Bakersfield-Tehachapi Highway	Disturbed	5.0	Segment 1

Staging Area Name	Location	Condition	Approx. Area (acres)	Project Component
1-11	Bakersfield-Tehachapi Highway	Disturbed	5.0	Segment 1
1-12	Tower Line Road	Disturbed	4.8	Segment 1
1-13	Tower Line Road	Disturbed	4.1	Segment 1
1-14	Tejon Highway	Disturbed	2.2	Segment 2
1-15	Millux Road	Agricultural	4.7	Segment 2
1-16	Millux Road	Agricultural	4.9	Segment 2
2-17	Rancho Road	Agricultural	4.8	Segment 3
2-18	Rancho Road	Agricultural	4.9	Segment 3
2-19	Laval Road	Disturbed	3.2	Segment 3
2-20	Laval Road	Disturbed	3.1	Segment 3
2-21	Laval Road	Disturbed	4.5	Segment 3
2-22	Edmonston Pumping Plant Road	Disturbed	1.6	Segment 3
2-23	Edmonston Pumping Plant Road	Asphalted	1.5	Segment 3
2-24	I-5	Disturbed	0.8	Segment 3
2-25	Lebec Road	Asphalted	4.4	Segment 3
2-26	Lebec Road	Disturbed	1.4	Segment 3
2-27	Lebec-Clear Canyon Road	Disturbed/Grassland	1.1	Segment 3
3-28	Crane Canyon Road	Disturbed/Grassland	3.0	Segment 3
3-29	Frazier Mountain Road	Disturbed/Grassland	5.0	Segment 3
3-30	Gorman Substation	Disturbed/Grassland	1.5	Segment 3
4-31	Bear Valley Road	Disturbed/Grassland	9.9	Segment 4
4-32	Bear Valley Road	Grassland	2.2	Segment 4
4-33	Comanche Point Road	Grassland	4.7	Segment 4
4-34	Comanche Point Road	Grassland	5.0	Segment 4
5-35	Banducci Road	Grassland	5.0	Segment 4/5
5-36	Banducci Road	Grassland	4.1	Segment 4/5

Staging Area Name	Location	Condition	Approx. Area (acres)	Project Component
Total Area			**133.8**	

Source: (SCE, 2022)

Figure 2-12 Staging Areas



Source: (SCE, 2022)

Staging Area Preparation

Staging area preparation would involve grubbing (i.e., vegetation removal) and/or minor grading to provide a flat and compacted surface for the application of gravel or crushed rock, with the exception of staging areas that are asphalted or already have a rock base. No new access roads would be constructed to access any of the staging areas. Any land that may be disturbed in a staging area would be returned to preconstruction conditions following construction completion.

Staging Area Uses

Staging areas would be used as the reporting location for workers, vehicle and equipment parking, helicopter landing zones, and as material storage areas. Materials commonly stored at the staging areas would include construction trailers, construction equipment, portable worker sanitation facilities, steel bundles, steel/wood structures, conductor/OHGW/OPGW reels, hardware, insulators, cross arms, signage, consumables (e.g., fuel and filler compound), waste materials for salvaging, recycling, or disposal, and SWPPP Best Management Practice (BMP) materials (e.g., straw wattles, gravel bags, silt fences).

The staging areas also may have construction trailers for supervisory and clerical personnel. Normal maintenance and refueling of construction equipment also would be conducted at the staging areas. All refueling—which may include helicopters—and fuel storage would be in accordance with the site-specific SWPPP.

Staging Area Security

The staging areas would be secured through installation of temporary perimeter fencing and one or more gates; typically, chain-link fencing would be used. In some instances, existing fencing may be present at the staging area location; in these instances, temporary perimeter fencing would not be installed. Other security measures that may be employed at staging areas could include cameras, privacy screening, and security personnel.

Staging Areas Power

Temporary power would be determined based on the type of equipment/facilities being used at the staging areas. If existing distribution facilities are available, a temporary service and meter may be used for electrical power at one or more of the yards. If determining that temporary power is not needed or available at a staging areas full-time, a portable generator may be used intermittently for electrical power at one or more of the yards.

Staging Area Lighting

Staging areas may be lit for security; this lighting would be directed internally and on site. If temporary lighting is needed at staging areas, portable light standards would be placed at point(s) along the outside edge of the staging area as necessary. The sources of illumination on the light standards would be shielded, resulting in light being directed downward and inward (toward the staging area). To the extent feasible, light standards would be positioned so that illumination would be directed away from the nearest residence(s).

2.4.5 Site Preparation

Underground Utility Identification

Before the start of activities requiring excavation, SCE or its construction contractor would identify underground utilities by contacting DigAlert, conduct visual observations, conduct exploratory excavations (potholing), and/or use buried line locating equipment.

Temporary Power

Temporary power may be installed at one or more staging area(s) as part of project construction. The process for installing temporary power would be determined by the service provider but generally would include installing a temporary meter on a temporary structure, the temporary installation of one or more wood structures (to be installed in the same manner as guard structures) and installing temporary electrical cable from the meter to the load source(s) at the staging area(s).

Vegetation Clearing

Vegetation and trees would be trimmed or removed as needed at or adjacent to construction work areas, to facilitate the safe project construction and reduce fire hazards associated with construction activities. Only the minimum amount of vegetation and trees necessary for the safe construction and operation of structures and facilities would be removed.

Surveys indicate that 1,689 trees with a diameter of 8 inches at breast height or greater occur within anticipated project work areas and associated access roads. An additional 116 trees are rooted outside these work areas but overhang the anticipated work areas and/or access roads and may by subject to pruning that would remove 25 percent or more of the tree canopy or cause disturbance to more than 25 percent of the root zone under the dripline of the tree canopy. The actual number of trees subject to removal, pruning, and/or root disturbance would be quantified during construction and would depend on equipment size and height, as well as implementation of potential oak tree avoidance and protection measures. SCE would try to minimize the number of trees removed during final design.

Vegetation removal would consist of “brushing” (i.e., shrubs and other low-lying vegetation would be trimmed and/or removed within the construction work area). Vegetation removal generally would be accomplished using a mower-type attachment mounted to a tractor; in some instances, areas would be brushed by individuals using heavy-duty “weed whacker” type equipment. Vegetation growing on the road surface would be removed by a motor grader during the blade-grading of roads, to remove potholes, ruts, and other surface irregularities.

Work Area Stabilization

Benching of temporary work pads and pull-and-tension/stringing sites may be required to provide access for foundation construction, assembly, structure erection, and wire stringing activities during line construction. Benching is a technique in which an earth-moving vehicle excavates a terraced access to structure locations in extremely steep and rugged terrain. Benching also may be used on an as-needed basis in some areas to help ensure the safety of personnel during construction activities.

Grading

Staging areas and construction work areas could require minor grading to provide a reasonably level work surface for equipment and vehicle use. Sites would be graded so that water would run toward the direction of the natural drainage and as directed by the SWPPP requirements. In addition, drainage would be designed to prevent ponding and erosive water flows at the new structures. If there are any areas that require cut and fill, they would be compacted to at least 90 percent relative density and would be capable of supporting heavy vehicles.

2.4.6 Subtransmission Line Construction

Subtransmission Structure Removal

Wood Pole Removal

Both the above-ground and below-ground portions of the wood structures at each structure would be removed using a line truck or similar equipment with an attached boom. Ground crew members would hand-excavate at the base of each structure and hydraulic jacks would be placed around the base of the structure; a boom would be attached to the structure, and the structure then would be jacked and lifted out and placed in the temporary work pad area or on a trailer. The structures would be transported by truck to a staging area, and then to an SCE facility for re-use or recycling.

Helicopters may be used to remove structures where access is limited. When helicopters are used for structure removal, crews would first cut the structure approximately 4 feet above ground and fell the above-ground portion in the temporary work pad area. The remaining above-ground and below-ground portions of the structure would be removed using hydraulic pole jacks and/or by hand-digging. The two portions of the structure then would be removed by helicopter; each portion would be placed on the ground within a previously disturbed area or on a trailer or would be flown to a helicopter landing zone. The hole left from removing the structure would be backfilled and compacted.

LST and TSP Removal

LSTs and TSPs would be removed either whole or in pieces. If the topography and land use(s) surrounding the LST or TSP are suitable, a crane would be positioned proximate to the LST or TSP in the temporary work pad area, and the crane would place it in tension. The LST or TSP then would be unbolted or cut from its foundations, and lifted clear of its location, set down in the temporary work pad area or in another cleared or previously disturbed area, and then dismantled by hand or with cutting tools (e.g., cutting torches, pneumatic cutters). If a crane cannot be used in a given location, an LST or TSP may be dismantled in-place by hand or with cutting tools; in these instances, crews may work from bucket trucks or man-lifts in the temporary work pad area rather than climbing the structures.

Helicopters would be used to remove existing LSTs or TSPs when overland access for equipment is not feasible. When helicopters are used for removal, ground crews would unbolt or cut portions of the LST or TSP and attach a sling to the unbolted portion. This portion then would be lifted by helicopter and placed in a previously disturbed area or on a trailer. The steel

components would be transported to a staging area, where they would be prepared for recycling.

Foundation Removal

To remove LST or TSP foundations, crews would excavate around each of the foundations, and the foundations then would be demolished, generally with a jackhammer or other pneumatic tool. The demolished concrete would be removed from the site and transported to a staging area before final disposal. Foundations typically would be removed 2 to 3 feet below grade; the holes left from removing the foundations would be backfilled and compacted. Foundations may be left in-place in locations where their removal may cause slope or soil instability, and thus could contribute to localized erosion. Foundations also may be removed completely if leaving a portion of the foundations in the ground is not compatible with land use in the area.

Foundation Construction

Direct-buried, LWS and wood structures would require a hole to be excavated using either an auger or backhoe or dug by hand. In some locations, corrugated steel, cardboard, slurry, or plastic forms may be placed to stabilize the excavation walls before installation of LWS structures. If a single concrete foundation is used, the hole would be drilled using truck or track-mounted excavators. Excavated material would be used as described in Section 2.4.10, Waste Generation and Management.

For concrete foundations, steel-reinforced cages would be set, positioning would be survey-verified, and concrete then would be poured in the excavation. Foundations in soft or loose soil or those extending below the groundwater level may be stabilized with drilling mud slurry. When mud slurry is used, it would be placed in the hole during the drilling process to prevent the sidewalls from sloughing. Concrete then would be pumped to the bottom of the hole, displacing the mud slurry. Depending on site conditions, the mud slurry brought to the surface typically would be collected in a pit adjacent to the foundation or vacuumed directly into a truck to be re-used or discarded at an appropriate off-site disposal facility.

Installation of micropile foundations would be used where there is no equipment access to the location. The micropile plant form including all the necessary equipment and material, including workers would be flown in using helicopters. Micropile foundations consist of several smaller diameter holes, using a drilling rig. Each micropile hole would be flushed with water or air to remove drill cuttings and loose material. After the holes are completed, rebar would be inserted in each hole and grout would be injected through grout tubes at the lowest point of each micropile, and the hole filled until viscous grout reaches the top of the casing. The micropiles then would be tied together, to act as a single unit foundation, in a reinforced concrete cap. Dry grout could be brought to each tower site and mixed at the site or could be flown in by helicopter.

During construction, existing concrete supply facilities would be used where feasible. However, because of the remoteness of some structure locations, a temporary concrete batch plant could be set up in one or more established staging areas.

Subtransmission Structure Installation and Modification

TSP/LWS Installation

TSP structures typically consist of multiple sections. The TSP/LWS sections would be placed at temporary work pads adjacent to each structure location. Depending on conditions at the time of construction, the top sections may come preconfigured, may be configured on the ground, or configured after structure installation with the necessary cross arms, insulators, and wire stringing hardware.

A crane would be used to install each TSP/LWS structure into the excavated hole. A crane or helicopter would be used to "stack" the sections onto the TSP foundation. TSPs and LWS structures also may be set by helicopter. When the base section is secured, the subsequent section(s) of the TSP would be slipped together into place onto the base section by crane or helicopter. Hydraulic jacks may be installed temporarily between structure sections to jack the structure sections together. The TSP sections then may be spot welded together for additional stability. Depending on the terrain and available equipment, the structure sections also could be pre-assembled into a complete structure before setting the structure.

Wood Pole Installation

Depending on conditions at the time of construction, the wood structure could be configured on the ground or configured after structure installation with the necessary cross arms, insulators, and wire-stringing hardware. The structures then would be installed in the direct bury holes, typically by a line truck or crane. Existing Lattice Steel Tower Modification

At the northern end of Segment 1, approximately six existing LSTs would be modified to accommodate the OPGW. The modifications would include installation of new mounting hardware at the top of the LSTs. In addition, conductor-related hardware, including insulators, would be removed and replaced during conductor installation. This work would be performed by crews on the towers; crews would gain access to the LSTs by foot, overland vehicle, or helicopter.

Above-Ground and Underground Conductor and Wire

Telecommunications

Overhead Installation

Overhead OPGW installed on replacement and re-used structures would be installed simultaneously with conductor. ADSS fiber optic cable would be installed along Segment 5.

Underground Installation

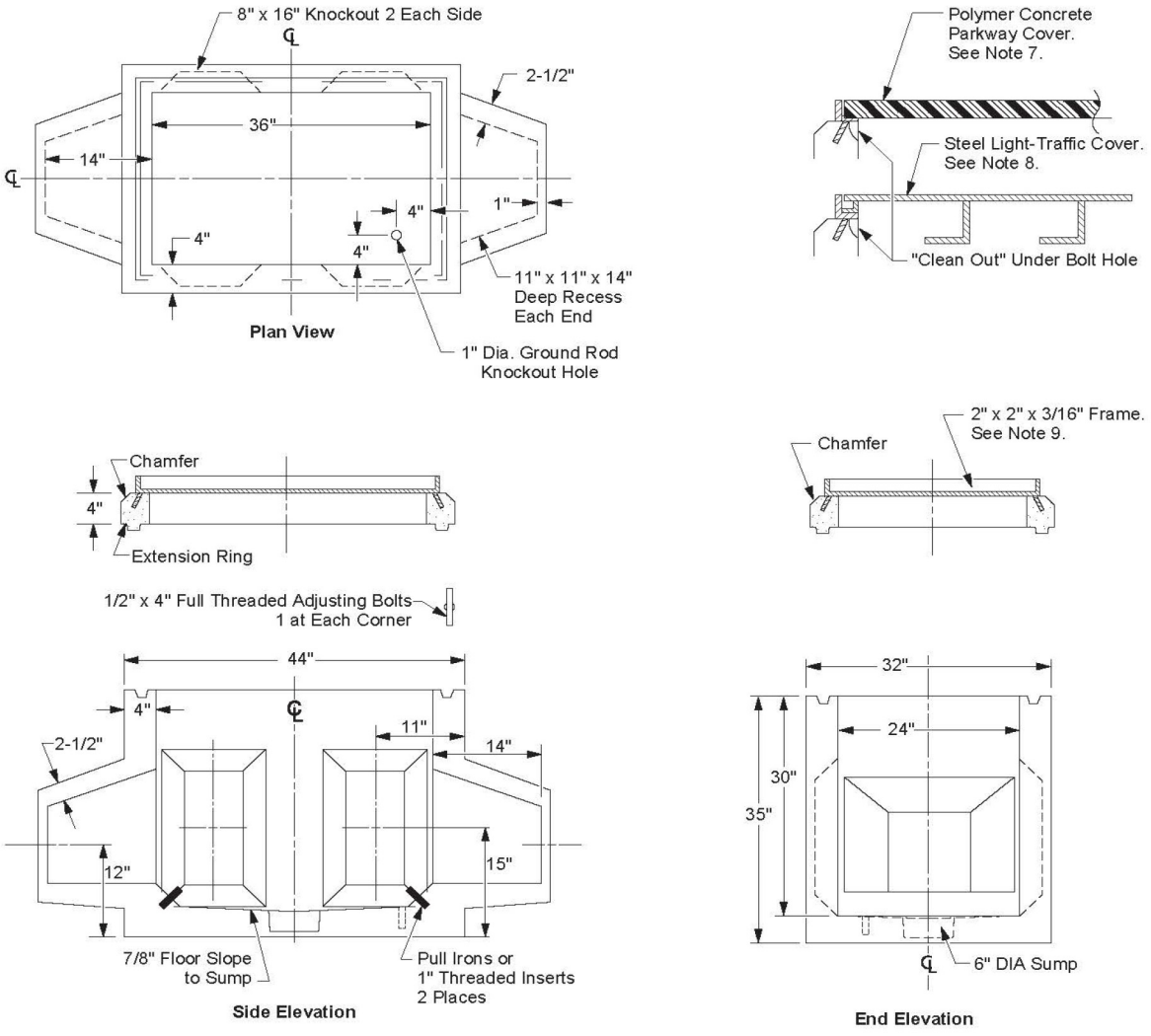
Short sections of fiber optic cable would be installed underground at and adjacent to the existing Banducci, Gorman, and Kern River 1 hydroelectric substations. OPGW would transition from an overhead configuration to an underground configuration through risers installed on replacement of existing structures (known as getaway poles).

Where existing conduit or cable raceways within and adjacent to the substations are available, underground fiber optic cable would be installed in these structures. If existing conduit or

raceways are not available within the substation, new conduit would be installed in trenches. New conduit also would be installed in trenches between the getaway pole(s) and the mechanical-electrical equipment rooms/telecommunications rooms/telecommunications cabinets in each substation. Conduit trenches would be approximately 12 inches wide and 36 inches deep. New underground conduit and structures typically would be installed with a backhoe. Polyvinyl chloride conduit would be placed in the trench and covered with a minimum of approximately 30 inches of concrete slurry, then backfilled and compacted. The fiber optic cable would be installed in an innerduct to protect and identify the cable within the underground conduit and structures. To install the innerduct, it would first be pulled in the conduit using a pull rope and pulling machine or truck-mounted hydraulic capstan. Then, the fiber optic cable would be pulled inside the innerduct using the same procedure.

Undergrounding would require excavation for installation of vaults or pull boxes at each end of the underground conduit (Figure 2-13). For each vault or pull box, a hole is excavated approximately 8 feet deep by 6 feet long by 6 feet wide. The vault or pull box would be lowered into place, connected to the conduits, and the hole would be backfilled with concrete slurry. One or more splice boxes also would be required on each getaway pole. SCE would install the fiber optic cable at the vaults and pull boxes and would splice the cable segments, where it transitions from underground to overhead.

Figure 2-13 Vault and T-Pull Box Details



Created: 12/12/2022

PANORAMA

Source: (SCE, 2022)

Approximately three vaults or pull boxes would be installed, at or in the vicinity of the Gorman and Kern River 1 hydroelectric substations, resulting in the excavation of approximately 900 cubic feet of material. An additional approximately 1,800 cubic feet of material may be excavated for installation of underground fiber optic cable at or in the vicinity of the existing substations. Fiber optic cable is anticipated to be installed in underground facilities at the Banducci substation.

Guard Structures

Guard structures are used to help keep the existing conductors and the new installed conductors from coming in contact with the ground. Typically these guard structures are located at road crossings, over existing electrical circuits, and rail road crossings. These guard structures are made of two wood structures "uprights" and are direct buried into the ground. After the existing conductors have been removed and the new conductors have been installed these "guard structures" will be removed. In some cases, the guard structures could be substituted with the use of specifically equipped boom trucks, or at highway crossings, temporary netting could be installed if required. Typical guard structures are wood structures with diameters of 12 to 18 inches at the base and burial depths of 5 to 7 feet. Depending on the overall spacing of the conductors being installed, approximately three to five guard structures would be required on either side of a crossing. Guard structure wood structures would be installed using a direct-buried approach. Direct-buried wood structures would require a hole to be excavated using either an auger or a backhoe, or with the use of hydraulic or pneumatic equipment (e.g., jackhammers, drills). In some locations, corrugated steel or plastic forms may be placed to stabilize the excavation walls before installation of the structure. Following excavation of the structure hole, the wood structure then would be installed in the excavated or augured holes, typically by a line truck with an attached boom; the base would be secured by backfilling with the excavated material in the interstitial space between the wall of the excavated or augured hole and the structure.

2.4.7 Substations

Transformers/Electric Components

At the Gorman and Kern River 1 hydroelectric substations, conductor would be removed from the subtransmission racks, and new conductor would be connected to the existing racks. Minor modifications to the existing racks at each of the substations may be required, so that OHGW could be installed between the racks and the getaway structures. These minor modifications could include installation of new fittings to which the OHGW would be attached, or structural reinforcement of the existing racks could be added.

Communication Systems (Supervisory Control and Data Acquisition Software)

At the Banducci, Gorman, and Kern River 1 hydroelectric substations, SCE would install new terminal equipment, channel multiplexer equipment, equipment cabling, and other telecommunication equipment devices in the control buildings/mechanical-electrical equipment rooms. This installation work would provide the required telecommunication circuit connection for subtransmission line protection relay equipment in the substations. The work would occur

generally within the substation fence line on previously disturbed surfaces. SCE also would install cabling between the dead-end rack to the control rooms/mechanical-electrical equipment rooms at each of the substations and would install new relay and protection racks in those facilities.

2.4.8 Public Safety and Traffic Management

Public Safety Considerations

Because of the non-urbanized location of many of the project components, public safety considerations during construction could include:

- spills of fuels or hazardous materials;
- work being performed along public roadways;
- movement of construction equipment along public roadways;
- use of helicopters;
- construction-caused wildfire; and
- de-energized conductor being dropped on personal property during wire stringing activities.

Measures that would be implemented during project construction to address public safety considerations would include:

- development and implementation of one or more SWPPPs, to ensure that fuels and hazardous materials are used and handled according to applicable regulations, and to ensure efficient and effective response to spills;
- development and implementation of a spill prevention, control, and countermeasures plan, if necessary, to ensure that fuels are stored appropriately, and to ensure efficient and effective response to spills, as specified in Applicant Proposed Measure (APM) HAZ-1;
- development and implementation of a hazardous materials business plan (HMBP), to ensure that materials are managed according to applicable regulations, as specified in APM HAZ-1;
- development and implementation of traffic control plans, to meet local permit requirements and protect public safety during construction along public roadways, as specified in APM TRA-1;
- development and implementation of a helicopter use and safety plan, to address use of helicopters in areas where the public are present, as specified in APM TRA-2;
- development and implementation of a construction fire prevention plan, to mitigate the risk of construction activities triggering a wildfire, as specified in APM HAZ-3; and
- installation of guard structures or use of specially equipped trucks during wire stringing activities, where public roadways are crossed by the project alignment.

To ensure public safety during project construction, the public would be restricted from entering or transiting construction work areas and staging areas and also would be excluded from those areas of the alignment where overhead cable removal or installation activities are underway. Public access restrictions would be maintained for the duration of construction activities at a given location.

Traffic Control

During construction, SCE would implement APM TRA-1. SCE would install appropriate traffic control devices between work zones and transportation facilities, post signs, and follow the recommendations in the California Temporary Traffic Control Handbook regarding basic standards for the safe movement of traffic on highways and streets, in accordance with Section 21400 of the California Vehicle Code.

The locations, process, and timing for the closing of sidewalks, lanes, roads, trails, paths, or driveways to manage public access is presented in Section 4.16, Transportation. Overhead cable removal and installation activities would require the temporary closures of roads, lanes of roads (if the entire road does not need to be closed), and associated sidewalks or pedestrian paths. SCE would obtain encroachment permits from the local jurisdictions and Caltrans, as appropriate, for lane or roadway closures. Closures of private driveways would be coordinated with individual property owners. SCE would coordinate with the relevant jurisdictions to coordinate closure of paths and trails if necessary, during stringing of conductor or wire over paths and trails.

Security

Staging areas would be fenced and may be illuminated for security purposes. Security personnel either may patrol the staging areas periodically or be stationed at staging areas. Security measures would not be employed at construction work areas.

2.4.9 Site Management and Waste Disposal

Dust

During construction, migration of fugitive dust from work sites would be limited by control measures set forth by the Eastern Kern Air Pollution Control District (EKAPCD), San Joaquin Valley Air Pollution Control District (SJVAPCD), and South Coast Air Quality Management District (SCAQMD). In addition, SCE would implement the following dust control measures:

- All exposed surfaces with the potential of dust-generating will be watered or covered with coarse rock to reduce the potential for airborne dust from leaving the site.
- The simultaneous occurrence of more than two ground-disturbing construction phases on the same area at any one time will be limited. Activities will be phased to reduce the number of disturbed surfaces at any one time.
- All haul trucks entering/leaving the site will be covered, and their loads will be trimmed as necessary.

- Wet power vacuum street sweepers will be used to sweep all paved access road, parking areas, staging areas, and public roads adjacent to project sites on a daily basis (at minimum) during construction. Use of dry power sweeping will be prohibited.
- Gravel or non-toxic soil stabilizers will be applied at all unpaved parking areas and staging areas.
- Soil stockpiles will be watered and/or covered daily.
- All vehicles will be limited to a speed of 15 miles per hour (mph) or less on unpaved areas.
- Dust monitoring will be implemented, in compliance with the standards of the local air district.
- Project construction will be halted during any periods when wind speeds are in excess of 50 mph.

Stormwater Management

To obtain coverage under the Construction General Permit, SCE would submit permit registration documents, including a Notice of Intent, to the State Water Resources Control Board (SWRCB) and would develop an SWPPP that complies with the Construction General Permit requirements. SCE also would receive an SWRCB-issued Waste Discharger Identification number before starting construction activities. SCE would implement the SWPPP during construction, which would include requirements for inspections and monitoring, BMPs, and requirements to revise the SWPPP and implement revisions as needed to protect stormwater quality. The SWPPP would describe the following:

- project location, site features, area of disturbance, dates of construction, and types of materials and activities that may result in pollutant discharges;
  BMPs to implement during construction, to control erosion, discharge of sediments, and other potential impacts associated with construction activities;
- an inspection and maintenance program for BMPs; and
- a sampling and analysis plan for monitoring pollutant discharges to water bodies, if required.

SCE must submit a Notice of Termination (NOT) to the SWRCB after completing a project, subject to the Construction General Permit to be relieved of the permit requirements. Final soil stabilization throughout the project area would need to be achieved before the SWRCB would approve the NOT.

2.4.10 Waste Generation and Management

Solid Waste

Project construction would result in generation of various solid wastes, including metals (from the removed LSTs, conductor, OHGW, and associated fittings), wood structures, wood pallets, cardboards/papers (e.g., from material packaging), worker-generated solid waste (e.g., food and food packaging), and organic waste (e.g., removed vegetation). Solid waste generated during

project construction would be collected at the point of creation, transported to a staging area, and then temporarily stored at a staging area as the solid waste awaits salvage, recycling, and/or disposal. Solid wastes would be sorted, and recyclable and non-recyclable materials would be stored separately at the staging areas. Solid wastes would be transported off-site using SCE-approved transporters and disposed at one or more SCE-approved disposal facilities or at an industrial-scale recycling facility. Mulch or green waste would be removed from the site in a covered vehicle, to prevent seed dispersal and transported to a licensed landfill or composting facility.

Approximately 900 tons of metal, consisting of 400 tons of steel from existing towers, 36 tons of hardware, 462 tons of metals from subtransmission conductor, and 2.5 tons of OHGW would be removed, as would approximately 210 tons of concrete from the foundations of existing towers. The mass of miscellaneous solid waste (e.g., pallets, packaging) would be approximately 10 tons.[2]

Because of the very large mass and recyclable content (approximately 35 percent of waste) of the waste streams that would be generated during project construction, the steel from the removed LSTs, conductor, OHGW, and steel hardware and fittings are expected to be transported to industrial-scale recycling facilities. Appropriate disposal facilities for non-metallic recyclable materials and non-recyclable materials are available at the Bena Landfill near Bakersfield and the Tehachapi Sanitary Landfill.

Liquid Waste

Sanitary waste is the only liquid waste planned to be generated during project construction. No other liquid wastes (e.g., drilling muds, contaminated waters) are expected to be generated. Portable toilets would be provided for on-site use by construction workers; sanitary waste would be collected, contained, and stored in these portable toilets before disposal by a licensed sanitation contractor. Sanitary waste would be treated at a wastewater treatment plant. The volumes of liquid waste generated during project construction would be approximately 25,000 gallons of liquid waste, commensurate with the number of workers on site during construction (i.e., a maximum of approximately 85 workers).

Hazardous Waste

Only small volumes of hazardous waste are anticipated to be generated during project construction. The wood structures or portions of wood structures to be removed would be returned to a staging area, and would be re-used by SCE, returned to the manufacturer, disposed in a Class I hazardous waste landfill, and/or disposed in the lined portion of an

[2] This assumes a mass of 2,000 pounds per LST removed, 654 pounds/1,000 feet for conductor; 450 pounds/1,000 feet for OHGW; 100 pounds of hardware and fittings; and 50 pounds of miscellaneous solid waste per existing structure on which new conductor would be installed. Furthermore, this assumes that 2 tons per wood pole would be removed.

RWQCB-certified landfill. Approximately 149 wood structures (accounting approximately 69 H-frames, three 3-pole installations, and two single poles), weighing approximately 298 tons in total, would be removed.

All hazardous waste would be stored, handled, and used in accordance with applicable regulations. SCE crews and/or SCE's construction contractor would implement proper hazardous waste management activities, which would include preparation and implementation of a project-specific HMBP, as specified in APM HAZ-1.

To address contaminated soil or groundwater, SCE would develop and implement a soil management plan, per APM HAZ-2. The plan would direct that, if encountered, contaminated soil would be segregated, sampled, and tested to determine appropriate disposal options. If the soil is classified as hazardous, it would be managed properly on location and transported in accordance with U.S. Department of Transportation (USDOT) regulations using a Uniform Hazardous Waste Manifest to a Class I Landfill or other appropriate soil treatment or recycling facility, as approved by SCE. If potentially contaminated groundwater is encountered, then groundwater samples would be collected and tested to determine appropriate treatment and disposal. Hazardous waste would be transported and disposed in accordance with applicable rules, regulations, and SCE standard protocols, designed to protect the environment, workers, and the public.

The final disposition location of hazardous wastes to an SCE-approved facility would be determined by the construction contractor immediately before or during construction. One or more of the following SCE-approved facilities may be used:

- Clean Harbors, Buttonwillow LLC, 2500 West Lokern Road, Buttonwillow, CA 93206
- Kettleman Hills, 35251 Old Skyline Road, Kettleman City, CA 93239

2.4.11 Water Use and Dewatering

Water Use

Water would be used for dust control, for restoration activities, and in the construction of TSP foundations. Project construction is estimated to require approximately 350 acre-feet of water; this water would be consumed over the 2-year construction duration.

SCE preferentially would use recycled or reclaimed water, if and when such water is available; at this time, the volume of recycled or reclaimed water that would be available for purchase is unknown. However, if the full volume of water needed for the Proposed Project is available for purchase at competitive rates, SCE would use only recycled or reclaimed water. If recycled or reclaimed water is not available in sufficient quantities to supply the entirety of project water demand, SCE would purchase water from commercial purveyors to supplement the volumes of recycled or reclaimed water available. Because of the nature of water resources in the project area, water purchased from commercial purveyors could be sourced either from surface water or groundwater resources.

Dewatering

During installation of TSPs or LWS structures, shallow groundwater may be encountered. In these instances, excavations would be dewatered using one or more pumps, and the water would be discharged on site to the surface (if so permitted) or be stored in Baker tanks or similar equipment before disposal off-site; Baker tanks or similar equipment would be located on the temporary work pad, established for new structure installation. Dewatering water also may be used for dust control.

2.4.12 Hazardous Materials and Management

Project construction would require the limited use of hazardous materials, such as fuels, lubricants, and cleaning solvents. These would be used to power internal combustion engines, to lubricate internal combustion engines and other construction equipment and hardware, and for cleaning purposes. The estimated volumes of these materials that would be consumed or used during construction are shown in Table 2-7.

Table 2-7 Types, Uses, and Volumes of Hazardous Materials

Hazardous Material Type	Use	Approximate Volume (gallons)
Diesel	Engine fuel	386,486
Gasoline	Engine fuel	48,579
Lubricants/Hydraulic Fluids	Engine and equipment lubrication/ Powering hydraulic equipment	21,753
Miscellaneous Construction Fluids (e.g., solvents)	Cleaning/lubricating hardware	1,088

Source: (SCE, 2022)

Foundations would be sampled for the presence of asbestos before the start of removal activities; sampling would be performed in accordance with American Society for Testing Methods (ASTM) standard E2356-09, Standard Practice for Comprehensive Building Surveys. If asbestos-containing materials are identified, response actions would be performed in compliance with 8 California Code of Regulations (CCR) 1529 and overseen and monitored per ASTM standards E1368-05, Standard Practice for Visual Inspection of Asbestos Abatement Projects, and D7201-06, Standard Practice for Sampling and Counting Airborne Fibers, Including Asbestos Fibers, in the Workplace, by Phase Contrast Microscopy (with an Option of Transmission Electron Microscopy).

If a foundation is found to be an asbestos-containing material, it would be properly abated and disposed in a California Department of Toxic Substances Control (DTSC)-approved landfill that accepts asbestos-containing wastes. Notification to the local air quality management district having jurisdiction over the particular location would be made at least 10 business days before any demolition activities.

2.4.13 Fire Prevention and Response

SCE would implement standard fire prevention protocols during construction activities and comply with applicable laws and regulations. Vegetation clearing activities before the staging of equipment would minimize the potential for vehicles or equipment to start a fire. In the event that the National Weather Service issues a Red Flag Warning during project construction, additional measures would be implemented to address smoking and fire rules, storage and parking areas, the use of gasoline-powered tools, the use of spark arresters on construction equipment, road closures, the use of a fire guard, fire suppression tools, fire suppression equipment, and training requirements.

2.4.14 Workforce and Equipment

SCE personnel on the project would include construction crews, environmental monitors, construction inspectors, and SCE personnel. SCE anticipates that two reconductoring crews would work concurrently, with up to approximately 85 construction personnel working at one time. Workers, monitors, and inspectors needed for each construction activity are listed in Table 2-8. Table 2-8 also lists the equipment that would be needed for each project activity and shows the typical use of equipment

Table 2-8 Construction Equipment and Workforce

Work Activity				Activity Production			
Primary Equipment Description	Estimated Equipment (horsepower)	Probable Fuel Type	Primary Equipment Quantity	Estimated Workforce	Estimated Schedule (days)	Duration of Use (hours/day)	Estimated Production (per day)
Survey							
1-Ton Truck, 4x4	300	Diesel	2	4	Duration of Project	10	N/A
Staging Areas							
1-Ton Truck, 4x4	300	Diesel	4	5	Duration of Project	4	N/A
R/T Forklift	350	Diesel	4	5	Duration of Project	5	N/A
Boom/Crane Truck	350	Diesel	4	5	Duration of Project	5	N/A
Generator	45	Diesel	4	5	Duration of Project	10	N/A
Water Truck	300	Diesel	8	5	Duration of Project	10	N/A
Truck, Semi-Tractor	500	Diesel	4	5	Duration of Project	6	N/A
Road Work				6	84		84 miles
1-Ton Truck, 4x4	300	Diesel	2	6	84	5	1 mile per day
Backhoe/Front Loader	350	Diesel	1	6	84	7	1 mile per day
Track Type Dozer	350	Diesel	1	6	84	7	1 mile per day
Motor Grader	350	Diesel	1	6	84	5	1 mile per day

Work Activity				Activity Production			
Primary Equipment Description	Estimated Equipment (horsepower)	Probable Fuel Type	Primary Equipment Quantity	Estimated Workforce	Estimated Schedule (days)	Duration of Use (hours/day)	Estimated Production (per day)
Water Truck	300	Diesel	2	6	84	10	1 mile per day
Drum Type Compactor	250	Diesel	1	6	84	5	1 mile per day
Excavator	300	Diesel	1	6	42	7	1 mile per day
Lowboy Truck/Trailer	500	Diesel	1	6	42	4	1 mile per day
Install TSP Foundations							
3/4-Ton Truck, 4x4	275	Gas	2	5	238	5	0.5 TSP/day 119 TSPs total
Boom/Crane Truck	350	Diesel	1	5	238	7	
Backhoe/Front Loader	200	Diesel	1	5	238	10	
Auger Truck	500	Diesel	1	5	179	10	
Water Truck	350	Diesel	1	5	238	10	
Dump Truck	350	Diesel	1	5	238	10	
Concrete Mixer Truck	425	Diesel	2	5	179	6	
TSP Haul							
3/4-Ton Truck, 4x4	275	Gas	2	5	30	8	4 TSPs per day 119 TSPs total
Boom/Crane Truck	350	Diesel	1	5	30	8	
Flat Bed Pole Truck	400	Diesel	2	5	30	10	
Water Truck	350	Diesel	1	5	30	10	
TSP Assembly				5	119		119 TSPs
3/4-Ton Truck, 4x4	275	Gas	2	5	119	6	1 TSP

Work Activity				Activity Production			
Primary Equipment Description	Estimated Equipment (horsepower)	Probable Fuel Type	Primary Equipment Quantity	Estimated Workforce	Estimated Schedule (days)	Duration of Use (hours/day)	Estimated Production (per day)
1-Ton Truck, 4x4	300	Diesel	2	5	119	6	1 TSP
Water Truck	350	Diesel	1	5	119	10	1 TSP
Compressor Trailer	60	Diesel	1	5	119	6	1 TSP
Boom/Crane Truck	350	Diesel	1	5	119	7	1 TSP
TSP Erection							
3/4-Ton Truck, 4x4	275	Gas	1	5	119	6	1 TSP/day 119 TSPs total
1-Ton Truck, 4x4	300	Diesel	1	5	119	6	
Water Truck	350	Diesel	1	5	119	10	
Compressor Trailer	60	Diesel	1	5	119	6	
R/T Crane	350	Diesel	1	5	119	7	
Jet A Fuel Truck	300	Diesel	1	5	12	4	
Helicopter Support Truck	300	Diesel	1	5	12	6	
Heavy-duty Helicopter		Jet A	1	5	12	1	
Install TSP H-frame Foundations							
3/4-Ton Truck, 4x4	275	Gas	2	5	8	5	1 TSP H-frame per day 4 TSPs total
Boom/Crane Truck	350	Diesel	1	5	8	7	
Backhoe/Front Loader	200	Diesel	1	5	8	10	
Auger Truck	500	Diesel	1	5	8	10	
Water Truck	350	Diesel	1	5	8	10	

Work Activity				Activity Production			
Primary Equipment Description	Estimated Equipment (horsepower)	Probable Fuel Type	Primary Equipment Quantity	Estimated Workforce	Estimated Schedule (days)	Duration of Use (hours/day)	Estimated Production (per day)
Dump Truck	350	Diesel	1	5	8	10	
Concrete Mixer Truck	425	Diesel	2	5	6	6	
TSP H-frame Haul							
3/4-Ton Truck, 4x4	275	Gas	2	5	4	8	1 TSP H-frame per day 4 TSPs total
Boom/Crane Truck	350	Diesel	1	5	4	8	
Flat Bed Pole Truck	400	Diesel	2	5	4	10	4 TSPs total
Water Truck	350	Diesel	1	5	4	10	4 TSPs total
TSP H-frame Assembly							
3/4-Ton Truck, 4x4	275	Gas	2	5	8	6	0.5 TSP H-frame per day 4 TSP H-frames total
1-Ton Truck, 4x4	300	Diesel	2	5	8	6	
Water Truck	350	Diesel	1	5	8	10	
Compressor Trailer	60	Diesel	1	5	8	6	
Boom/Crane Truck	350	Diesel	1	5	8	7	
TSP H-frame Erection							
3/4-Ton Truck, 4x4	275	Gas	1	5	8	6	0.5 TSP H-frame per day 4 TSP H-frames total
1-Ton Truck, 4x4	300	Diesel	1	5	8	6	
Water Truck	350	Diesel	1	5	8	10	
Compressor Trailer	60	Diesel	1	5	8	6	
R/T Crane	350	Diesel	1	5	8	7	

Work Activity				Activity Production			
Primary Equipment Description	Estimated Equipment (horsepower)	Probable Fuel Type	Primary Equipment Quantity	Estimated Workforce	Estimated Schedule (days)	Duration of Use (hours/day)	Estimated Production (per day)
Jet A Fuel Truck	300	Diesel	1	5	1	4	
Helicopter Support Truck	300	Diesel	1	5	1	6	
Heavy-duty Helicopter		Jet A	1	5	1	1	
Existing Pole Removal							
1-Ton Truck, 4x4	300	Diesel	2	5	37	10	
Compressor Trailer	60	Diesel	1	5	37	5	
Manlift/Bucket Truck	250	Diesel	1	5	37	8	4 structures per day 145 structures total
Boom/Crane Truck	350	Diesel	1	5	37	8	
Flat Bed Pole Truck	400	Diesel	1	5	37	10	
Water Truck	300	Diesel	1	5	37	10	
Existing Lattice Structure/TSP Removal							
1-Ton Truck, 4x4	300	Diesel	2	5	802	10	
Compressor Trailer	60	Diesel	1	5	802	5	
Manlift/Bucket Truck	250	Diesel	1	5	802	8	
Backhoe/Front Loader	125	Diesel	2	5	802	10	0.5 TSP or lattice structure per day 401 TSPs/ lattice structures total
Boom/Crane Truck	350	Diesel	1	5	802	8	
Flat Bed Pole Truck	400	Diesel	1	5	802	10	
Water Truck	300	Diesel	1	5	802	10	
Jet A Fuel Truck	300	Diesel	1	5	80	4	

Work Activity				Activity Production			
Primary Equipment Description	Estimated Equipment (horsepower)	Probable Fuel Type	Primary Equipment Quantity	Estimated Workforce	Estimated Schedule (days)	Duration of Use (hours/day)	Estimated Production (per day)
Helicopter Support Truck	300	Diesel	1	5	80	6	
Medium-duty Helicopter		Jet A	1	5	80	6	
Dump Truck	350	Diesel	1	5	802	10	
Excavator	250	Diesel	1	5	802	10	
R/T Crane (M)	215	Diesel	1	5	802	5	
R/T Crane (L)	300	Diesel	1	5	802	7	
LWS Pole Haul							
3/4-Ton Truck, 4x4	275	Gas	1	5	85	10	
Water Truck	300	Diesel	1	5	85	10	4 poles per day 338 structures total
Boom/Crane Truck	350	Diesel	1	5	85	8	
Flat Bed Pole Truck	400	Diesel	1	5	85	10	
LWS Pole Assembly							
3/4-Ton Truck, 4x4	275	Gas	2	5	85	6	
Compressor Trailer	60	Diesel	1	5	85	6	4 structures per day 338 structures total
1-Ton Truck, 4x4	300	Diesel	2	5	85	10	
Water Truck	350	Diesel	1	5	85	10	
Boom/Crane Truck	350	Diesel	1	5	85	8	
Install LWS Pole							
1-Ton Truck, 4x4	300	Diesel	1	5	85	6	

Work Activity				Activity Production			
Primary Equipment Description	Estimated Equipment (horsepower)	Probable Fuel Type	Primary Equipment Quantity	Estimated Workforce	Estimated Schedule (days)	Duration of Use (hours/day)	Estimated Production (per day)
Manlift/Bucket Truck	350	Diesel	1	5	85	10	4 structures per day 338 structures total
Boom/Crane Truck	350	Diesel	1	5	85	7	
Auger Truck	210	Diesel	1	5	85	8	
Water Truck	300	Diesel	1	5	85	10	
Backhoe/Frontloader	125	Diesel	1	5	85	10	
Extendable Flat Bed Pole Truck	400	Diesel	1	5	85	6	
Jet A Fuel Truck	300	Diesel	1	5	9	4	
Helicopter Support Truck	300	Diesel	1	5	9	6	
Medium-duty Helicopter		Jet A	1	5	9	4	
LWS H-frame Haul							
3/4-Ton Truck, 4x4	275	Gas	1	5	6	10	2 H-frames/ day 11 H-frames total
Water Truck	300	Diesel	0.5	5	6	10	
Boom/Crane Truck	350	Diesel	1	5	6	8	
Flat Bed Pole Truck	400	Diesel	1	5	6	10	
LWS H-frame Assembly							
3/4-Ton Truck, 4x4	275	Gas	2	5	6	6	2 H-frames/day 11 H-frames total
Compressor Trailer	60	Diesel	1	5	6	6	
1-Ton Truck, 4x4	300	Diesel	2	5	6	10	
Water Truck	350	Diesel	1	5	6	10	

Work Activity				Activity Production			
Primary Equipment Description	Estimated Equipment (horsepower)	Probable Fuel Type	Primary Equipment Quantity	Estimated Workforce	Estimated Schedule (days)	Duration of Use (hours/day)	Estimated Production (per day)
Boom/Crane Truck	350	Diesel	1	5	6	8	
Install LWS H-frame							
1-Ton Truck, 4x4	300	Diesel	1	5	6	6	2 H-frames/day 11 H-frames total
Manlift/Bucket Truck	350	Diesel	1	5	6	10	
Boom/Crane Truck	350	Diesel	1	5	6	7	
Auger Truck	210	Diesel	1	5	6	8	
Water Truck	300	Diesel	1	5	6	10	
Backhoe/Frontloader	125	Diesel	1	5	6	10	
Extendable Flat Bed Pole Truck	400	Diesel	1	5	6	6	
Install/Remove Conductor/OPGW/OHGW							
3/4-Ton Truck, 4x4	275	Gas	1	20	217	10	0.3 miles/ day 65 linear miles total
1-Ton Truck, 4x4	300	Diesel	2	20	217	10	
Manlift/Bucket Truck	250	Diesel	1	20	217	10	
Boom/Crane Truck	350	Diesel	1	20	217	10	
Dump Truck	350	Diesel	1	20	143	10	
Wire Truck/Trailer	350	Diesel	2	20	109	10	
Sock Line Puller	300	Diesel	1	20	55	10	
Bull Wheel Puller	350	Diesel	1	20	109	10	

Work Activity				Activity Production			
Primary Equipment Description	Estimated Equipment (horsepower)	Probable Fuel Type	Primary Equipment Quantity	Estimated Workforce	Estimated Schedule (days)	Duration of Use (hours/day)	Estimated Production (per day)
Hydraulic Rewind Puller	350	Diesel	1	20	217	10	
Static Truck/ Tensioner	350	Diesel	1	20	217	10	
Backhoe/Front Loader	125	Diesel	1	20	55	8	
Truck, Semi-Tractor	400	Diesel	2	20	217	10	
Lowboy Truck/Trailer	450	Diesel	2	20	217	10	
Water Truck	300	Diesel	1	20	217	10	
Jet A Fuel Truck	300	Diesel	1	20	109	4	
Helicopter Support Truck	300	Diesel	1	20	109	7	
Light Helicopter		Jet A	1	20	109	5	
Conductor Splicing Rig	350	Diesel	1	20	55	10	
Fiber Splicing Lab	300	Diesel	1	20	55	10	
Install/Remove Guard Structures							
3/4-Ton Truck, 4x4	275	Gas	2	5	39	8	5 structures/day 194 structures total
1-Ton Truck, 4x4	300	Diesel	2	5	39	8	
Compressor Trailer	60	Diesel	2	5	39	7	
Backhoe/Front Loader	125	Diesel	1	5	39	10	
Water Truck	300	Diesel	1	5	39	5	
Manlift/Bucket Truck	250	Diesel	1	5	39	8	
Boom/Crane Truck	350	Diesel	1	5	39	10	

Work Activity				Activity Production			
Primary Equipment Description	Estimated Equipment (horsepower)	Probable Fuel Type	Primary Equipment Quantity	Estimated Workforce	Estimated Schedule (days)	Duration of Use (hours/day)	Estimated Production (per day)
Auger Truck	500	Diesel	1	5	39	8	
Extendable Flat Bed Pole Truck	400	Diesel	1	5	39	8	
Telecommunications Underground Infrastructure Installation							
1-Ton Truck, 4x4	300	Diesel	2	6	5	4	
Backhoe/Front Loader	125	Diesel	1	6	5	6	
Dump Truck	350	Diesel	2	6	5	6	
Pipe Truck/Trailer	275	Diesel	1	6	5	8	125 feet/day 600 feet total
Concrete Mixer Truck	350	Diesel	3	6	5	2	
Water Truck	300	Diesel	1	6	5	6	
Compressor Trailer	60	Diesel	1	6	5	4	
Lowboy Truck/Trailer	450	Diesel	1	6	5	4	
Restoration							
1-Ton Truck, 4x4	300	Diesel	2	7	65	4	
Backhoe/Front Loader	125	Diesel	1	7	65	4	
Motor Grader	250	Diesel	1	7	65	6	1 mile/day 65 miles total
Water Truck	300	Diesel	1	7	65	8	
Drum Type Compactor	100	Diesel	1	7	65	4	
Lowboy Truck/Trailer	450	Diesel	1	7	65	4	

Source: (SCE, 2022)

2.4.15 Construction Traffic

Construction equipment would be transported to and from construction work areas along the project alignment by being driven (in the case of self-propelled vehicles) or towed (in the case of equipment that is not self-propelled) along public roadways and along the existing network of access roads. Construction crews would be transported to and from construction work areas along the project alignment in construction vehicles (pick-up trucks or other self-propelled vehicles) or by helicopter. Along the project alignment, many pieces of construction equipment would be likely to be left at work areas overnight and on off-days (e.g., holidays) rather than being driven to and from construction work areas each day. The vehicle miles traveled (VMT) estimated to be generated during construction are shown in Table 2-9.

Table 2-9 Vehicle Miles Traveled during Project Construction

Vehicle Type	VMT (daily)[a]	VMT (total)
Worker Vehicles	1,598	957,250
Construction Vehicles	1,203	720,480

Note:

[a] Assumes 6-day construction week, and 24-month construction duration, totaling 599 workdays.

Source: (SCE, 2022)

2.4.16 Construction and Work Schedule

Project construction is anticipated to take approximately 23 months. Construction is anticipated to begin in June 2026 and end in May 2028. Some activities may be performed concurrently; for instance, pull-and-tension/stringing sites may be established at the same time as guard structures are being installed, and the restoration of disturbed areas may occur at the same time as staging area demobilization and restoration is occurring. Furthermore, work could occur in one or more segments simultaneously.

To the extent feasible, construction activities would occur between 7 a.m. and 7 p.m., Monday through Saturday, or during the hours established in local ordinances and/or in any ministerial permits obtained. However, at limited times some construction along the project alignment may be required or finished outside these hours. The dates and locations of such work is not known at this time.

2.4.17 Project Operation and Maintenance

SCE would continue to perform O&M activities as described herein along the subtransmission lines that would be included under the Proposed Project. In addition, SCE would conduct a wide variety of emergency repairs in response to emergency situations, such as damage resulting from high winds, storms, fires, and other natural disasters, and accidents. Such repairs could include replacement of downed structures or lines, or re-stringing of conductors. Emergency repairs could be needed at any time.

2.4.18 Inspection Programs

Portions of the project alignment are in a high-fire threat district: portions of Segments 4 and all of Segment 5 are in an area designated by the California Public Utilities Commission (CPUC) as Tier 3-Extreme, and portions of Segments 1, 2, 3, and 4 are in areas designated by the CPUC as Tier 2-Elevated. Asset management and inspections of SCE's Wildfire Mitigation Plan, as detailed on the CPUC website, would be performed as applicable in these areas.

Inspection Processes

GO 165 inspections are performed via ground and/or aerial observation. No new access would be required for future inspections; ground-based inspections would be performed using the existing network of access and spur roads.

Proposed Maintenance Programs

The existing maintenance activities performed along the subtransmission lines included under the Proposed Project would be unchanged by project construction. Maintenance would occur as needed and could include activities such as repairing conductors, washing or replacing insulators, repairing or replacing other hardware components, replacing structures and towers, tree trimming, brush and weed control, and access road maintenance.

Most regular O&M activities for overhead facilities are performed from existing access roads with no surface disturbance. Repairs done to existing facilities, such as repairing or replacing existing structures and towers, could occur in undisturbed areas.

Existing conductors could require re-stringing to repair damage. Some pull-and-tension/stringing site locations could be in previously undisturbed areas, and at times, conductors could be passed through existing vegetation during re-stringing activities.

Insulators could require periodic washing with water to prevent the buildup of contaminants (e.g., dust, salts, animal droppings, smog, condensation) and reduce the possibility of electrical arcing that can result in circuit outages and potential fire. Frequency of insulator washing is region-specific and based on local conditions and build-up of contaminants. Replacement of insulators, hardware, and other components is performed as needed to maintain circuit reliability.

Some structure locations and/or laydown areas could be in previously undisturbed areas and could result in ground and/or vegetation disturbance, though attempts would be made to use previously disturbed areas to the greatest extent possible. In some cases, new temporary access would be created to remove and replace an existing structure.

In some cases, structures would not have access roads and could be accessed only on foot, by helicopter, or by creating temporary access areas. O&M-related helicopter activities could include transportation of transmission line workers, delivery of equipment and materials to structure sites, structure placement, hardware installation, and conductor and OPGW stringing operations. Helicopter landing areas could need to be created in locations where access by road is infeasible.

Access Road Maintenance

Routine access road maintenance is conducted on an annual and/or as-needed basis. Road maintenance includes maintaining a vegetation-free corridor, to facilitate access and for fire prevention, and blading, to smooth over washouts, eroded areas, and washboard surfaces as needed. For the Proposed Project, access road maintenance could include brushing (i.e., trimming or removal of vegetation) approximately 2 to 5 feet beyond berms or the road edge when necessary to keep vegetation from intruding into the roadway. Road maintenance also could include cleaning ditches, moving, and establishing berms, clearing, and making functional drain inlets to culverts, culvert repair, clearing and establishing water bars, and cleaning and repairing over-side drains. Access road maintenance would include repair, replacement, and installation of stormwater diversion devices on an as-needed basis.

2.5 Applicant-Proposed Measures

SCE included APMs in its February 2022 Proponents Environmental Assessment (PEA). Further revisions were made in October 2022. SCE proposes to implement these measures during project design, construction, and operation, to avoid or minimize potential environmental impacts. APMs are considered part of the Proposed Project in the evaluation of environmental impacts. The APMs are shown in Table 2-10.

Table 2-10 Applicant-Proposed Measures

APM Number	Requirements
AIR-1	**Tier 4 Construction Equipment**. All construction equipment with rating between 100 and 750 horsepower (hp) will be required to use engines compliant with U.S. EPA Tier 4 non-road engine standards. In the event a Tier 4 engine is not available for any off-road construction equipment with rating at or higher than 100 hp, that documentation of the unavailability will be provided.
BIO-HERP-5	**Tehachapi Slender Salamander** **Pre-construction survey/Construction monitoring**. Prior to initial ground-disturbing activities, a qualified Tehachapi Slender Salamander (TSS) biologist will conduct focused surveys within areas identified as habitat for this species. Biological monitors shall monitor construction activities impacting areas identified as occupied or potentially occupied TSS habitat. If TSS are observed and relocation is required, SCE will obtain the necessary permits or authorizations to relocate salamander individuals to the closest habitat area containing talus, as required by California Department of Fish and Wildlife (CDFW) in applicable permits or habitat conservation plans. **Avoid and minimize impacts.** All project activities located within areas identified as TSS habitat shall implement the following avoidance and minimization measures: • **Limited Operating Period**. If occupied habitat is identified, no construction activities will occur during the TSS active period without coordination with CDFW, February through April, in work areas impacting TSS occupied habitat. • Project activities occurring in habitat located within oak woodlands and ravines shall avoid displacing rocks, logs, bark, and other debris in thick leaf litter, near talus slopes. **Trapped Animal Prevention**. All auger holes, trenches, pits, or other steep-sided excavations that may pose a hazard to TSS will be either constructed with escape ramps (earthen or wooden) or securely covered when unattended to prevent entrapment. At the start and end of each workday, and just before backfilling, all excavations will be inspected for trapped animals. If found, trapped animals will be removed by the qualified biologist and relocated to outside the Project footprint, as required in all applicable permits or habitat conservation plans.
BIO-MAM-2	**San Joaquin kit fox** Pre-construction survey/Construction monitoring. Within 30 days prior to initial ground-disturbing activities, a qualified biologist will conduct surveys within areas identified as habitat for San Joaquin kit fox. Known and potential dens shall be monitored for evidence of kit fox use by placing an inert tracking medium or an infra-red beam camera at the entrance and monitoring for at least five consecutive nights. A qualified biologist will monitor construction activities within occupied kit fox habitat. If SJKF occupancy is determined at a given site during pre-construction surveys, USFWS and CDFW will be consulted for any necessary and unavoidable impacts prior to conducting work. **Agency consultation and den avoidance**

If there are known or potential SJKF dens within project impact areas or project activities within den exclusion zone distances, CDFW and U.S. Fish and Wildlife Service (USFWS) will be consulted to ensure project activities will not impact the species.

The following exclusion zones will be established for SJKF dens in accordance with the 2011 USFWS Standardized Recommendations for Protection of the San Joaquin Kit Fox:

- **Potential and atypical dens**. An exclusion zone with a minimum radius of 50 feet as measured outward from the entrance or cluster of entrances will be maintained. Potential dens include any hole of any appropriate size for SJKF. Atypical dens may include any man-made structure, pipes, culverts, and similar structures with a diameter of approximately 4-inches or greater.
- **Known/occupied dens**. An exclusion zone with a minimum radius of 100 feet as measured outward from the entrance or cluster of entrances will be maintained.
- **Natal/pupping dens**. If a den is identified as known/occupied during the breeding season (February through September), the den will be demarcated with a 200-foot buffer.
- Actions within exclusion zones will be limited to essential vehicle and equipment travel on authorized roads and foot traffic and will be monitored by a qualified biologist.

No modification to existing occupied or natal dens can occur without authorization from USFWS and/or CDFW and in accordance with the 2011 USFWS Standardized Recommendations for Protection of the San Joaquin Kit Fox. Natal/pupping dens will not be destroyed until the pups and adults have vacated. If a den can be avoided by construction, but the exclusion zone can't be, then the den can have a one-way door installed or the entrance plugged once confirmed not to be occupied; one-way doors will be removed at the end of construction. If a den cannot be avoided by construction, the den might be able to be removed but may require additional mitigation, such as the creation of artificial dens. Dens in which no activity was detected may be closed by a qualified biologist following agency guidelines.

Avoid and minimize impacts. The following avoidance and minimization measures shall be implemented for all project activities located within areas identified as SJKF habitat:

- **Limited Operating Period**. Within occupied SJKF areas, SCE shall restrict work to daylight hours, except during an emergency, in order to avoid nighttime activities when kit fox may be present on access roads.
- **Disposal of Trash**. Trash and food items will be contained in closed containers and removed daily to reduce attractiveness to opportunistic predators.
- **Pets Prohibited**. Employees will not bring pets or other animals to the GKR Project area, unless the animal is ADA compliant.
- **Vehicle Travel**. During construction-related activities, motor vehicles will be limited to maintained roads, designated routes, and areas identified as being permanently or temporarily affected by construction within the Project footprint. Motor vehicle speeds along Project routes and access roads within areas identified as habitat for SJKF will not exceed 20 miles per hour.
- **Trapped Animal Prevention**. All auger holes, trenches, pits, or other steep-sided excavations that may pose a hazard to SJKF will be either constructed with escape ramps (earthen or wooden) or securely covered when unattended to prevent entrapping SJKF. At the start and end of each workday, and just before backfilling, all excavations will be inspected for trapped animals. Any SJKF found will be allowed to escape unimpeded. If a SJKF is trapped and does not leave on its own, a qualified biologist will move the

	animal according to agency authorizations, if there is no agency authorization, the fox shall not be moved (unless in imminent danger) until the USFWS and/or CDFW has been contacted and further guidance has been received. • **Cover Construction Materials**. All construction pipes, culverts, or similar structures with a diameter of approximately four (4) inches or greater that are stored for one or more overnight periods will be thoroughly inspected for SJKF before the pipe is subsequently buried, capped, otherwise used or moved in any way. Likewise, all construction equipment with the potential to entrap SJKF (e.g., water buffalos, barrels, bins) will be covered or secured by turning over or tipping on their side to prevent trapping SJKF. All water tanks and containers will have tight fitting lids and will be checked to ensure the lids are closed and properly secured. Any SJKF found will be allowed to escape unimpeded. If a SJKF is trapped and does not leave on its own, a qualified biologist will move the animal according to agency authorizations, if there is no agency authorization, the fox shall not be moved (unless in imminent danger) until the USFWS and/or CDFW has been contacted and further guidance has been received.
BIO-RES-2	**Develop Invasive Plant Management Plan.** SCE shall prepare and implement an Invasive Plant Management Plan (IPMP). This plan shall include measures designed to avoid the introduction and spread of new nonnative invasive plant species (invasive plants) and minimize the spread of existing invasive plants resulting from project activities. The IPMP shall be submitted to the CPUC and for review and approval prior to the start of construction. For the purpose of the IPMP, invasive plants shall include plants that (1) are invasive and rated high or moderate for negative ecological impact in the California Invasive Plant Inventory Database (Cal-IPC, 2006), or (2) aid and promote the spread of wildfires (such as Bromus tectorum (cheatgrass), Brassica tournefortii (Sahara mustard), and Bromus madritensis spp. Rubens (red brome)) or (3) identified by USFS as special concern. The IPMP will be implemented throughout project pre-construction, construction, and restoration phases. **Invasive Plant Management Plan** The IPMP will include the information defined in the following sections: **Assessment.** An assessment of the GKR Project's potential to cause spread or introduction of invasive plants into new areas, or to introduce new invasive plants into the ROW. This section will list known and potential invasive plants occurring on the ROW and in the project region and identify threat rankings and potential for project-related occurrence or spread for each species. This section will identify control goals (e.g., eradication, suppression, or containment) for invasive plants of concern with potential to occur on the ROW. **Pre-construction invasive plant inventory.** SCE shall inventory of all invasive plants of concern in areas (both within and outside the ROW) subject to project-related vegetation removal/disturbance, overland travel (drive and crush), and ground-disturbing activity. The invasive plants inventory area shall also include vehicle and equipment access routes within the ROW and all project staging and storage yards. Invasive plants of concern shall be mapped by area of occurrence and percent cover. The map will be updated with new occurrences at least once a year. **Pre-construction invasive plants treatment.** Invasive plant infestations identified in the pre-construction invasive plants inventory shall be evaluated to identify potential for project-related spread and potential benefits (if any) of pre-construction treatment. Pre-construction treatment will consider the specific invasive plants, potential seed banks, or other issues. The IPMP will identify any

infestations to be controlled or eradicated prior to project construction. Control and follow-up monitoring of pre-construction invasive plants treatment sites will follow methods identified in appropriate sections of the IPMP.

Prevention. The IPMP will specify methods to minimize potential transport of new invasive plant seeds onto the ROW, or from one section of the ROW to another. The ROW may be divided into "weed zones," based on invasive plants of concern in the ROW. The IPMP will specify inspection procedures for construction equipment entering the GKR Project area. Vehicles and equipment may be inspected and cleaned at entry points to specified sections of the ROW, and before leaving work sites where invasive plants of concern must be contained locally. Construction equipment shall be inspected to ensure it is free of any dirt or mud that could contain invasive plant seeds, roots, or rhizomes, and the tracks, outriggers, tires, and undercarriage will be carefully washed, with special attention being paid to axles, frame, cross members, motor mounts, underneath steps, running boards, and front bumper/brush guard assemblies. Other construction vehicles (e.g., pick-up trucks) that will be frequently entering and exiting the site will be inspected and washed on an as-needed basis. Tools such as chainsaws, hand clippers, pruners, etc., shall be cleaned of dirt and mud before entering project work areas.

All vehicles will be washed off-site when possible. If off-site washing is infeasible, on-site cleaning stations (including air washing) will be set up at specified locations to clean equipment before it enters the work area. Wash stations will be located away from native habitat or special-status species occurrences. Wastewater from cleaning stations will not be allowed to run off the cleaning station site. When vehicles and equipment are washed, a daily log must be kept stating the location, date and time, types of equipment, methods used, and personnel present. The log shall contain the signature of the responsible crewmember. Written or electronic logs shall be available to CPUC monitors on request.

Erosion control materials (e.g., straw bales) must be certified free of invasive plant seed ("weed-free") before they are brought onto the site. The IPMP must prohibit on-site storage or disposal of mulch or green waste that may contain invasive plant material. Mulch or green waste will be removed from the site in a covered vehicle to prevent seed dispersal and transported to a licensed landfill or composting facility.

The IPMP will specify guidelines for any soil, gravel, mulch, or fill material to be imported into the GKR Project area, transported from site to site within the GKR Project area, or transported from the GKR Project area to an off-site location, to prevent the introduction or spread of invasive plants to or from the GKR Project area.

Monitoring. The IPMP shall specify methods to survey for invasive plants of concern during pre-construction, construction, and restoration phases; and shall specify qualifications of specialists responsible for invasive plant monitoring and identification. It must include a monitoring schedule to ensure timely detection and immediate control of new invasive plant infestations to prevent further spread. Surveying and monitoring for invasive plant infestations shall occur at least two times per year, to coincide with the early detection period for early season and late season invasive plants. The monitoring section shall also describe methods for post-eradication monitoring to evaluate success of control efforts and any need for follow-up control.

Control. The IPMP must specify manual and chemical invasive plant control methods to be employed. The IPMP shall include only invasive plant control measures with a demonstrated record of success for target invasive plants, based on the best available information. The plan shall describe proposed methods for promptly scheduling and implementing control activity when any project-related invasive plant infestation is located (e.g., located on a project disturbance site), to ensure effective and timely invasive plant

	control. Invasive plant infestations must be controlled or eradicated as soon as possible upon discovery, and before they go to seed, or when appropriate with the goal to prevent further spread. All proposed invasive plant control methods must minimize disturbance to native vegetation, limit ingress and egress to defined routes, and avoid damage to any environmentally sensitive areas (ESAs) identified within or adjacent to the ROW. New infestations by invasive plants of concern will be treated at a minimum of once annually until eradication, suppression, or containment goals are met. Invasive plant occurrences can be considered eradicated when no new seedlings or resprouts are observed for three consecutive years, or a single season where new seedlings or resprouts are observed in reference populations but not at the control site. Invasive plant control efforts may cease when eradication is complete. Manual control shall specify well-timed removal of invasive plants or their seed heads with hand tools; seed heads and plants must be disposed of in accordance with guidelines from the relevant County Agricultural Commissioners, if such guidelines are available. The focus of weed abatement will be manual control. Chemical controls will be avoided. If chemical controls are indicated for specific invasive species, the following guidelines shall be followed. The chemical control section must include specific and detailed plans for any herbicide use. It must indicate where herbicides will be used, which herbicides will be used, and specify techniques to be used to avoid drift or residual toxicity to native vegetation or special-status plants, consistent with the National Invasive Species Management Plan (NISC, 2008). All herbicide applications will follow U.S. Environmental Protection Agency label instructions and will be in accordance with federal, state, and local laws and regulations. Only state-approved herbicides may be used. Herbicide treatment will be implemented by a Licensed Qualified Applicator. Herbicides shall be applied in accordance with product labels and applicator licenses. Herbicides shall not be applied during or within 24 hours of high confidence predicted rain. Only water-safe herbicides shall be used in riparian areas or within channels (engineered or not) where they could run off into downstream areas. Herbicides shall not be applied in high wind conditions. **Reporting schedule and contents.** The IPMP shall specify reporting schedule and contents of each report.
CUL-2	**Avoid Environmentally Sensitive Areas (ESA).** SCE will perform cultural resource surveys for any portion of the proposed project APE/API not yet surveyed (e.g., new or modified staging areas, pull sites, or other work areas). Cultural resources discovered during surveys will be subject to APM CUL-1 (Develop CRMP). Where operationally feasible, all NRHP- and CRHR-eligible resources will be protected from direct project impacts by project redesign (i.e., relocation of the line, ancillary facilities, or temporary facilities or work areas). In addition, all historic properties/historical resources will be avoided by all project construction, operation and maintenance, and restoration activities, where feasible. Avoidance measures will include, but not be limited to, fencing off ESAs for the duration of the proposed project or as outlined in the CRMP.
CUL-3	**Conduct Construction Monitoring.** Archaeological monitoring will occur as outlined in the CRMP. Archaeological monitoring will be conducted by a qualified archaeologist familiar with the types of historic and prehistoric resources that could occur within the project areas. The qualifications of the principal archaeologist and monitors will be approved by the CPUC. Monitoring reports will be submitted to the CPUC on a monthly basis. A Tribal Participant may be required at culturally sensitive locations in consultation with the CPUC and/or as outlined in the CRMP.

CUL-4	**Properly Treat Human Remains.** SCE will follow all federal and state laws, statutes, and regulations that govern the treatment of human remains. All work in the vicinity of a find will cease within a 200-foot radius of the remains, the area will be protected to ensure that no additional disturbance occurs. Should inadvertent discovery of human remains be made on federal lands, the federal agency and county coroner (California Health and Safety Code 7050.5(b)) will be notified immediately. If the remains are determined to be Native American or if Native American cultural items pursuant to the Native American Graves Protection and Repatriation Act (NAGPRA) are uncovered, the remains will be treated in accordance with the provisions of NAGPRA (43 CFR 10) and the Archaeological Resources Protection Act (43 CFR 7). SCE will assist and support the federal agency, as appropriate, in all required NAGPRA and Section 106 actions, government to-government and consultations with Native Americans, agencies, and consulting parties as requested by the federal agency. If the remains are not on federal land, the county coroner and CPUC will be notified immediately and the remains will be treated in accordance with Health and Safety Code Section 7050.5, CEQA Section 15064.5(e), and Public Resources Code Section 5097.98. If the county coroner identifies the remains are Native American, they will notify the California Native American Heritage Commission (NAHC) within 24 hours. If the remains are not believed to be Native American, the appropriate local law enforcement agency will be notified. The NAHC will immediately notify the person or tribe it believes to be the most likely descendant (MLD) of the remains, and the MLD has 48 hours to make recommendations to the landowner or representative for the respectful treatment or disposition of the human remains and any associated grave goods. If the MLD does not make recommendations within 48 hours, the remains will be reinterred in the location they were discovered, and the area of the property will be secured from further disturbance. If there are disputes between the landowner and the MLD, the NAHC will mediate the dispute and attempt to find a solution. If the mediation fails to provide measures acceptable to the landowner, the landowner or their representative will reinter the remains and associated grave goods and funerary objects in an area of the property secure from further disturbance. The location of any reburial of Native American human remains will not be disclosed to the public and will not be governed by public disclosure requirements of the California Public Records Act, Cal. Govt. Code § 6250 et seq., unless otherwise required by law. SCE will assist and support the CPUC and NAHC, as appropriate.
CUL-5	**Cultural Resources Awareness Worker Training.** Prior to initiating construction, all construction personnel will be trained by a qualified archaeologist regarding the recognition of possible buried cultural resources (i.e., prehistoric and/or historical artifacts, objects, or features) and paleontological resources (i.e., fossils), and protection of these resources during construction. Training will also inform all construction personnel of the procedures to be followed upon the discovery of cultural materials. All personnel will be instructed that unauthorized removal or collection of artifacts is a violation of federal and state laws. Any excavation contract (or contracts for other activities that may have subsurface soil impacts) will include clauses that require construction personnel to attend a Worker's Environmental Awareness Training Program (WEAP). The WEAP will include the project's potential for the post-discovery review of archaeological deposits, how to operate adjacent to and avoid all ESAs, and procedures to treat post-discovery reviews.
HAZ-1	**Prepare a Hazardous Materials Management Plan.** SCE will prepare and implement a Hazardous Materials Management Plan (HMMP)/Hazardous Materials Business Plan (HMBP) during project construction. The plan will outline proper hazardous materials

	handling, use, storage and disposal requirements, as well as hazardous waste management procedures. This plan will be developed to ensure that all hazardous materials and wastes will be handled and disposed of according to applicable rules and regulations. The HMMP will address the types of hazardous materials to be used during the project, hazardous materials storage, employee training requirements, hazard recognition, fire safety, first aid/emergency medical procedures, hazardous materials release containment/control procedures, hazard communication training, PPE training, and release reporting requirements. It will also include fueling and maintenance procedures for helicopters and construction equipment. If on site refueling is necessary, BMPs shall be implemented in accordance with the project SWPPP. Refueling stations and fuel tanks will be located, maintained, and operated during construction in accordance with applicable laws and regulations pertaining to hazardous materials. If more than 1,320 gallons of petroleum products in containers greater than 55-gallons, a SPCC plan must be created prior to products being brought on-site. All construction personnel, including environmental monitors, will be made aware of local, state and federal emergency response reporting guidelines for accidental spills.
HAZ-2	**Prepare a Soil Management Plan**. A Soil Management Plan will be developed and implemented for the proposed project. The Soil Management Plan will provide guidance for the proper handling, on-site management, and disposal of impacted soil that may be encountered during construction activities. The Soil Management Plan will direct that during grading or excavation work, the construction contractor shall observe the exposed soil for visual evidence of contamination. If visual contamination indicators are observed during construction, potentially contaminated soil will be segregated, sampled, and tested to determine appropriate treatment and disposal options. Work in the area of the potentially contaminated soil will be stopped until appropriate measures are determined based on the testing results and are taken to protect human health and the environment. If the soil is classified as hazardous, it will be properly managed on location and transported in accordance with the U.S. Department of Transportation regulations using a Uniform Hazardous Waste Manifest to a Class I Landfill or other appropriate soil treatment or recycling facility. If potentially-contaminated groundwater is encountered, then groundwater samples will be collected and tested to determine appropriate treatment and disposal. Hazardous materials will be transported and disposed of in accordance with applicable rules, regulations, and SCE standard protocols designed to protect the environment, workers, and the public.
HAZ-3	**Prepare and Implement a Project-Specific Fire Management Plan.** A Fire Prevention and Emergency Response Plan will be developed to ensure the health and safety of construction workers, SCE personnel, and the public during Project construction. The Plan shall cover: • The purpose and applicability of the plan • Responsibilities and duties • Project areas where the plan applies • Procedures for incorporating Red Flag Warnings, Fire Potential Index (FPI), Project Activity Level (PAL), and equivalent indicators in determining fire weather related work restrictions • Procedures for fire reporting, response, prevention, and evacuation routes

	• Coordination procedures with federal and local fire officials • Crew training, including fire safety practices and restrictions • Fire suppression and communication equipment required to be on hand during construction • Method for verification that Plan protocols and requirements are being followed • Post-construction fire prevention and response measures The Project-specific Fire Prevention and Emergency Response Plan for construction of the project will be prepared by SCE and submitted to CPUC, CALFIRE, Inyo, Kern and San Bernardino counties, and local municipal fire agencies for review at least 30 days prior to initiation of construction. SCE will address all comments received from reviewing agencies and provide the final Fire Prevention and Emergency Response Plan to reviewing agencies for approval prior to initiating construction activities.
NOI-1	**Noise Disturbance Minimization Procedures.** SCE will employ the following noise-control techniques, at a minimum, to reduce construction noise exposure at noise-sensitive receptors during construction: • Construction activities will be confined to daytime, weekday and weekend hours established by the applicable local jurisdiction. In the event construction is required beyond those hours, SCE will notify the appropriate local agency or agencies regarding the description of the work, location, and anticipated construction hours. • Construction equipment will use noise reduction features (e.g., mufflers and engine shrouds) that are no less effective than those originally installed by the manufacturer. • Construction traffic and helicopter flight will be routed away from residences and schools, where feasible. • Unnecessary construction vehicle use, and idling time will be minimized. If a vehicle is not required for use immediately or continuously for construction activities, its engine will be shut off.
PAL-1	**Develop Paleontological Resource Mitigation and Monitoring Plan.** SCE will prepare a Paleontological Resources Mitigation and Monitoring Plan (PRMMP) to guide all paleontological management activities during project construction. The PRMMP will be submitted to the CPUC for review and approval prior to the start of construction. The PRMMP will be prepared by a qualified paleontologist, based on Society of Vertebrate Paleontology (SVP) 2010 guidelines, and meet all regulatory requirements. The qualified paleontologist will have a Master's degree or Ph.D. in paleontology, have local paleontology knowledge, and will be familiar with paleontological procedures and techniques. The PRMMP will include, but not be limited to, the following sections: 1. **Paleontological Resource Monitoring and Reporting**: Detail monitoring procedures and methodologies, which will require a qualified paleontological monitor for all construction-related ground disturbance that reach approximate depths for significant paleontological resources in sediments with moderate (PFYC 3a) to very high (PFYC 5) and Unknown sensitivity. Sediments of undetermined sensitivity will be monitored on a part-time basis as outlined in the PRMMP. Sediments with very low or low sensitivity will not require monitoring. Paleontological monitors will meet standard qualifications per the SVP (2010). 2. **Unanticipated Discovery Protocol:** Detail procedures for halting construction, defining work stoppage zones, notifying stakeholders, and assessing the paleontological find for scientific significance. If indicators of potential microvertebrate fossils are found, screening of a test sample will be carried out as outlined in SVP 2010.

	3. **Data Analysis and Reporting**: Detail methods for data recovery, analysis in a regional context, reporting of results within one year of completion of field studies, curation of all fossil specimens in an accredited museum repository approved by the CPUC, and dissemination of reports to appropriate repositories.
PAL-2	**Paleontology Resources Awareness Training.** Prior to the initiation of construction, all construction personnel will be trained regarding the recognition of possible buried paleontological resources (i.e., fossils) and protection of all paleontological resources during construction. Training will inform all construction personnel of the procedures to be followed upon the discovery of paleontological materials. All personnel will be instructed that unauthorized removal or collection of fossils is a violation of Federal and State laws. Any excavation contract (or contracts for other activities that may have subsurface soil impacts) will include clauses that require construction personnel to attend a Worker's Environmental Awareness Training Program (WEAP). The WEAP will include the project's potential for inadvertently exposing buried paleontological resources, how to operate adjacent to and avoid any potential Environmentally Sensitive Area, and procedures to treat unanticipated discoveries.
PAL-3	**Conduct Paleontology Resources Construction Monitoring.** Paleontological monitoring will be conducted by a qualified paleontologist familiar with the types of resources that could occur within the project area. The qualifications of the principal paleontologist and monitors will be approved by the CPUC. Monitoring reports will be submitted to the CPUC on a monthly basis.
TCR-2	**Tribal Engagement Plan.** A tribal engagement plan shall be prepared, which will detail how Native American tribes will be engaged and informed throughout the proposed project. The tribal engagement plan will be included in the CRMP (APM CUL-1).
TRA-1	SCE will implement traffic control measures consistent with those published in the Manual on Uniform Traffic Control Devices, as written and amended by Caltrans for the state of California (CA MUTCD) and using standard templates from the California Temporary Traffic Control Handbook (CATTCH) (California Inter-Utility Coordinating Committee 2018). These measures will be implemented as and where necessary as described in the CA MUTCD and/or CATTCH, or in ministerial permits.
TRA-2	Prior to construction, SCE will consult with the FAA regarding helicopter flight plans that will take place during construction. This consultation will include, but not be limited to: • Providing locations of helicopter construction staging and work areas. • Establishing designated flight corridors between staging and work areas. • Means to ensure external load operations avoid occupied structures and roadways. • Locations of traffic control where external load operations will cross public roadways. • Locations where Congested Area Plans may be required for filing with the FAA. • Identifying any flight restrictions recommended/required by the FAA. • The results of this coordination will be provided to the CPUC.
TRA-3	Where the proposed project work area encroaches upon a public right-of-way and reduces the existing pedestrian path of travel to less than 48 inches wide, alternate pedestrian routing will be provided during construction activities.

This page is intentionally blank.

2.6 Electromagnetic Fields and California Public Utilities Commission EMF Analysis/Mitigation Requirements

The CPUC does not consider electromagnetic fields (EMFs) to be an environmental issue in the context of the California Environmental Quality Act (CEQA) because (1) no agreement exists among scientists that EMF creates a potential health risk, and (2) CEQA does not define or adopt standards for defining any potential risk from EMF.

2.6.1 California Public Utilities Commission Electromagnetic Fields Guidelines

In 1991, the CPUC initiated an investigation into electric and magnetic fields associated with electric power facilities. This investigation explored the approach to potential mitigation measures for reducing public health impacts and possible development of policies, procedures, or regulations.

The CPUC has implemented a decision (D.93-11-013) that requires for utilities to use "low-cost or no-cost" mitigation measures for facilities requiring certification under GO 131-D.4. This decision directs utilities to use a 4 percent benchmark on the low-cost mitigation. This decision also implemented a number of EMF measurement, research, and education programs. The CPUC did not adopt any specific numerical limits or regulation on EMF levels related to electric power facilities.

In D.93-11-013, the CPUC addressed mitigation of EMF of utility facilities and implemented the following recommendations:

- No-cost and low-cost steps to reduce EMF levels
- Workshops to develop EMF design guidelines
- Uniform residential and workplace programs
- Stakeholder and public involvement
- A 4-year education program
- A 4-year non-experimental and administrative research program
- An authorization of federal experimental research, conducted under the National Energy Policy Act of 1992

The CPUC issued D.06-01-042 on January 26, 2006, affirming the low cost/no-cost policy to mitigate EMF exposure from new and upgraded utility power line, transmission line, and substation projects. This decision also adopted rules and policies to improve utility design guidelines for reducing EMF. The CPUC stated, "at this time we are unable to determine whether there is a significant scientifically verifiable relationship between EMF exposure and negative health consequences." At this time, the CPUC has not implemented a general requirement that utilities include non-routine mitigation measures or other mitigation measures that are based on numeric values of EMF exposure, and it has not adopted any specific limits or regulation on EMF levels related to electric power facilities. Measures to mitigate EMF may be determined on a project-by-project basis by the CPUC.

Recognizing that a great deal of public interest and concern exist regarding potential health effects from exposure to EMFs from power lines, additional information regarding EMF associated with the electric utility facilities and potential EMF resulting from the Proposed Project is provided in Appendix C. EMF information is presented for the benefit of the public and decision-makers but is not considered within the context of CEQA.

Other concerns related to power line[3] fields include nuisance (corona and audible noise; radio, television, and electronic equipment interference) and potential health risk impacts (induced currents and shock hazards, and effects on cardiac pacemakers). Not all of these concerns are CEQA considerations.

[3] The term "power line" in this section refers generally to electric lines of all voltage classes operating in SCE's electric system. However, CPUC GO 131-D distinguishes between transmission lines ("designed to operate at or above 200 kilovolts [kV]"), power lines ("designed to operate between 50 and 200 kV"), and distribution lines ("designed to operate under 50 kV").

3.1 Aesthetics

This section presents the environmental setting and impact analysis for aesthetic resources that would be affected by the Proposed Project. The section includes background information, applicable regulations, environmental impacts, and mitigation measures to reduce or avoid significant effects.

3.1.1 Definitions

The term *aesthetics* refers the visual character of an area. *Aesthetic resources* refers to the visible features, natural and built, of a landscape. Natural landscape features include the landforms, water, rock outcroppings, and vegetation patterns that define an area's visual character. Built landscape features include buildings, roads, and other human-made structures and modifications. Both natural and built landscape features contribute to the public's experience and appreciation of the environment and are considered visual resources. Table 3.1-1 lists and defines key terms used to discuss aesthetic resources.

Table 3.1-1 Aesthetic Resource Terms and Definitions

Term	Definition
Color	The light reflecting off of an object at a particular wavelength that creates hue (e.g., green, indigo, purple, red) and value (light to dark hues).
Cultural modification	Any human-caused (anthropogenic) change in the landform, water features, or vegetation or the addition of a structure that creates a visual contrast in the basic elements (i.e., form, line, color, texture) of the natural character of a landscape. Cultural modifications can contribute to or detract from the unity of the landscape.
Distance zones	Distance zones are a function of a viewer's position in relation to a landscape and are defined according to distance from the viewer's observation point. The three distance zones use to discuss aesthetic resources are as follows: • Foreground: Up to 0.5 mile from the observation point • Middleground: From the distant edge of the foreground to 4 miles from the observation point • Background: From the distant edge of the middleground to the limit of the visible area
Form	The unified mass or shape of an object that often has an edge or outline and can be defined by surrounding space. For example, a high-rise building would have a highly regular, rectangular form whereas a hill would have an organic, mounded form.
Glare	Sunlight or other brilliant luminary reflecting off a specular (mirror-like) surface. If the reflected rays of light reach a receptor, the intensity of the reflection can be distracting, discomforting, or debilitating.
Glint	A momentary direct reflection of light that may be repetitious and attract the receptor's attention.

Term	Definition
Intactness	The integrity of visual order in the natural and built landscape; the extent to which the landscape is free from visual encroachment.
Key observation point (KOP)	A location from which a viewer (traveler or neighbor) can view either iconic or representative landscapes. Typically, at least one KOP is identified for each landscape character unit. Key observation points are also used for visual simulations.
Landscape unit	Area with similar visual features and homogeneous visual character and, frequently, a single viewshed. Typically, the spatial unit used for assessing visual impacts.
Line	The well-defined edges of shapes or masses created in the visual landscape by horizons, silhouettes, or human-made features. Perceived when there is a change in form, color, or texture, with the eye generally following this pathway because of the visual contrast. For example, a city's high-rises can be seen silhouetted against the blue sky, appearing as a skyline; a river can have a curvilinear line as it passes through a landscape; or a hedgerow can create a line where it is seen rising up against a flat agricultural field.
Scenic vista	A public view that is recognized or valued for its visual quality, located along or through an opening or corridor.
Simulation	Two- or three-dimensional depiction of the current visual character of a landscape or of future conditions following a proposed alteration. Forms of simulation include artistic renderings and computer animations.
Texture	The quality of appearance created by the interplay of light and shadow over the surface of an object. For example, a rough texture (e.g., a rocky mountainside) would have many facets, resulting in a number of areas in light and shadow and, often, distinct separations between areas of light and shadow. Conversely, a smooth surface texture (e.g., a beach) would have fewer facets, larger surface areas in light or shadow, and gradual gradations between light and shadow.
Unity	The degree to which the various visual resources within a landscape, when viewed simultaneously, form a coherent, harmonious visual pattern; the compositional harmony or inter-compatibility between landscape elements.
Viewer exposure	A factor of viewer sensitivity determined by proximity (i.e., distance between viewer and visual resource being viewed), extent (i.e., number of viewers), and duration (how long visual resources are viewed) of a view. The greater the viewer exposure, the more viewers will be concerned about visual impacts.
Viewer awareness	A factor of viewer sensitivity determined by attention (i.e., intensity of observation, based on routine and familiarity), focus (i.e., intensity of concentration), and protection (i.e., legal and social constraints on the use of visual resources) of the view. The greater the viewer awareness, the more viewers will be concerned about visual impacts.
Viewshed	The area visible from a particular location (e.g., an overlook) or sequence of locations (e.g., a roadway or trail).
Visual character	The description of the visible attributes of a scene or object typically using descriptive terms such as form, line, color, and texture.

Term	
Visual compatibility	The ability of environment to visually absorb a project as a result of compatibility of visual character among the project and the landscape features of an environment. A project can be considered compatible or incompatible. Visual compatibility alone should not be confused or conflated with the value of the impact on visual resources.
Visual contrast	The opposition or unlikeness of different forms, lines, colors, or textures in a landscape.
Visual quality	An evaluation of specific visual resources based on viewer-perceived natural harmony, cultural order, and project coherence. Neighbors and travelers may have different opinions on the particulars of what they like and dislike about a scene.
Viewer	A person theoretically present at a given scenic vista, scenic highway, or public recreational area within the viewshed of which of a project is located or an area from which visual intrusion from a project could occur.
Visual resource	Component of the natural, cultural, or project area environment that is visible.
Vividness	The visual impact or memorability of the visual impression received from contrasting landscape elements as they combine in distinctive visual patterns.

Source: (FHWA 2015)

3.1.2 Environmental Setting

Aesthetic resources in the Proposed Project area (including important historic, cultural, and archaeological locations) were identified through aerial photography, site visits, review of data provided by SCE, and land use cover mapping. Designated scenic highways and vistas in the vicinity of the Proposed Project were identified through a review of applicable federal, state, and local regulations, plans, and standards, described in Section 3.1.4.

Method for Evaluating Visual Character and Quality

The existing visual character and quality in the Proposed Project area was assessed using the Federal Highway Administration (FHWA) *Guidelines for the Visual Impact Assessment of Highway Projects* (2015 guidance) (FHWA 2015)

Regional Visual Character

The landscape within the Proposed Project area generally exhibits a high level of human modification and reflects its proximity to important regional transportation corridors, infrastructure, and population centers. The Proposed Project crosses through a variety of terrain including the relatively flat topography of the southern San Joaquin Valley, gently sloping alluvial plains surrounding the valley floor, and mountainous areas along the Tehachapi Mountains. Elevations along the Proposed Project alignment range from approximately 400 feet *above mean sea level* (amsl) near the City of Arvin in the San Joaquin Valley to over 4,000 feet amsl in the Tehachapi Range at the southern end of the Proposed Project area, with surrounding peaks reaching elevations of approximately 7,500 feet amsl.

The north-south Proposed Project alignment originates at the Kern River 1 substation located near the mouth of the Kern River Canyon. The Proposed Project then traverses the eastern margin of the San Joaquin Valley and subsequently enters Grapevine Canyon through the steep flank of the east–west trending Tehachapi Mountains to the south. From its origin at a "T" junction along the north–south alignment near the city of Arvin, the Proposed Project's eastward extension traverses the eastern margin of the San Joaquin Valley before crossing the rugged Tejon Hills and entering the relatively gentle terrain of the Cummings Valley within the eastern Tehachapi Range to the Banducci substation. The Cummings Valley area is characterized by agricultural uses, such as green row crops, orchards, and vineyards, which contrasts sharply with the arid mountainous terrain where the predominant vegetation consists of sparse, low-growing chaparral, open grassland, and stands of oak and pines at higher elevations. The landscape outside of the valley bottoms is characterized by areas of exposed rock and soil in addition to the spare vegetation.

3.1.3 Proposed Project Setting

The Proposed Project alignment extends approximately 65.3 miles and consists of a 51-mile-long north–south alignment between the Kern River 1 substation and Gorman substation and an approximately 14.3-mile-long east-west alignment beginning south of the Central Valley community of Arvin that extends east to Banducci substation. The Proposed Project alignment crosses portions of unincorporated Kern County and northeastern Los Angeles County and passes through the cities of Arvin and Bakersfield. Although the majority of the Proposed

Project would be built within existing ROWs located on private lands, the Proposed Project also crosses state and federal lands, including a short section (less than 2,000 feet) within Sequoia National Forest in Segment 1 and Los Padres National Forest and Fort Tejon Historic State Park in Segment 2.

The landscape within the Proposed Project area includes a high level of human modification, reflecting proximity to transportation corridors, infrastructure, and population centers. Within the San Joaquin Valley, the Proposed Project alignment follows the eastern edge of the city of Bakersfield along State Route (SR) 99. The Proposed Project meets Interstate 5 (I-5) approximately 23 miles south of Bakersfield. The Proposed Project alignment is generally parallel to I-5 for approximately 8 miles from the community of Grapevine south towards the Gorman substation. In addition, the Proposed Project passes in proximity to and crosses SR 178 and SR 58. In addition, local paved and unpaved rural roadways, railroad lines, and electric utility infrastructure, including numerous power and distribution lines, constitute linear features in the landscape. Structures within the Proposed Project area include power-generating facilities and agricultural structures such as warehouses, equipment storage yards, irrigation components, and produce-processing plants.

The landscape in the immediate Proposed Project area is sparsely inhabited and consists of dispersed rural residences in the valley flatlands while scattered low-density semi-rural and suburban residential clusters are found within foothills and mountains surrounding the Proposed Project.

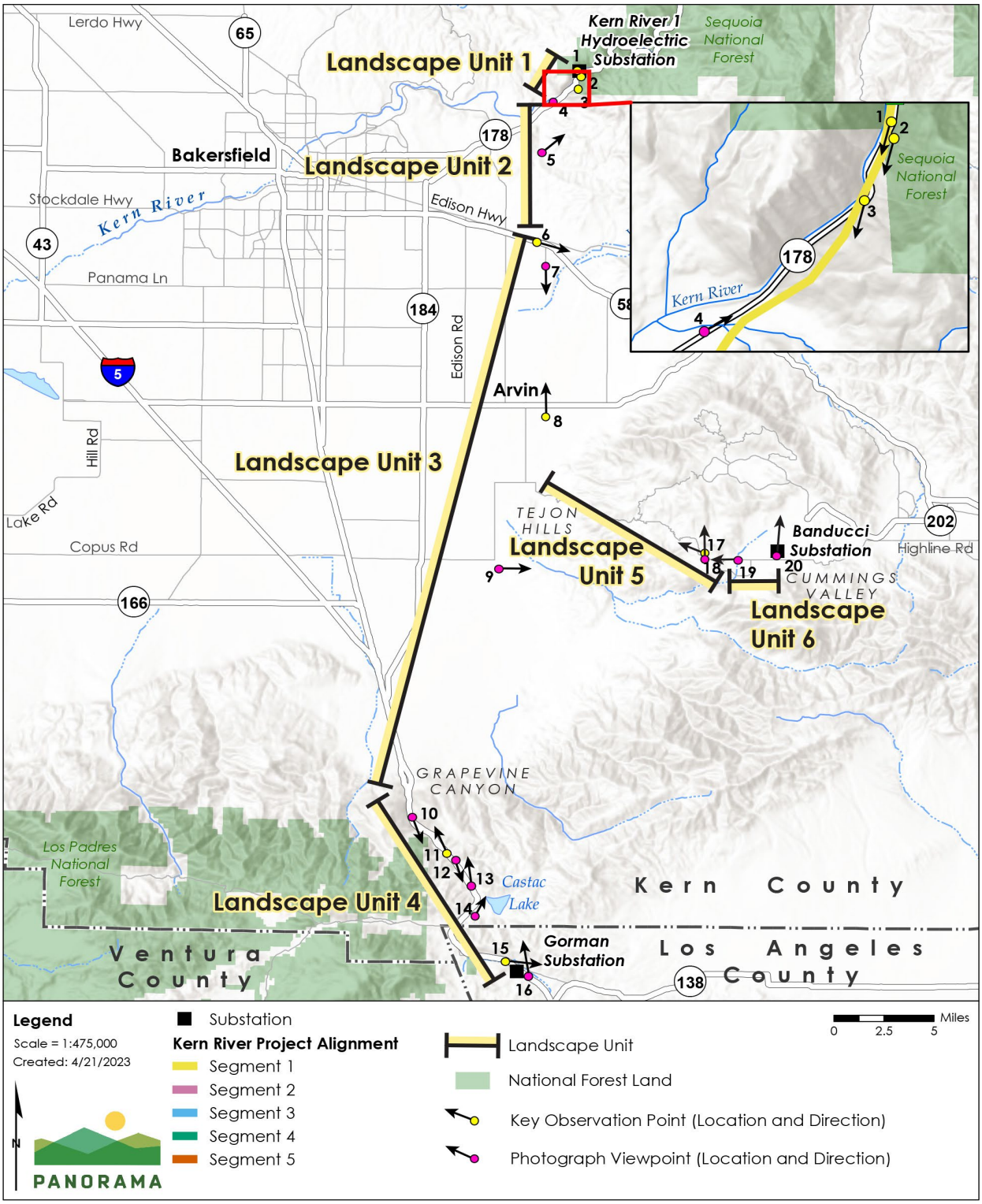
Landscape Units

Six distinct landscape units (LUs) are defined for the Proposed Project based on distinct physical and cultural characteristics within the Proposed Project area. The extent of each LU is shown in Figure 3.1-1. Table 3.1-2 provides summaries of each the LU in terms of jurisdiction, approximate length, corresponding project segments, and existing visual conditions along with representative photographs.

Key Observation Points (KOPs)

Eight *key observation points* (KOPs) were selected to represent the level of visual change from the LU, as shown in Table 3.1-3. The KOPs represent points where the Proposed Project would be most visible to the public from sensitive locations such as recreation facilities, areas in proximity to residences, or public land subject to scenic resource management policy.

Figure 3.1-1 Landscape Units and Key Observation Point Locations



Source: (Environmental Vision, 2021)

Table 3.1-2 Landscape Units Summary

Description	Representative images
Landscape Unit 1 (LU1) **Location.** LU1 extends approximately 1.5 miles southwest from the Kern River 1 substation in the lower Kern River Canyon to the location where SR 178 exits Kern River Canyon and enters the agricultural lands of the San Joaquin Valley. **Characteristic features**. Strong topographic form; river water; hydroelectric facilities. **Visual quality.** High **Intactness.** Low to moderate **Unity.** Low to Moderate **Vividness.** High	 Photo 1: SR 178 near Kern River 1 substation looking southwest.  Photo 2: SR 178 in Kern River Canyon looking east.  Photo 3: SR-178 in Kern River Canyon looking south.  Photo 4: SR-178 east of Bakersfield looking northeast.

Description	Representative images
Landscape Unit 2 (LU2) **Location.** LU2 extends approximately 7 miles south from where SR 178 first emerges from Kern River Canyon through sparsely populated range lands within the Sierra foothills to where the foothills meet the flat agricultural landscape of the San Joaquin Valley. **Characteristic features.** Agricultural land use with very few rural residences. **Visual quality.** Low to moderate **Intactness.** Moderate **Unity.** Moderate **Vividness.** Low	 Photo 5: Breckenridge Road looking northeast.

Description	Representative images
Landscape Unit 3 (LU3) **Location.** LU3 starts about 1 mile north of where Segment 1 crosses SR 58 and extends south through the flat sparsely populated agricultural lands of San Joaquin Valley to the small unincorporated community of Grapevine. **Characteristic features.** Flat agricultural land use with very few rural residences. **Visual quality.** Low **Intactness.** Low **Unity.** Low **Vividness.** Low	 Photo 6: SR-58 near Towerline Road looking east.  Photo 7: Towerline Road looking south.  Photo 8: Towerline Road near Arvin looking north.  Photo 9: Rancho Road near David Road looking east.

Description	Representative images
Landscape Unit 4 (LU4) **Location.** LU4 starts where the Proposed Project alignment approaches the I-5 at the foot of the steep northern flank of the Tehachapi Range and extends approximately 12 miles southeast to Gorman substation southeast of Tejon Pass in Los Angeles County. **Characteristic Features.** Rugged and sparsely forested open space of the Grapevine Canyon, Fort Tejon State Historic Park, small rural residential communities of Lebec and Gorman. **Visual quality.** Moderate **Intactness.** Moderate **Unity.** Moderate **Vividness.** Moderate	 Photo 10: I-5 near Grapevine Road looking south.  Photo 11: Fort Tejon State Historic Park looking north.  Photo 12: Fort Tejon Middle School looking south.  Photo 13: I-5 near Lebec looking north.

Description	Representative images
	 Photo 14: Tejon Safety Roadside Rest Area along I-5 looking northeast.  Photo 15: I-5 near Gorman Substation looking southeast.  Photo 16: I-5 near Gorman Substation looking northwest.

Description	Representative images
Landscape Unit 5 (LU5) **Location**. LU5 starts at the "T" junction from Segment 1 and extends southeast for the extent of Segment 4. **Characteristic Features.** Predominantly open rangeland, sparsely vegetated, with variable topography except to the east where semi-rural large lot residential development exists **Visual quality.** Low to moderate **Intactness.** Low to moderate **Unity.** Low to moderate **Vividness.** Low to moderate	 Photo 17: Quail Drive near Comanche Point Road looking northwest.  Photo 18: Comanche Narrative Trail near Comanche Point Road looking northwest.  Photo 19: Banducci Road at St. Andrews Place looking west.

Description	Representative images
Landscape Unit 6 (LU6) **Location.** LU6 starts at the entrance of the Cummings Valley and extends east to the Banducci substation. **Characteristic Features.** LU6 is within Segment 4 and traverses the flat open agricultural area of the Cummings Valley. **Visual quality.** Low to moderate **Intactness.** Low to moderate **Unity.** Low to moderate **Vividness.** Low to moderate	 Photo 20: Pellisier Road near Banducci substation looking north.

Table 3.1-3 Summary of Representative Viewpoints and KOP Photographs

Photograph number and location	Primary viewers	Viewing distance	Viewer sensitivity	Predominant backdrop for Project structures
Landscape Unit 1				
[a] 1. SR 178 in Kern River Canyon looking south	Regional motorists, recreationalists	Foreground, middleground	High	Landscape and sky
[a] 2. SR- 78 near Kern River 1 substation looking southwest	Regional motorists, recreationalists	Foreground, middleground	High	Landscape and sky
[a] 3. SR 178 in Kern River Canyon looking south	Regional motorists, recreationalists	Foreground	High	Landscape and sky
4. SR 178 east of Bakersfield looking northeast	Regional motorists, recreationalists	Foreground	Moderate	Landscape and sky
Landscape Unit 2				
5. Breckenridge Road looking northeast	Local motorists	Foreground	Low	Landscape
Landscape Unit 3				
[a] 6. SR 58 near Towerline Road looking east	Regional motorists, local motorists	Foreground	Low to moderate	Landscape and sky
7. Towerline Road looking south	Local motorists, residents	Foreground, middleground	Low to moderate	Landscape and sky

Photograph number and location	Primary viewers	Viewing distance	Viewer sensitivity	Predominant backdrop for Project structures
[a] 8. Towerline Road near Arvin looking north	Local motorists, residents	Foreground, middleground	Low to moderate	Sky
9. Rancho Road near David Road looking east	Local motorists	Foreground	Low	Landscape
Landscape Unit 4				
10. I-5 near Grapevine Road looking south	Regional motorists, local motorists	Foreground, middleground	Low to moderate	Landscape and sky
[a] 11. Fort Tejon State Historic Park looking north	Recreationalists, regional motorists	Foreground	High	Landscape and sky
12. Fort Tejon Middle School looking south	Local motorists, students/faculty/ school visitors	Foreground	Moderate to high	Landscape and sky
13. I-5 near Lebec looking north	Local motorists, regional motorists	Foreground	Low to moderate	Landscape and sky
14. Tejon Safety Roadside Rest Area along I-5 looking northeast	Regional motorists	Middleground	Low to moderate	Landscape
[a] 15. I-5 near Gorman Substation looking southeast	Regional motorists, local motorists	Foreground	Low to moderate	Landscape

Photograph number and location	Primary viewers	Viewing distance	Viewer sensitivity	Predominant backdrop for Project structures
16. I-5 near Gorman Substation looking northwest	Regional motorists, local motorists	Middleground 0.75 mile	Low to moderate	Landscape
Landscape Unit 5				
[a] 17. Quail Drive near Comanche Point Road looking northwest	Residents, local motorists	Foreground	Moderate to high	Sky
18. Comanche Narrative Trail near Comanche Point Road looking northwest	Recreationalists	Foreground	High	Sky
19. Comanche Point Road at St. Andrews Place looking west	Residents, local motorists	Foreground	Moderate to high	Landscape and sky
Landscape Unit 6				
20. Pellisier Road near Banducci Substation	Local motorists	Foreground	Low	Landscape and sky

Notes:
* denotes KOPs with simulations

Viewers and Viewer Sensitivity

Viewer activity, view duration, distance zone (foreground, middleground, and background), adjacent land uses, and special planning designations, such as scenic route designation, are used to characterize viewer sensitivity. Potentially affected viewers are characterized below.

Motorists

Motorists are the largest viewer group in the Proposed Project area. Included in this group are regional motorists traveling the network of interstate and state highways, including the following:

- SR 178 connecting Bakersfield through the Kern River Canyon to Lake Isabella, Kernville, and the upper Kern River region. Motorists are predominantly local commuters and tourists, with limited commercial traffic. Because of the dramatic landscape of the Kern River Canyon and Kern River and the large number of motorists going to and coming from the significant recreation opportunities of the upper Kern River, sensitivity levels are moderate to high.
- SR 58 connecting Bakersfield with Tehachapi. Motorists are predominantly local commuters and commercial traffic with some tourists. Local motorists include those commuting between Bakersfield and outlying communities such as Stallion Springs and Tehachapi on a regular basis for work or school and local agricultural workers within the eastern San Joaquin Valley. Sensitivity levels ae low to moderate.
- I-5 connecting the lower San Joaquin Valley where it crosses the Tehachapi Mountains through Grapevine Canyon to Lancaster and greater Los Angeles. Travelers on I-5 are highly varied, with significant commercial traffic, San Joaquin Valley-Los Vegas inter-city commuter traffic, and tourists. Sensitivity levels are low to moderate.

Residents

Residential viewers in the Proposed Project area are largely dispersed in scattered small concentrations or at isolated rural residences. A limited number of residences border the immediate Proposed Project area, such as those along Tower Line Road in the San Joaquin Valley and in places in and around Cummings Valley. Residential views tend to be long in duration, and the viewer sensitivity of the residents to change is considered moderate to high.

Recreationists

Recreation-oriented viewers include individuals motoring through the Kern River Canyon/Sequoia National Forest lands, rafting or fishing the Kern River, and visiting Fort Tejon State Historical Park. The general expectation of a natural-appearing landscape setting among recreationists is high.

Scenic Corridors and Highways

Federal

Federal scenic highways include highways that are eligible for designation as scenic highways under the National Scenic Byways Program. There are no designated or eligible National Scenic Byways or All-American Roads in the Proposed Project area.

State
California's Scenic Highway System includes highways that are eligible for designation as scenic highways and designated scenic highways. There are no designated or eligible scenic highways in the Proposed Project area (Caltrans 2021).

Local
The Kern County General Plan identifies roads within the unincorporated County that are part of the County's scenic route corridor. There are no scenic route corridors within the viewshed of which the Proposed Project is located.

Scenic Vistas
A *scenic vista* is defined as a distant public view along or through an opening or corridor that is recognized in a land management plan. The Kern County General Plan does not designate any scenic vistas within the county (Kern County Planning Department 2009).

Scenic Resources
Scenic resources are those natural and built landscape patterns and features that are considered to have visual or aesthetical value. Scenic resources may include trees or other important vegetation; landform elements, such as hills or mountains, ridgelines, or rock outcroppings; water features such as rivers, bays, or reservoirs; and landmarks, important buildings, or historic sites and structures.

The vivid landscape features along the Proposed Project alignment include the lower Kern River and Kern River Canyon, Grapevine Canyon, the rolling terrain of the Cummings Valley and Tejon Hills, and the Tehachapi Mountains. Approximately 0.4 mile of the Proposed Project alignment passes through the Sequoia National Forest, and approximately 450 feet is located in the Los Padres National Forest. The Proposed Project alignment is also adjacent a designated California historic landmark, Fort Tejon State Historic Park, which features restored adobes from the original fort as well as a number of 400-year-old Valley Oak Trees (California State Park and Recreation Commission n.d.).

A portion of Segment 4 is in a mixed oak woodland forest that is identified as a "scenic landscape" in the Greater Tehachapi Area Specific and Community Plan (Kern County Planning Department 2009).

Scenic Resource Management Areas
Approximately 0.4 mile of the Proposed Project alignment at the northern terminus (Segment 1) crosses the Sequoia National Forest, and 450 feet of the Proposed Project alignment in Segment 2 and one tower are located in the Los Padres National Forest. The Draft Sequoia National Forest Land and Resource Management Plan and the Los Padres National Forest Land and Resource Management Plan establish management objectives for these areas. The portions of the Sequoia and Los Padres crossed by the Proposed Project have *scenic integrity objectives* (SIOs) of high. See Table 3.1-4 for definitions of SIOs.

Table 3.1-4 USFS Scenery Management System Scenic Integrity Objectives

Scenic integrity objective (SIO)	Characteristics
Very high	The very high SIO generally provides for ecological changes only. This refers to landscapes where the valued (desired) landscape character is intact with only minute, if any, deviations. The existing landscape character and sense of place is expressed at the highest possible level. The landscape is unaltered.
High	The high SIO is used for landscapes where the valued landscape character "appears intact." Deviations may be present, but they must repeat the form, line, color, texture, and pattern common to the landscape character so completely and at such scale that they are not evident.
Moderate	The moderate SIO is used for landscapes where the valued landscape character "appears slightly altered." Noticeable deviations must remain visually subordinate to the landscape character being viewed.
Low	The low SIO is used for landscapes where the valued landscape character "appears moderately altered." Deviations begin to dominate the valued landscape character being viewed, but they borrow value attributes such as size, shape, edge effect and pattern of natural openings, vegetative type changes, or architectural styles outside the landscape being viewed. They should not only appear as valued character outside the landscape being viewed but should be compatible or complimentary to the character within.

Source: (USDA Forest Service 1995)

Light and Glare

Visual effects from outdoor lighting are generally attributable to light pollution, light trespass and encroachment, and glare. Light pollution is generally associated with ground-reflected light, which results in the sky glow found in urban areas. Light trespass or encroachment and nuisance glare results from unwanted light affecting viewers at an adjacent property. Glare ranges in severity from unwanted brightness that creates a nuisance to levels causing physical discomfort or disability.

Sources of Light in the Proposed Project Area

There are no nighttime lights on structures within the existing ROW. Existing sources of nighttime lighting in the region include the following:

- Residential, commercial, and institutional buildings
- Street lights
- Parking area lights
- Automobile headlights
- Security lighting
- Area and decorative landscape lighting

Sources of Glare in the Proposed Project Area

Pervasive sources of glare in the Proposed Project area include window glass, polished steel architectural elements, and reflections from moving cars.

3.1.4 Applicable Regulations, Policies and Standards

Federal Regulations, Policies, and Standards

USDA Forest Service

The USDA Forest Service applies an inventory and assessment system known as the Scenery Management System (SMS) to manage visual resources of lands within their jurisdiction. The SMS establishes management goals to describe the level of modification associated with land use activity that is acceptable in a given area. The SIOs range from very high, which is typically applied only to highly sensitive landscapes such as wilderness areas or special classified areas, to very low, a standard that allows land use activity that may appear dominant in relationship to the natural landscape while not completely harmonizing with the natural setting (USDA Forest Service 1995). Only one SIO class applies to any given area. It is important to note that the SIO does not necessarily represent current scenery conditions but instead is a guideline for forest management objectives over time. The SIOs are defined in Table 3.1-4.

USDA Forest Service: Land Management Plan for the Sequoia National Forest (2022)

The Land Management Plan for the Sequoia National Forest establishes management objectives for lands on the Sequoia National Forest (USDA Forest Service 2023). The following are the objectives, goals, and management approaches for scenic resources in the Draft Sequoia National Forest Land and Resource Management Plan:

Desired Conditions (SCEN-FW-DC)

- The Sequoia National Forest provides a variety of ecologically sound, resilient, and visually appealing forest landscapes that sustain scenic character, supporting the national forest recreation program niche in ways that contribute to visitors' sense of place and connection with nature.
- Scenic character is maintained and/or adapted to changing conditions to support ecological, social, and economic sustainability on the Sequoia National Forest and in surrounding communities.
- The Sequoia National Forest's scenic resources meet or are moving toward desired scenic integrity objectives, as displayed in figure 24, appendix A of the Land Management Plan. In places with distinctive scenic attractiveness,[14] and in "special places,"[15] scenic integrity is maintained or improved to assure high-quality viewing experiences.
- The built environment meets or exceeds scenic integrity objectives and contributes to scenic stability.
- Scenery stability is enhanced through integrated fuels and forest health projects.

Goal (SCEN-FW-GOAL)

- The Forest Service works with other agencies and adjacent landowners to maintain shared vistas.

Guideline (SCEN-FW-GDL)

- Management activities should maintain or move toward scenic integrity objectives in the long-term timeframes.

Potential Management Approaches

- Use integrated resource planning during projects to respond to changing scenery conditions affecting scenic character and integrity.
- Minimize visible lines in landscape areas where vegetation is removed for management objectives. Cleared areas should include edges that reflect the visual character of naturally occurring vegetation openings.

UDSDA Forest Service. Revised Draft Land Management Plan for the Los Padres National Forest (2005)

The Los Padres National Forest Land Management Plan establishes management goals for lands on the Los Padres National Forest. A description of the relevant goals is provided below:

Goal 3.1: Managed Recreation in a Natural Setting

Landscape management strives to meet the public's scenery expectations for the management of national forest landscapes. The Scenery Management System recognizes the interdependence of aesthetics and ecological systems and promotes natural-appearing landscapes. Landscapes should be managed to maintain a natural appearance, characterized by scenic integrity objectives of high and very high.

Goal 3.2: Retain a Natural Evolving Character within Wilderness

Visitor satisfaction in wilderness is gauged by the general level of development expected in adjacent areas and key indicators of how well the wilderness system can be expected to provide solitude, challenge and untrammeled ecological processes desired for these areas. Existing wilderness should be retained where feasible.

Goal 4.2 - Infrastructure needed to transport energy into and out of southern California and between sub-regional areas is developed in designated utility corridors

The land use zones suitable for consideration of sites and corridors on National Forest System land are the Developed Area Interface, Back Country, and Back Country Motorized Use Restricted zones.

State Regulations, Policies, and Standards

California Department of Transportation: Scenic Highway Program

The State Scenic Highway Program was established by the Legislature in 1963 to preserve and enhance the natural beauty of California. The State Scenic Highway System includes highways that are either eligible for designation as scenic highways or have been designated as such. The status of a state scenic highway changes from “eligible” to “officially designated” when the local jurisdiction adopts a scenic corridor protection program, applies to Caltrans for scenic highway approval, and receives the designation from Caltrans. A city or county may propose adding routes with outstanding scenic elements to the list of eligible highways. However, state legislation is required.

There are no designated state scenic highways within the Proposed Project area. The nearest eligible state scenic highways are portions of SR 14 and SR 58, both located more than 12 miles east of the Proposed Project near Mojave.

California State Parks Office of Historic Preservation (OHP) California Landmarks and Point of Historic Interest

The Office of Historic Preservation (OHP) is responsible for administering federally and state mandated historic preservation programs to further the identification, evaluation, registration, and protection of California's historic resources including California Historic Landmarks, Points of Historic Interest, and Historical Resources. The landmarks, points, and resources include but are not limited to buildings, sites, features, or events that are of statewide significance and have anthropological, cultural, military, political, architectural, economic, scientific, or technical, religious, experimental, or other historical value.

Fort Tejon State Historic Park (No. 129 Fort Tejon) is a designated California Landmark listed on the National Registry of Historic Places that includes restored adobes from the original fort. The park's museum features exhibits on army life and local history, and the park has a number of noteworthy 400-year-old valley oak trees (California State Park and Recreation Commission n.d.).

Local Regulations, Policies, and Standards

The CPUC has sole and exclusive State jurisdiction over the siting and design of the Proposed Project because it authorizes the construction, operation, and maintenance of investor-owned public utility facilities. Pursuant to GO 131-D section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters." Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the counties' and cities' regulations are not applicable as the counties and cities do not have jurisdiction over the Proposed Project. Accordingly, the following discussion of local land use laws, regulations, and policies is provided for informational purposes only.

Kern County General Plan: Circulation Element

General Plan Scenic Route Corridors

On August 5, 1974, the Kern County Board of Supervisors adopted a Scenic Highways Element to the Kern County General Plan. In 1992, the Kern County Board of Supervisors rescinded the County's Scenic Highway Element. Kern County has the discretion to designate local scenic routes if circumstances warrant such designation.

There are three scenic routes in Kern County that are designated as eligible State Scenic Highways:

- State Route 14 and State Highway 395: north of Mojave and continues to the Inyo County line

- State Route 58: between Mojave and Boron
- State Route 41: 5 miles in northwest Kern County

Scenic Route Corridor Policies

- Kern County should consider designating local scenic highway routes, where appropriate, throughout the County.
- Various methods of protecting and enhancing the scenic qualities of land and uses within corridor boundaries must be devised and carried out.
- Standards for corridor protection should parallel those established by State Scenic Highway Law (1963) and outlined in State guidelines.

Scenic Route Corridor Implementation Measures

- Caltrans has the responsibility for coordinating Scenic Highway programs. Caltrans will not act on programs until the local government requests aid from that agency. Caltrans will coordinate and conduct two studies. Caltrans calls the studies "Corridor Survey" and "Highway Facility Study." Results of these two studies will be presented in a comprehensive Scenic Highway Report.

Kern County General Plan: General Provisions – Oak Tree Conservation Policies

Oak woodlands and large oak trees shall be protected where possible and incorporated into project developments.

Promote the conservation of oak tree woodlands for their environmental value and scenic beauty.

Kern County General Plan: Land Use/Conservation/Open Space Element

1.10.7 Light and Glare

Policy

1. Ensure that light and glare from discretionary new development projects are minimized in rural as well as urban areas.

2. Encourage the use of low-glare lighting to minimize nighttime glare effects on neighboring properties.

Implementation

AA. The County shall utilize CEQA Guidelines and the provisions of the Zoning Ordinance to minimize the impacts of light and glare on adjacent properties and in rural undeveloped areas.

Kern County Zoning Ordinance

Section 19.81 of the Kern County Zoning Ordinance (County of Kern 2022) provides principles for ensuring that the “natural dark skies” that are considered part of the existing character of Kern County are maintained. The Dark Sky Ordinance includes general requirements for light shielding, fixture types, and mounting heights.

Los Angeles County General Plan
The Conservation and Natural Resources Element of the County of Los Angeles General Plan (Los Angeles County Department of Regional Planning 2015) contains one policy related to protection of aesthetic resources, which calls for the protection of the visual quality of scenic views from public roads, trails, and key vantage points.

Metropolitan Bakersfield General Plan
The Metropolitan Bakersfield General Plan contains general goals and policies related to aesthetic resources and planning for visually pleasing development within the city (City of Bakersfield 2016). Relevant goals and policies are provided below:

Goals

1. Conserve and enhance the unique aspects of open space within the planning area.
2. Create an integrated system of open space amenities in the planning area.
3. Locate and site development to minimize the disruption of open space areas.
4. Policies Development of ridge lines within the planning area should consider natural topographic constraints.
5. Hillside development should exhibit sensitivity and be complementary to the natural topography.
6. Require the use of grading techniques in hillside areas that preserve the form of natural topography and ridge lines.
7. Development location and siting should be sensitive to its relationship to the Kern River.
8. Development on or adjacent to bluff areas should complement the natural topographic integrity of such areas.

3.1.5 Applicant Proposed Measures

SCE has proposed measures to reduce environmental impacts. The significance of the impact is first considered prior to application of applicant proposed measures (APMs) and a significance determination is made. The implementation of the APMs is then considered as part of the Proposed Project when determining whether impacts would be significant and thus would require mitigation. These APMs would be incorporated as part of any CPUC project approval, and SCE would be required to adhere to the APMs as well as any identified mitigation measures. The APMs are included in the MMRP for the Proposed Project, and the implementation of the measures would be monitored and documented in the same manner as mitigation measures. There are no applicant proposed measures (APMs) that would apply to potential aesthetic impacts.

3.1.6 Environmental Analysis

Approach to Impact Analysis

Definition of Visual Impact

The visual impact levels referenced in this MND indicate the relative degree of overall change to the visual environment that the Proposed Project would create. A numeric rating scale was used to determine visual quality and viewer response, as defined in Table 3.1-5. Overall visual impact scores of moderately high and high are considered significant under CEQA and require mitigation.

Table 3.1-5 Visual Quality and View Response

Score	Description
None	No or very low degree of visual change to the existing visual resource
Low	Minor adverse change to existing visual quality, with low viewer response to change in the visual environment. Impacts would be less than significant.
Moderate	Moderate adverse change to existing visual quality with moderate viewer response. Impact can be reduced within 5 years using conventional visual resource mitigation measures of facilities including landscaping.
Moderately high	Moderate adverse change to existing visual quality with high viewer response; or high adverse visual resource change with moderate viewer response. Conventional visual resource mitigation measures of facilities including landscape treatment practices will generally reduce impacts.
High	A high level of adverse change to the visual quality or a high level of viewer response to visual change such that architectural design and landscape treatment cannot reduce the impacts to below a significant level. Viewer response level is high. An alternative project design or location may be required to avoid highly adverse impacts. The composite visual impact score reflects both the degree of visual quality change resulting from the Proposed Project and the viewer response to the change.

Source: (U.S. Department of Transportation, 2015)

The significance of the impact is determined based on combined factors of viewer response and the degree of change to visual quality that the Proposed Project would cause. The interrelationship of these two factors in determining whether adverse visual impacts are significant is shown in Table 3.1-6.

Table 3.1-6 Guidelines for Determining Adverse Visual Impact Significance

Overall viewer response	Overall visual change/impact				
	Low	Low to moderate	Moderate	Moderately high	High
Low	**Less than significant**	**Less than significant**	Adverse, less than significant	Adverse, less than significant	Adverse, less than significant
Low to moderate	**Less than significant**	Adverse, less than significant	Adverse, less than significant	Adverse, not significant	Adverse, less than significant
Moderate	Adverse, less than significant	Adverse, less than significant	Adverse, less than significant	**Adverse, potentially significant**	**Adverse, potentially significant**
Moderate to high	Adverse, less than significant	Adverse, less than significant	**Adverse, potentially significant**	**Adverse, potentially significant**	Significant
High	Adverse, less than significant	**Adverse, potentially significant**	**Adverse, potentially significant**	Significant	Significant

Notes:

Less than significant: Impacts may or may not be perceptible but are considered minor in the context of existing landscape characteristics and view opportunity.

Adverse, less than significant: Impacts are perceived as negative but do not exceed environmental thresholds.

Adverse, potentially significant: Impacts are perceived as negative and may exceed environmental thresholds depending on project and site-specific circumstances.

Significant: Impacts with feasible mitigation may be reduced to less than significant levels or avoided all together. Without mitigation or avoidance measures, significant impacts would exceed environmental thresholds.

Analysis of Visual Quality Impacts

KOPs are representative viewpoints of the Proposed Project. Eight KOPs were selected to prepare simulations of the Proposed Project and analyze visual impacts. Table 3.1-3 describes the locations of the KOPs used in this analysis. Photographs of existing conditions were taken at each of the eight KOPs to represent the baseline conditions. Visual photo-simulations were then developed for each KOP to represent views of the Proposed Project and to evaluate the impact of the Proposed Project on the visual quality in the area.

The photograph of existing conditions and visual simulation for each KOP were evaluated quantitatively with a numerical rating system to analyze the Proposed Project's impact on visual quality. The evaluation involved the following steps:

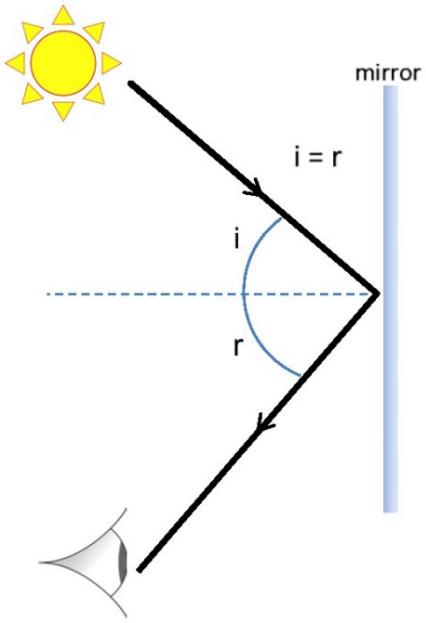
1. Use the baseline photograph to analyze, describe, and assign numerical ratings for existing visual quality using three criteria: vividness, intactness, and unity (defined in Table 3.1-2).

2. Analyze, describe viewer response, and define numerical ratings for viewer sensitivity and viewer exposure (defined in Table 3.1-2). The visual experience of many different viewers was considered in the evaluation.
3. Analyze the photo-simulation and assign numerical ratings for the Proposed Project's visual quality using three criteria: vividness, intactness, and unity.
4. Calculate visual change as the difference between existing visual quality using the numeric rating of the baseline photo and visual quality after construction of the Proposed Project using the numeric rating of the visual simulation.
5. Assess resulting visual quality before and after mitigation.

Light and Glare

The location of viewers and intensity of existing light and glare were evaluated to determine the significance of new light and glare effects of the Proposed Project. Fugitive glare, caused by incident sunlight reflecting off reflective surfaces, is predictable. According to the Law of Reflection, the angle at which light hits a reflective surface equals the angle that the light would be reflected off the surface. The Law of Reflection is illustrated in Figure 3.1-2.

Figure 3.1-2 Law of Reflection



Summary of Impacts

Table 3.1-7 presents a summary of the CEQA significance criteria and impacts on aesthetics that would occur during construction, operation, and maintenance of the Proposed Project.

Table 3.1-7 Summary of Proposed Project Impacts to Aesthetic Resources

Would the proposed project:	Potentially Significant Impact	Less than Significant Impact with Mitigation	Less than Significant Impact	No Impact
a) Have an adverse effect on a scenic vista?	☐	☐	☐	☒
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c) In nonurbanized areas, 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 publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	☐	☒	☐	☐
d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?	☐	☐	☒	☐

Impact Discussion

a) Have an adverse effect on a scenic vista?

There are no designated or eligible scenic vistas in the Proposed Project area, and the Proposed Project would not be visible from any designated or eligible federal, state, county, or city scenic vistas. Because the Proposed Project is not within the viewshed of any scenic vista, the Proposed Project would have no impact on a scenic vista.

Required APMs and MMs: None required.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

The Kern County General Plan defines a scenic route as a freeway, highway, road, or other public right-of-way that traverses an area of exceptional scenic quality and officially designated as a scenic route by the Kern County Board of Supervisors or the State of California. The segment of SR 58 located between the cities of Mojave and Boron is designated as an eligible scenic highway. However, the scenic eligible segment of SR 58 is located approximately 38 miles east of the Proposed Project, and views of the Proposed Project would be blocked or obscured by the Tehachapi Mountains. Due to distance and intervening topography, the Proposed Project would not be visible from any scenic highway. Therefore, the Proposed Project would not affect or substantially damage scenic resources within a scenic highway, and no impact would occur.

Required APMs and MMs: None required.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

KOP and Visual Simulations

Table 3.1-8 provides a description of the KOPs and viewer sensitivity. Figures 3.1-3 through 3.1-18 provide the baseline photograph and visual simulations for the eight KOPs that were selected to represent the Proposed Project impacts. The simulations presented in Figures 3.1-3 through 3.1-18 consist of two full-page images designated "a" and "b," with the existing views shown in the "a" figure and the after in the "b" visual simulation figure.

Table 3.1-8 Visual Impact Analysis

KOP #	Viewer sensitivity factor(s)	Viewer sensitivity score	Visual change and effect	Overall visual change/impact
Landscape Unit 1				
1	Well-traveled public highway Proximity to public recreation area Scenic views of canyon	High	Low	Moderate
2	Well-traveled public highway Proximity to public recreation area Scenic views of canyon	High	Low	Moderate
3	Well-traveled public highway Proximity to public recreation area Scenic views of canyon	High	Low	Moderate
Landscape Unit 3				
6	Well-traveled public roadway Project crossing	Low to moderate	Low	Low
8	Proximity to residences Public roadway	Low to moderate	Low	Low
Landscape Unit 4				
11	Proximity to public recreation area Proximity to California State Historical Monument	High	Low	Low
15	Proximity to heavily- traveled freeway corridor	Low to moderate	Low	Low

KOP #	Viewer sensitivity factor(s)	Viewer sensitivity score	Visual change and effect	Overall visual change/impact
Landscape Unit 5				
17	Proximity to residence	Moderate to high	Low	Low

Source: (Vision Environmental 2021)

Figure 3.1-3 KOP 1a (original)



Figure 3.1-4 KOP 1b (simulation)



Figure 3.1-5 KOP 2a (original)



Figure 3.1-6 KOP 2a (simulation)



Figure 3.1-7 KOP 3a (original)



Figure 3.1-8 KOP 3b (simulation)



Figure 3.1-9 KOP 6a (original)



Figure 3.1-10 KOP 6b (simulation)



Figure 3.1-11 KOP 8a (original)



Figure 3.1-12 KOP 8b (simulation)

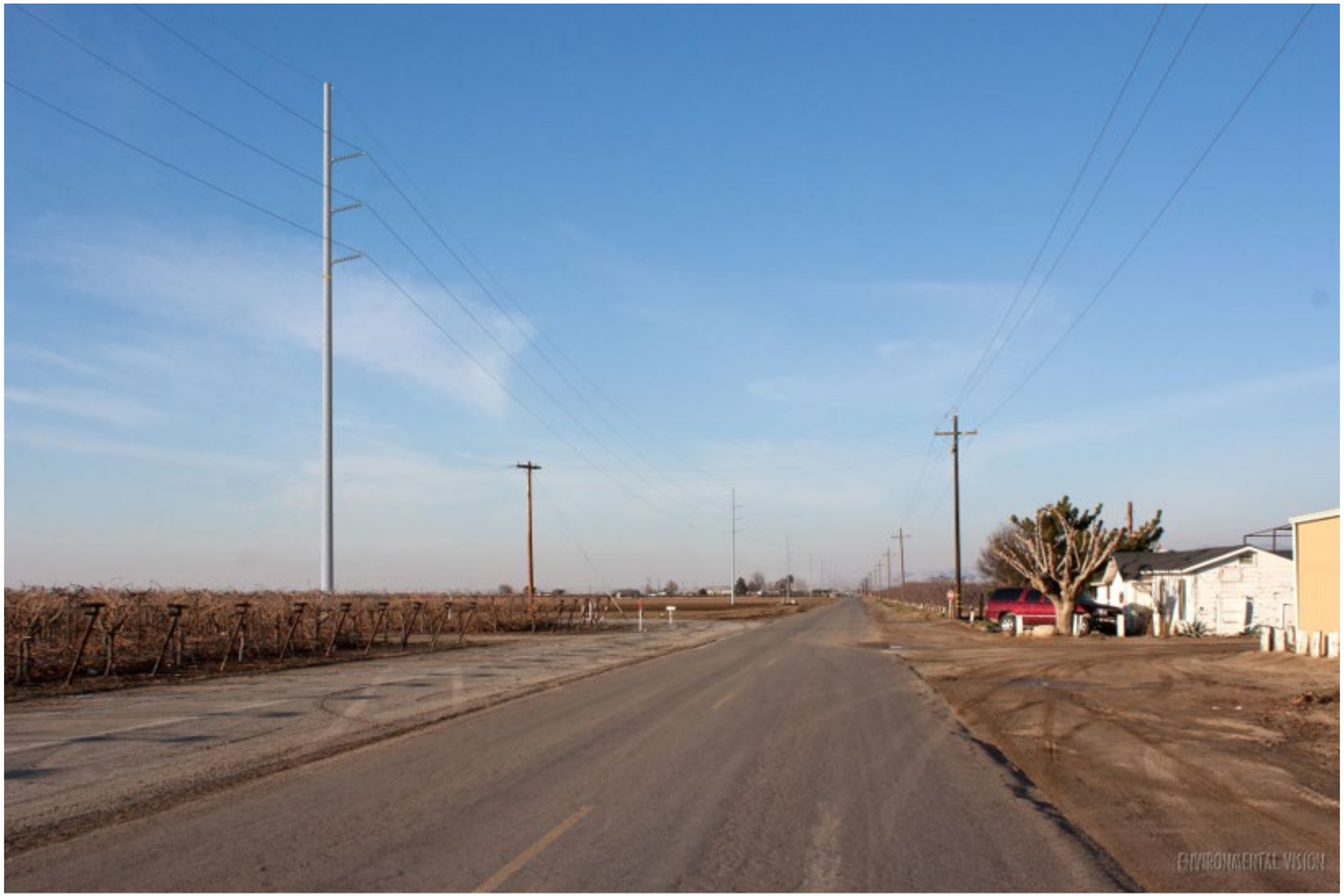


Figure 3.1-13 KOP 11a (original)



Figure 3.1-14 KOP 11b (simulation)



Figure 3.1-15 KOP 15a (original)



Figure 3.1-16 KOP 15b (simulation)



Figure 3.1-17 KOP 17a (original)



Figure 3.1-18 KOP 17b (simulation)



Construction

Construction Activities

Construction activities are expected to occur over a 2-year period. Construction activities would be noticeable to local residents, motorists, and recreational visitors as the Proposed Project alignment crosses through jurisdictions of the cities of Arvin and Bakersfield. The Proposed Project alignment also follows popular transportation routes SR 99, SR 58, SR 178, and I 5. However, with the exception of the 8-mile segment that closely parallels the I-5 corridor through the Grapevine Canyon (LU 4), the majority of the Proposed Project alignment crosses largely undeveloped open space, agricultural land, and rural single-family residential, so viewer sensitivity would be low to moderate. As construction activities would be temporary and would not permanently change the visual character of the area, impacts would be less than significant.

Tree Removal

Trees or portions of trees that encroach on existing access and spur roads may be trimmed or removed to facilitate the safe movement of construction equipment. Similarly, trees or portions of trees within or adjacent stringing sites, construction laydown areas, construction work areas, staging yards, and helicopter landing zones may be trimmed or removed to permit the safe operation of construction equipment; however, the locations of these areas would be selected to minimize the trimming or removal of trees.

Proposed Project construction is not anticipated to require large-scale removal of trees, and effects on existing vegetation would be limited to as-needed tree trimming and some removal of shrubs and other low-growing vegetation that encroach upon access and spur road setbacks required for safe passage of material and equipment. If restoration and/or revegetation occurs within sensitive habitats, a habitat restoration and/or revegetation plan(s) would be developed by SCE with the appropriate resource agencies and implemented after construction is complete. In general, the visual effects of vegetation removal would be minor and less than significant.

Soil Disturbance

A limited degree of visual contrast could occur as a result of land disturbance activity such as creation of newly exposed soil areas. If the areas of disturbance were not properly restored, the denuded temporary work sites could cause a significant visual impact due to the visual absence of vegetation, which would persist after construction is complete. Mitigation Measure Biology-2 requires the development and implementation of a Revegetation, Restoration, and Monitoring Plan to restore or revegetate temporary impacts to vegetation communities. Mitigation Measure Biology-2 includes monitoring and reporting throughout establishment of vegetation with key indicators of successful or unsuccessful progress and quantitative criteria values to objectively determine success or failure at the conclusion of the monitoring period. SCE would restore all areas that would be temporarily disturbed by construction, including locations where structures are removed, staging yards, construction work areas, and stringing sites, among others, to as close to pre-construction conditions as feasible or to the conditions agreed upon between the landowner and SCE following the completion of construction of the Proposed Project. The effect would be minimized so that the disturbed areas would blend in with the surrounding

landscape setting. These measures would reduce visual contrast and potential visibility of land disturbance resulting from temporary construction activities. As a result, any temporary visual character degradation resulting from Proposed Project construction would be less than significant with mitigation incorporated.

Staging Yards

Construction of the Proposed Project would require the establishment of temporary staging yards. Staging yards would be used as a reporting location for workers, vehicle and equipment parking, and material storage. The yard may also have construction trailers for supervisory and clerical personnel. Staging yards may include on-site lighting for safety and security purposes. The visual quality and viewer sensitivity at staging yards varies by location and is similar to nearby LUs since most of the proposed staging is near the subtransmission line corridor.

Temporary construction-related visual impacts resulting from the presence of equipment, materials, and work crews at the staging and work areas would not substantially degrade the existing visual character of the landscape. Impacts would be less than significant.

Substation

The Proposed Project includes minor modifications to the existing Kern River, Gorman, and Banducci substations. The existing areas are highly industrialized with existing equipment, such as dead-end structures, circuit breakers, disconnect switches, communication interfaces, metering equipment, and fencing. The nearest sensitive receptor to the Proposed Project is approximately 120 feet from the Gorman substation construction area.

The nearby neighbors may experience visual impacts during construction due to the presence of construction equipment and personnel. Project construction is anticipated to take approximately 23 months; however, activities near the substation would not occur continuously over the entire construction period. The areas near the substations have low viewer sensitivity due to the existing low visual quality at the substation (i.e., existing electrical equipment and industrial facilities) and low number of viewers. Therefore, construction of the proposed minor modifications would not substantially degrade the existing visual character or quality of the site during construction. Impacts would be less than significant.

Conclusion

Visual change resulting from Proposed Project construction would be temporary and would not substantially alter or degrade the existing visual character in the area. Impacts would be less than significant.

Required APMs and MMs: Mitigation Measure Biology-2: Habitat Restoration (refer to Section 3.4)

Operation and Maintenance

Most of the Proposed Project alignment crosses largely undeveloped open space, agricultural land, and rural-single family residential areas. Open views toward Segments 1, 2, 3, and 4 of the Proposed Project are available from the local street and highway system. Frequent atmospheric

haze within the San Joaquin Valley and the visual backdrop presented by the topography of the Tehachapi Mountains moderates the visibility of the Proposed Project. As a result, visual change associated with the Proposed Project would be most noticeable where the alignment closely parallels or crosses public roadways and where the alignment is located in the foreground view from residential areas or public recreation areas.

Segment 5 of the Proposed Project passes through private farmland, a section of the Tejon Ranch, and undeveloped private ranchlands that are not accessible to the general public.

Permanent visual change resulting from Proposed Project would be incremental and would not substantially alter or degrade the existing visual character in the area. The Proposed Project would primarily entail replacing or modifying existing subtransmission facilities along existing utility ROWs located in predominantly rural, sparsely populated portions of Kern and Los Angeles counties. Existing steel lattice structures and wood poles would be replaced with a combination of single TSPs, *light-weight steel* (LWS) poles, and H-frame structures, typically in the same locations or adjacent the structures being replaced. In contrast to the predominantly dark color of the existing weathered steel lattice towers and wood poles that characterize the existing alignments, the new replacement poles would be a predominantly lighter-colored dull gray galvanized steel. The existing conductor would be replaced with newer and slightly larger diameter non-specular conductor.

Landscape Unit 1

Landscape Unit 1 is located in the western limits of the 15- to 20-mile-long Kern River Canyon. The form of the steep canyon walls and the water of the Kern River in the immediate foreground of SR-178 present a landscape that is highly vivid. The canyon east of the Proposed Project, with the exception of SR 178, is generally undeveloped and visually unified and intact. Visual quality of the overall canyon is high.

As presented in Photos 1 through 4, traveling west through the Proposed Project, the character of the canyon changes with the presence of the Kern River Hydroelectric Plant consisting of its penstock, hydroelectric plant structure, substation, tall lattice steel towers (LST), existing subtransmission lines crossing SR 178, and shorter wooden poles with electric lines parallel SR 128 leading from the hydroelectric plant west into the San Joaquin Valley. The cumulative effect of these features that are in the foreground view reduces the intactness and unity of the canyon landscape.

Approximately 0.25 mile of the Proposed Project is within the Sequoia National Forest with an SIO designation of high. As noted in Table 3.1-4, this designation is characterized for landscapes where the character "appears intact." An SIO designation of high allows for deviations to be present, but they must repeat the form, line, color, texture, and pattern common to the landscape character so completely and at such scale that they are visually not significant.

As seen from KOPs 1 through 3 (see Table 3.1-3), approximately six existing LSTs would be modified to support the installation of *optical ground wire* (OPGW) with new mounting hardware at the top of the LSTs. In addition, conductor-related hardware, including insulators,

would be removed and replaced during conductor installation. As the existing LSTs would be reused within the alignment on the Sequoia National Forest, the Proposed Project would not change the size or height of the LST. All modifications to the LST structures would be minor compared to the scale of the existing figures, so visual changes from the structural modifications within the LU 1, including on the Sequoia National Forest, would be negligible to viewers and would not substantially affect the existing landscape character.

Marker balls would be placed on circuits between selected LSTs where they are over 200 feet above grade to comply with FAA obstruction requirements. The marker balls would be most visible for approximately 0.25 mile to motorists traveling west towards the city of Bakersfield along SR 178. As seen from KOP 1 and KOP 2, marker balls would be most visible when viewed in the immediate foreground with the open sky as a backdrop. The marker balls draw attention to the subtransmission line. However, the presence of the existing subtransmission line and other related Kern River hydroelectric facilities modify the existing visual quality of the landscape. The attention of motorists and passengers travelling west on this segment of the highway are either of the sharp turns in the roadway alignment or looking down to the Kern River.

While the marker balls may cause a moderate change to the visual environment and further reduce intactness of the landscape, there would be a relatively low viewer response to the change given the marker balls would only be visible to motorists intermittently and briefly over an approximately 1-mile section of the highway. Combined with the attention required on the part of the motorist to the alignment of the SR 178 and the commanding presence of the waters of the Kern River that draw the view away from the marker balls, impacts of the marker balls would be adverse but less than significant because of the short view duration of the marker balls and the marker balls are not directly within the viewers line of sight.

While this segment located within Sequoia National Forest has an SIO designation of high, the Proposed Project would not replace any structures in this area and would not affect the intact appearance of the landscape setting within the Sequoia National Forest. The replacement of conductor as part of the Proposed Project would be consistent with the USFS visual management goals for the Sequoia National Forest.

Landscape Unit 2

As illustrated in Photo #5, the significant feature of the characteristic landscape is the low-rolling rangelands of the Sierra foothills with sparse development. While the intactness and unity are moderate, the overall vividness is low due to the absence of other natural features (e.g., vegetative variety, rock outcrops, water). Existing visual quality is low to moderate.

The new taller TSPs would replace existing H-frame structures. The TSPs would appear less obtrusive than the existing H-frame structures because the structures would have a dull grey galvanized finish that would be less noticeable due to its weaker visual contrast with the backdrop. Changes would be seen predominantly by local residents and farm workers. The form and color of the TSPs would simplify that of the more visually textured LSTs and reduce

the contrast with the landscape. The visual impact from the change in structure type would be minor as viewed within the context of the landscape. The impact on visual quality would be less than significant.

Landscape Unit 3

As seen in Photos #6 through #8, LU 3 is characterized by the flat terrain of the San Joaquin Valley mostly dedicated to row crops and orchards. An open landscape is contrasted with numerous cultural developments including isolated rural residence, roadside fencing and signage, overpasses, and irrigation facilities as well as an assortment of overhead utility structures. The overall intactness, unity, and vividness of the characteristic landscape is considered low.

Changes in views created by the Proposed Project from within LU 3 can be seen in KOP 6 and KOP 8 (see Table 3.1-3). SR 58 is a heavily traveled highway, with Proposed Project components seen by both local motorists and dispersed rural residents along a roadway primarily serving the surrounding farm operations. KOPs 6 and 8 show where the alignment crosses SR 58. Existing lattice structures would be replaced with narrower-profile galvanized TSPs. The dull grey galvanized finish and the narrower profile of the new TSP poles of the Proposed Project, compared with the lattice structures being replaced, would diminish the visual contrast when seen against the predominantly light-colored sky and landscape backdrop that is characteristic of the valley environment. Visual impacts would be less than significant.

Landscape Unit 4

Photos #10 through #16 illustrate the existing characteristic landscape setting within LU 4. From the north, the Proposed Project parallels the heavily traveled I-5 through Grapevine Canyon to Lebec. From Lebec, the Proposed Project alignment veers away from the interstate through the Tejon Ranch east to the Gorman substation. Most of the Proposed Project alignment through the Tejon Ranch is not within view of I-5 or local public roads.

The form and topography of Grapevine Canyon are the most vivid elements of the landscape. Various cultural modifications distract from the intactness of the landscape. These include I-5, the existing subtransmission line that crosses I-5 in four locations, Fort Tejon State Historic Park, the town of Lebec, rest areas, various Tejon Ranch facilities, overhead lighting, and numerous other overhead utility structures. Regional motorists, with a sensitivity level of low to moderate, comprise the majority of viewers. Existing visual quality is moderate.

From various points, the subtransmission line backdrop as seen from I-5 is hillsides while in other instances it is open sky. Regardless of backdrop conditions, the form and color of the TSPs would simplify that of the more visually textured LSTs and reduce the contrast with the landscape. With a very low degree of visual change to the existing visual resource, impacts would be less than significant.

An exception to viewer sensitivity is Fort Tejon State Historic Park, where viewer sensitivity would be high. KOP 11 is located near the entrance to Fort Tejon State Historic Park, a designated California Landmark listed on the National Registry of Historic Places. As shown in

Figures 3.1-13 and 3.1-14, the view from a parking lot adjacent to I-5 shows two existing weathered steel lattice towers replaced with two galvanized steel TSPs of approximately the same height. The slender vertical form of the new structures would be seen within the context of a number of other nearby utility structures that are similar in form. These include wood utility poles supporting power and communication lines visible in the foreground as well as tubular steel structures supporting cellular phone equipment, visible beyond the overpass across I-5. The form and color of the TSPs would simplify that of the more visually textured LSTs. While viewer response is high, the over visual change is low. Impacts would be adverse but less than significant.

One existing lattice tower situated on the Los Padres National Forest would be removed and replaced with a LWS pole. The new pole would be similar in size and scale to the existing tower and be located in the same general location. Accordingly, the Proposed Project would be consistent with existing conditions and would not conflict with the Forest Service visual management goals for utility corridors within the Los Padres National Forest. Impacts would be less than significant.

Landscape Unit 5

Within LU 5, the Proposed Project's subtransmission line is approximately 12 miles in length. The landscape of LU 5 is composed of the variable topography of the Tehachapi Range foothills. To the west there is grassland vegetation. To the east, the vegetation pattern changes to scrub and sparce oak woodland. Visual quality is low to moderate.

There are two sub-units of LU 5. While the landscape is vivid and intact, the westernmost 9 miles of the subtransmission line passes through a portion of the Tejon Ranch and private rangelands. Ranch roads are not paved and are inaccessible to the general public. Viewer response is low. Any views of the Proposed Project alignment from the surrounding areas would be from the middleground or background. There would be several locations along this segment of the subtransmission line where circuits are over 200 feet above grade and would require marker balls to comply with FAA obstruction requirements. However, no public access occurs within the area, so foreground views of the marker balls are not likely. If seen, the marker balls would have a landscape backdrop, reducing their contrast. Visual change would be low to moderate such that their impacts to views would be less than significant.

Photos #17 through #19 illustrate the existing characteristic landscape setting to the east, where the subtransmission line passes through sparsely developed rural residences in the hills above Stallion Springs and the Cummings Valley. The patterns of roads and varied styles of residential development reduce the intactness and unity of the characteristic landscape. In many instances, the potential visibility of Proposed Project components is reduced by topographic and vegetative screening. However, as shown in KOP 17 (see Table 3.1-3), the Proposed Project is located in the foreground view from some residences. While viewer response would be moderate to high. The form and color of the TSPs would simplify that of the more visually textured LSTs and reduce the contrast with the landscape as compared to the

existing structures. With a very low degree of visual change to the existing visual resource, impacts would be less than significant.

Landscape Unit 6
The Proposed Project alignment parallels existing roads within the Cummings Valley where more open, long-range views of the Proposed Project are available to local motorists. Viewer sensitivity is low. The foreground view is of flat terrain and predominantly agricultural uses. The intactness and unity of the landscape is reduced by vertically prominent transmission, distribution, and telecommunication line poles and scattered residential development. The Tehachapi Mountains form the backdrop. Overall visual quality is low to moderate.

The new TSPs would be taller than the existing poles. The proposed poles would have a dull grey galvanized finish that would diminish the visual contrast of the Proposed Project when viewed against the predominantly light-colored sky and landscape backdrop that is characteristic of the valley environment. With a low viewer response and low visual change, impacts would be less than significant.

Required APMs and MMs: None

d) Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area?

Construction
Construction activities would predominately occur during daylight hours; however, limited activities may occur early morning or late in the evening when natural light is limited and would require the use of lighting for safety purposes. Construction lighting would be temporary and limited to the necessary work areas. Staging yards may also be illuminated with lighting for staging and security. All lighting would be directed on site and away from potentially sensitive receptors. As lighting would be temporary and limited to safety and security purposes, construction of the Proposed Project would not create a substantial source of light that would affect day or nighttime views in the area and the impact would be less than significant.

Required APMs and MMs: None required. Operation and Maintenance
No new permanent lighting is proposed as part of the Proposed Project. Accordingly, no operation-related impacts to daytime or nighttime conditions would occur.

The Proposed Project would replace the existing subtransmission lines with non-specular conductors and dulled galvanized steel poles. The new structures have the potential to produce glare that reflects off the steel surface of the structures. According to the Law of Reflection, the angle at which light hits a reflective surface equals the angle that the light would be reflected off the surface (as illustrated in Figure 3.1-2). At the latitude of the Proposed Project, direct sun rays would shine from the southern sky so viewers south of reflective Project components would be most likely to perceive glare. The area affected by the fugitive glare also changes as the sun's position in the sky changes throughout the day, so glare experienced in a given location would

be temporary. The lower the sun angle (early morning and late evening) the more likely fugitive glare would be reflected onto sensitive viewers.

With the exception of the 8-mile segment that closely parallels the I-5 corridor through Grapevine Canyon (LU 4), the majority of the Proposed Project alignment crosses largely undeveloped open space, agricultural land, and rural single-family residential areas. Impacts from potential glare from the Proposed Project are expected to be low given the low population density in the surrounding areas. Along I-5, either the structures would be in the canyon bottom, where glare would be minimal due to the shading from the mountains, or the structures would be elevated and would not create glare at the highway. Furthermore, the Proposed Project would install steel structures that would replace existing steel structures and would not introduce new reflective surfaces into the area. Therefore, the Proposed Project subtransmission line would not result in a substantial light or glare effect, and the impact would be less than significant.

Required APMs and MMs: None

3.1.7 References

2M Associates. 2022. "TLRR Line Project: Gorman-Kern River – Visibility of Potential FAA Mark Ball Placement."

California State Park and Recreation Commission. n.d. "Fort Tejon State Historic Park." California State Parks. n.d. https://www.parks.ca.gov/?page_id=585

Caltrans. 2021. "California State Scenic Highways Map: Scenic New 1.4." Using: California State Scenic Highway System Map [online map viewer]. esriGeometryPolyline. Created by Panorama Environmental, Inc. 7p/21/2023: Kern TLRR Scenic Highway Map. https://caltrans.maps.arcgis.com/apps/webappviewer/index.html?id=465dfd3d807c46cc8e8057116f1aacaa.

City of Bakersfield. 2016. "Metropolitan Bakersfield General Plan."

County of Kern. 2022. *Kern County Zoning Ordinance*. *Title 19 – Zoning*. Available: https://kernplanning.com/planning/planning-documents/zoning-ordinance/.

Federal Highway Administration (FHWA). 2015. "Guidelines for the Visual Impact Assessment of Highway Projects." U.S. Department of Transportation. https://www.environment.fhwa.dot.gov/env_topics/other_topics/VIA_Guidelines_for_Highway_Projects.aspx.

Kern County Planning Department. 2009. "Kern County General Plan." Bakersfield, CA. Available.

Los Angeles County Department of Regional Planning. 2015. "Los Angeles County 2035 General Plan." Available: https://planning.lacounty.gov/long-range-planning/general-plan/.

USDA Forest Service. 1995. "Landscape Aesthetics: A Handbook for Scenery Management." Agriculture Handbook Number 701.

———. 2023. "Land Management Plan for the Sequoia National Forest." R5-MB-330A. Fresno, Kern, and Tulare Counties, California: Pacific Southwest Region/Sequoia National Forest. Available: https://www.fs.usda.gov/project/?project=3375.

Vision Environmental. 2021. "Visual Resources Technical Report."

3.2 Agriculture and Forestry Resources

This section presents the environmental setting and impacts on agriculture and forestry resources that would result from the Proposed Project. This section includes existing agriculture and forestry resources information, applicable regulations, environmental impacts, and mitigation measures to reduce or avoid significant effects of the Proposed Project.

3.2.1 Environmental Setting

Agricultural Resources

The Proposed Project is located on and adjacent to land that is designated, zoned, and/or actively used for agricultural activities in Kern County, Los Angeles County, and the City of Bakersfield.

Department of Conservation Farmland Mapping and Monitoring Program

The California Department of Conservation (DOC) classifies land according to agricultural suitability through the Farmland Mapping and Monitoring Program (FMMP) based on land uses, irrigation, and soil conditions. FMMP categories applicable to CEQA are defined below (CDOC n.d.).

- **Prime Farmland**. Farmland with the best combination of physical and chemical features able to sustain long-term agricultural production. Land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.
- **Farmland of Statewide Importance**. Farmland like Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.
- **Unique Farmland**. Farmland of lesser quality soils used to produce the state's leading agricultural crops. This land is usually irrigated, but may include non-irrigated orchards or vineyards, as found in some climatic zones in California. Land must have been cropped at some time during the 4 years prior to the mapping date.

As shown in Figure 3.2-1, Segments 1, 2, 3, and 5 of the Proposed Project area contain FMMP-designated Prime Farmland, Farmland of Statewide Importance, and Unique Farmland.

Agricultural Land Uses and Zoning Designated by Local Jurisdictions

Agricultural land uses and/or zoning in the Proposed Project area are established by Kern County, Los Angeles County, and the City of Bakersfield.[1] Kern County designates agricultural districts in the General Plan as Exclusive Agriculture and Limited Agriculture. Los Angeles County designates agricultural districts in the General Plan as A-2-2 (Heavy Agriculture). The City of Bakersfield designates agriculture districts in the General Plan as A-HD (Agricultural-Hillside Development Overlay). Agricultural zoning is shown in Figure 3.2-2

Williamson Act Contract Lands

The California Land Conservation Act of 1965, commonly referred to as the Williamson Act, enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open-space use for periods of 10 to 20 years (CDOC n.d.). Until the passage of SB 574 in 2021, the DOC and counties were required to collect and publish program enrollment data in biennial reports, the most recent, and final, publication being the Williamson Act Status Report 2020–2021 (CDOC 2022). Under the new Williams Act reporting requirements (section 5127.5), each city or county provides to the Department of Conservation, on or before January 30 of each year, GIS data files of all agricultural preserves and Williamson Act contracted land in existence at the end of the preceding year. That information is now made available through the California Williamson Act Enrollment Finder. Lands in the Proposed Project region that are subject to Williamson Act contract are shown in Figure 3.2-3.

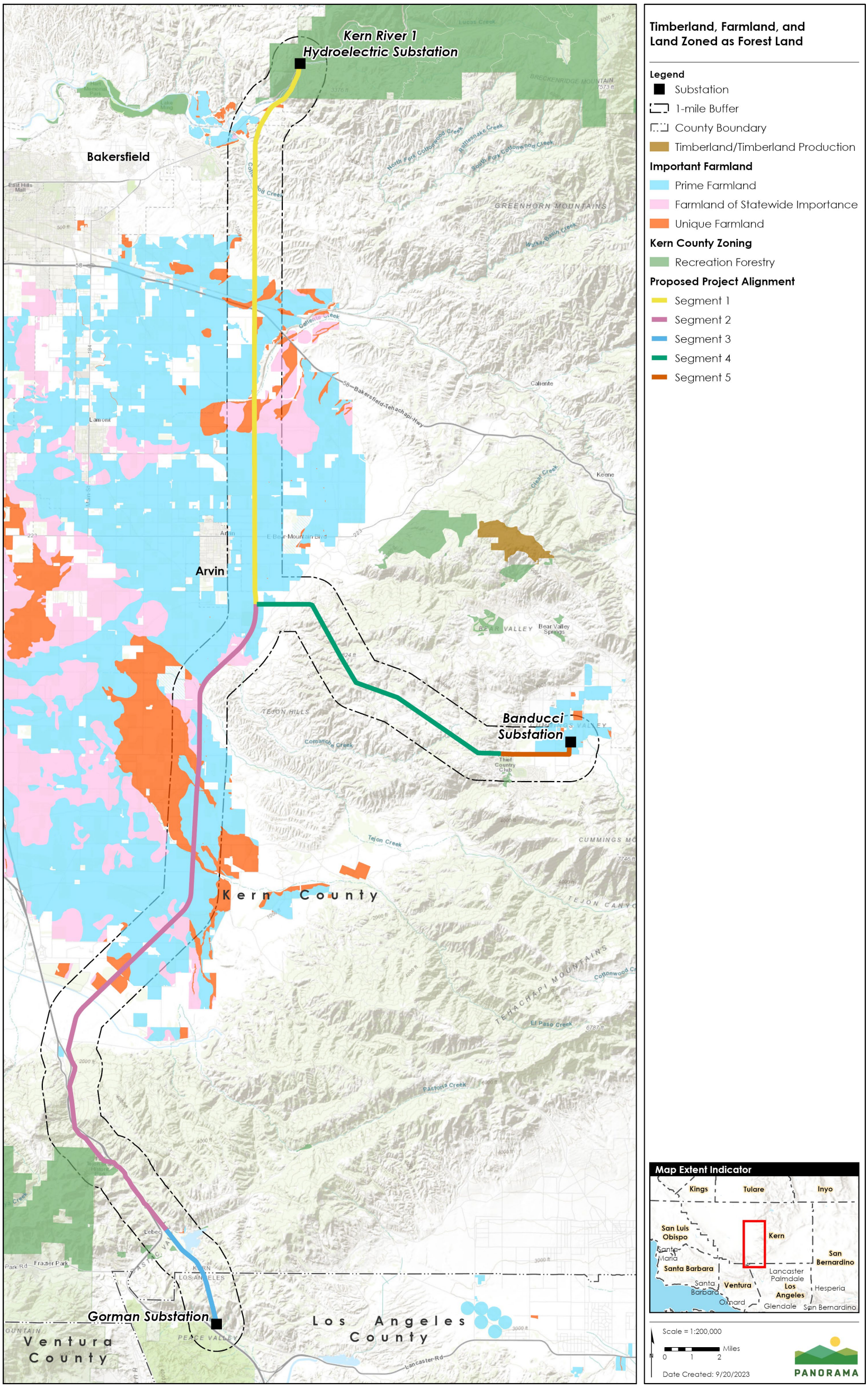
Active Agricultural Operations

Agricultural operations, including existing permits or leases, may occur on land that is not FMMP-designated farmland or subject to local agricultural land use or zoning designations. Active agricultural operations that may be important to the region, but are not within designated agricultural areas, are considered agricultural resources. Active agricultural operations include areas where there is evidence of existing agricultural production both within and outside designated Farmland, local land use and zoning, or Williamson Act contract lands.

Active agricultural operations in the Proposed Project area includes areas with irrigated cropland, non-irrigated cropland, pastures, fallow lands, ranch and farm facilities, and windrows. Crops observed within the Proposed Project area alignment include grapes, almonds, alfalfa (*Medicago sativa*), and various other fruit, nut, vegetable, and graminoid species that likely serve as livestock feed.

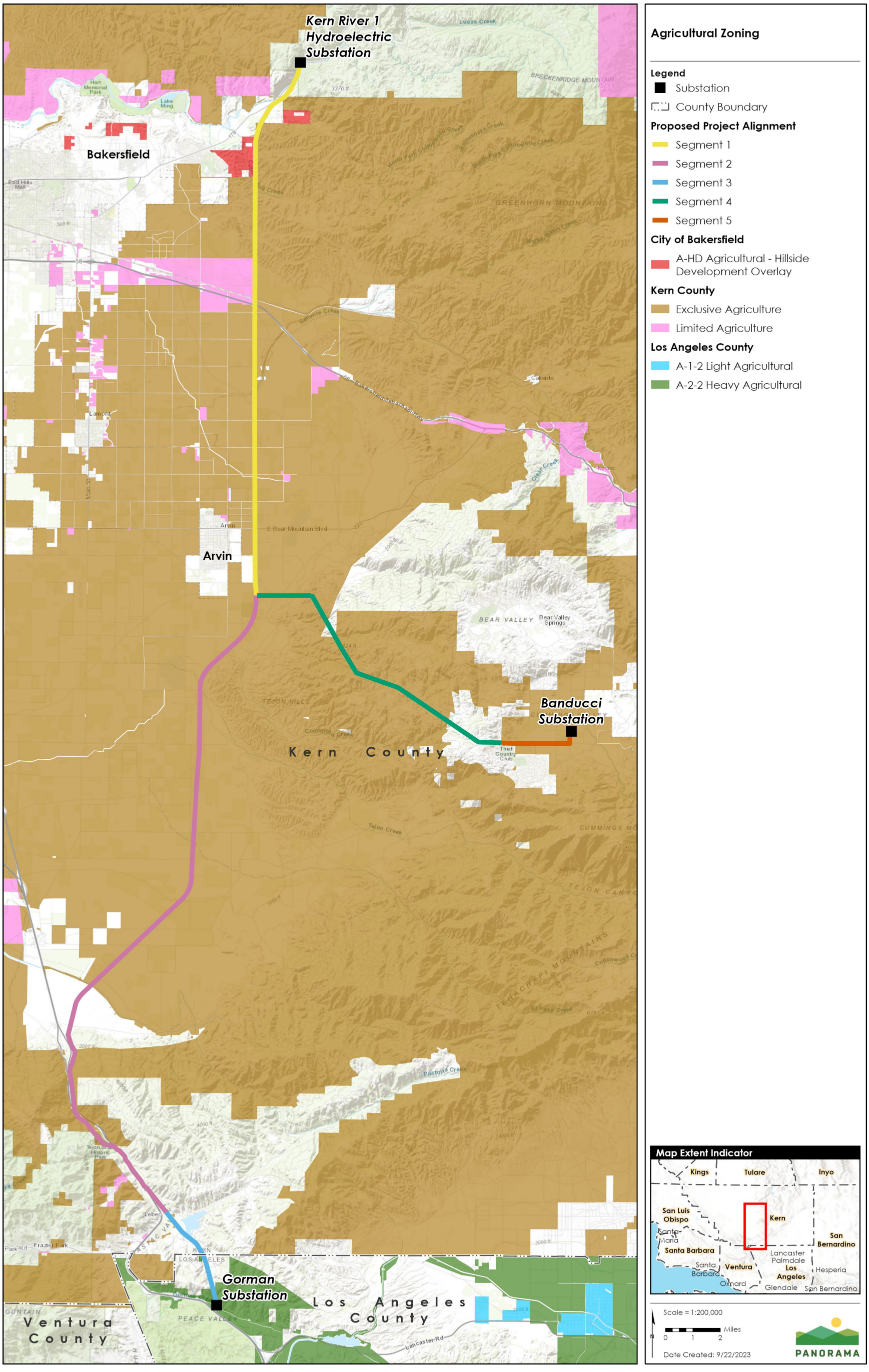
[1] The City of Arvin does not have any specific designation for agriculture land.

Figure 3.2-1 Farmland and Forest Land



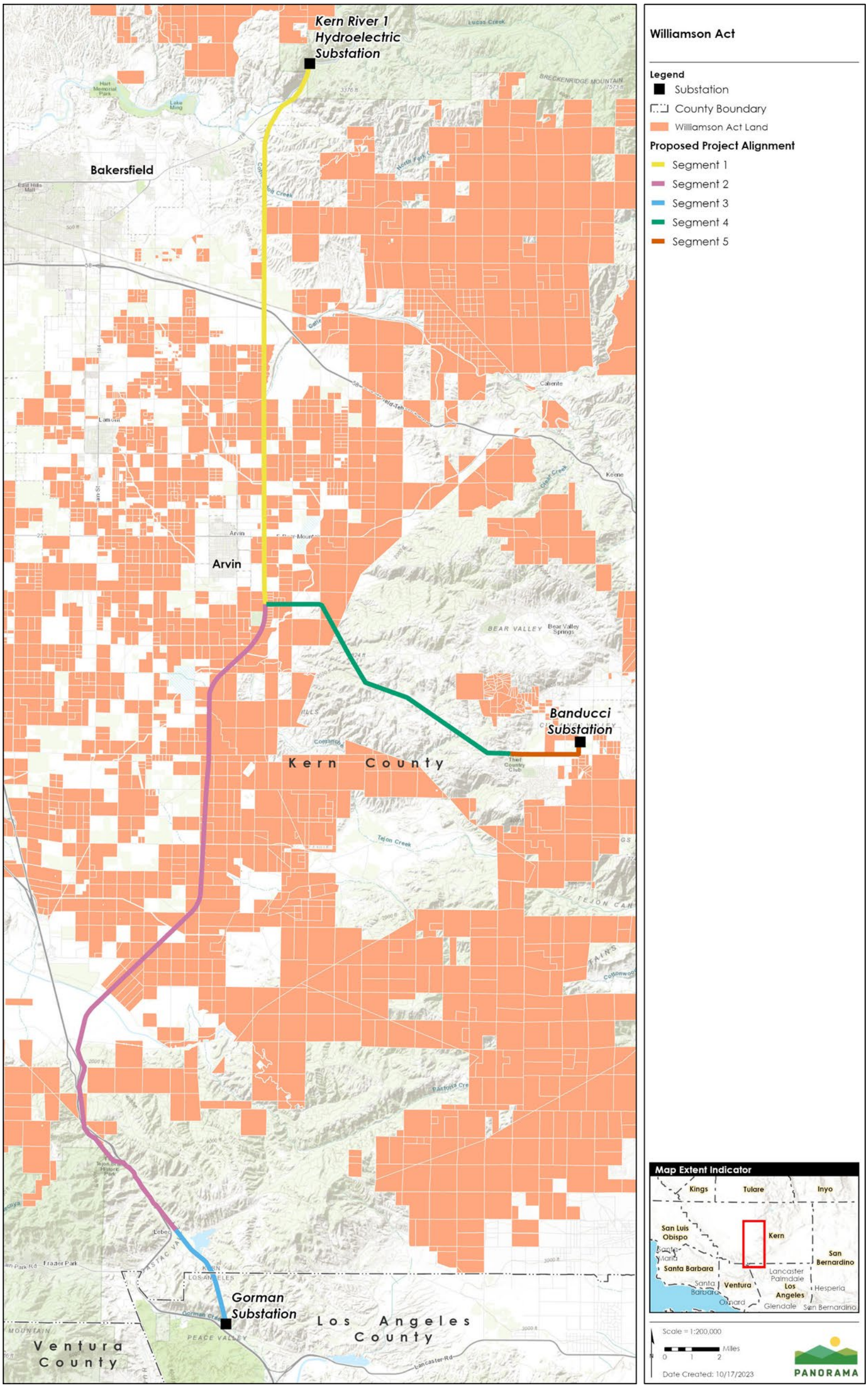
Source: (CDOC 2018; CAL FIRE FRAP 2015; CAL FIRE 2023)

Figure 3.2-2 Agricultural Zoning for the Proposed Project Area



Source: (Kern County Planning and Natural Resources Department 2023; City of Bakersfield Planning Department 2022; County of Los Angeles 2023)

Figure 3.2-3 Williamson Act Land



Source: ((County of Kern GIS, 2023))

This page is intentionally blank.

Forestry Resources

Portions of the Proposed Project area within Segments 1 and 2 are located on lands zoned for recreational forestry, as shown in Figure 3.2-1. Forestry resources are also defined more broadly in the PRC as follows:

- **Forest Land (PRC § 12220(g))** Land that can support 10-percent native tree cover of any species, including hardwoods, under natural conditions and that allows for management of one or more forest resources, including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, and other public benefits.
- **Timberland (PRC § 4526)** Land, other than land owned by the federal government and land designated by the State Board of Forestry and Fire Protection (board) as experimental forest land, which is available for, and capable of, growing a crop of trees of a commercial species used to produce lumber and other forest products, including Christmas trees. Commercial species shall be determined by the board on a district basis.
- **Timberland Production Zone (California Government Code § 51104(g))** With respect to the general plans of cities and counties, "timberland preserve zone" means "timberland production zone". Timber production zones are areas that have been zoned for and are devoted to and used for growing and harvesting timber, or for growing and harvesting timber and compatible uses, as defined below. "Compatible use" is any use that does not significantly detract from the use of the property for, or inhibit, growing and harvesting timber and shall include, but not be limited to, any of the following, unless in a specific instance such a use would be contrary to the preceding definition of compatible use:
  - Management for watershed
  - Management for fish and wildlife habitat or hunting and fishing
  - A use integrally related to the growing, harvesting, and processing of forest products, including but not limited to roads, log landings, and log storage areas.
  - The erection, construction, alteration, or maintenance of gas, electric, water, or communication transmission facilities
  - Grazing
  - A residence or other structure necessary for the management of land zoned as timberland production

The Fremont Cottonwood Forest, Live Oak Forest, Blue Oak Forest, Valley Oak Riparian Forest, Mixed Oak Forest, and Red Willow Riparian Forest vegetation communities within the Proposed Project area may meet the definition of forest land under PRC § 12220(g). Although vegetation communities are present that may meet the definition of forest land, no commercial harvesting of forest materials occur in these areas.

3.2.2 Applicable Regulations, Plans, and Standards

Federal Regulations, Policies, and Standards

Farmland Protection Policy Act

The 1980 Congressional report *Compact Cities: Energy-Saving Strategies for the Eighties* identified the need for Congress to implement programs and policies to protect farmland and combat urban sprawl and the waste of energy and resources that accompanies sprawling development. The Compact Cities report indicated that much of the sprawl was the result of programs funded by the federal government (U.S. Congress 1980).

In 1981, the Final Report for the National Agricultural Land Study (NALS) was released. NALS was a two-year project commissioned to document the extent and cause of the loss of prime farmland in the United States. The NALS Final Report conclude that large areas of prime farmland in the United States were being permanently converted into nonagricultural uses and that federally sponsored programs were a major contributor to that conversion (USDA and CEQ 1981). Congress responded with the passage of the Farmland Protection Policy Act (FPPA) subtitle I of Title XV, Section 1539-1549 as part of the Agriculture and Food Act of 1981 (Public Law 97-98) (also known as the 1981 Farm Bill), with the first initial rule issued in 1984. Congress made significant changes to the law in 1985, with those changes addressed in in 1987 with a new proposed rule that was finalized in 1994 (American Farmland Trust 2022). On June 17, 1994, the final rules and regulations were published in the Federal Register (NRCS 1994).

The FPPA is intended to minimize the impact federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. It assures that to the extent possible federal programs are administered to be compatible with state, local units of government, and private programs and policies to protect farmland. Federal agencies are required to develop and review their policies and procedures to implement the FPPA every two years (American Farmland Trust 2022).

Forest Service Master Special Use Permit

Forest Service special use permits require that permittees comply with all applicable federal, state, county, and municipal laws, regulations, and other legal requirements. Permittees have a general duty to protect all federal land and interest from damage, and are liable for all damage, including fire suppression costs, associated with the use and occupancy authorized by the permit (Clause IV F). Power line permits are classified as a high-risk use by Forest Service regulations (36 CFR 251.56(d)(2)) and are subject to strict liability requirements. The Forest Service would recover compensation for any damages with the assistance of the U.S. Justice Department. The Forest Service has also adopted California Public Resource Code (PRC) sections 4292 and 4293, by Regional Forester Order, which incorporates the power line clearing requirements established by CAL FIRE and described in the following section in more detail. The rules established by CPUC General Order 95 would also apply to the permittee (CAL FIRE and CPUC 2021).

State Regulations, Policies and Standards

Williamson Act

The Williamson Act, also known as the California Land Conservation Act of 1965, enables local governments to enter into contracts with private landowners for the purpose of restricting specific parcels of land to agricultural or related open space use. In return, landowners receive property tax assessments that are much lower than normal because they are based upon farming and open space uses as opposed to full market value (CDOC n.d.).

The CDOC assists all levels of government, and landowners in the interpretation of the Williamson Act related government code. The CDOC also researches, publishes, and disseminates information regarding the policies, purposes, procedures, and administration of the Williamson Act according to government code. Participating counties and cities are required to establish their own rules and regulations regarding implementation of the Act within their jurisdiction. These rules include but are not limited to: enrollment guidelines, acreage minimums, enforcement procedures, allowable uses, and compatible uses (CDOC n.d.).

Local Regulations, Policies and Standards

The CPUC has sole and exclusive State jurisdiction over the siting and design of the Proposed Project because it authorizes the construction, operation, and maintenance of investor-owned public utility facilities. Pursuant to GO 131-D section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters." Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the counties' and cities' regulations are not applicable as the counties and cities do not have jurisdiction over the Proposed Project. Accordingly, the following discussion of local land use laws, regulations, and policies is provided for informational purposes only.

Kern County General Plan

The Kern County General Plan Land Use Open Space and Conservation Element guides the long-term conservation of natural resources and preservation of available open space areas. The Land Use, Open Space, and Conservation Element contains a number of goals and policies relevant to the analysis of agricultural and forestry resources for the Proposed Project, including the following:

The Kern County General Plan states that agriculture is vital to the future of Kern County and sets goals to protect important agricultural lands for future use and prevent the conversion of prime agricultural lands to other uses (e.g., industrial, residential). The Kern County General Plan includes three designations for agricultural land, as follows:

- 8.1 Intensive Agriculture (minimum parcel size 20 acres gross): lands devoted to the production of irrigated crops or having potential for such use

- 8.2 Resource Reserve (minimum parcel size is 20 acres gross, except to a Williamson Act Contract/Farmland Security Zone Contract, in which case the minimum parcel size shall be 80 acres gross): lands devoted to areas of mixed natural resource characteristics including rangeland, woodland, and wildlife habitat which occur in an established Kern County water district
- 8.3 Extensive Agriculture (minimum parcel size 20 acres gross, except lands subject to a Williamson Act contract/Farmland Security Zone contract, in which case the minimum parcel size shall be 80 acres gross): lands devoted to uses involving large amounts of land with relatively low value-per-acre yields, such as livestock grazing, dryland farming, and woodlands

Kern County Zoning Ordinance

The Kern County Zoning Ordinance designates Agricultural Districts as Exclusive Agriculture or Limited Agriculture Districts. The purpose of the Exclusive Agriculture District is to designate areas suitable for agricultural uses and to prevent the encroachment of incompatible uses onto agricultural lands and the premature conversion of such lands to nonagricultural uses. Uses in the Exclusive Agriculture District are limited primarily to agricultural uses and other activities compatible with agricultural uses. The purpose of the Limited Agriculture District is to designate areas suitable for a combination of estate-type residential development, agricultural uses, and other compatible uses.

Per section 19.08.090 of the Kern County Zoning Ordinance, the provisions of the ordinance do not apply to the construction, installation, operation, and/or maintenance of electrical utility lines, which would be replaced under the Proposed Project.

Los Angeles County General Plan

The Los Angeles County General Plan Land Use Element guides the long-term conservation of natural resources and preservation of available open space areas. The Land Use Element contains a number of goals and policies relevant to the analysis of agricultural and forestry resources for the Proposed Project, including the following (Los Angeles County Department of Regional Planning 2015):

- Policy LU 6.2: Encourage land uses and developments that are compatible with the natural environment and landscape.
- Policy LU 6.3: Encourage low density and low intensity development in rural areas that is compatible with rural community character, preserves open space, and conserves agricultural land.

Los Angeles County Zoning Ordinance

Title 22 of the Los Angeles County Code of Ordinances is the zoning ordinance. Los Angeles county designates agricultural districts as A-1 (Light Agriculture) and A-2 (Heavy Agriculture). The sections of Title 22 that address the zoning designations do not identify electric utility infrastructure as a prohibited use within A-1 or A-2 zoning (Los Angles County, 2022).

City of Arvin General Plan, Land Use Element
The City of Arvin Land Use Element contains the following goals and policies related to agricultural resources: (City of Arvin, 2012).

- Goal 13: Protect highly productive, prime agricultural lands from premature conversion to nonagricultural use.
- Policy LU-13.1 Encourage participation in Williamson Act contracts for agricultural lands within and adjoining the City of Arvin.
- Policy LU-13.2 Require that proposals to convert agricultural lands to non-agricultural use demonstrate a need for the conversion and create a benefit to the community.
- Goal 14: Promote wise management of agriculturally productive soils to ensure their long-term viability in the production of food and fiber.
- Policy LU-14.1 Encourage good agricultural practices to maximize the useful life of the soils.
- Policy LU-13.2 Encourage cooperation among responsible agencies to protect the prime soils from dangers such as erosion and misuse

City of Arvin Zoning Ordinance
Title 17 of the Arvin Municipal Code is the City or Arvin's land-use zoning ordinance (City of Arvin, 2022): The City of Arvin does not have any specific designations for agricultural land use.

City of Bakersfield General Plan
The City of Bakersfield General Plan does not contain any goals or policies relevant to agricultural or forestry resources.

City of Bakersfield Zoning Ordinance
Title 17 of the Bakersfield Municipal Code is the City of Bakersfield's land use zoning ordinance. The City of Bakersfield designates agricultural land use as A (Agriculture Zone). Chapter 17.32 of Title 17 that addresses permitted uses within lands zoned for agricultural uses does not list electric utility infrastructure as a prohibited use (City of Bakersfield, 2022).

3.2.3 Applicant Proposed Measures

SCE has proposed measures to reduce environmental impacts. The significance of the impact is first considered prior to application of applicant proposed measures (APMs) and a significance determination is made. The implementation of the APMs is then considered as part of the Proposed Project when determining whether impacts would be significant and thus would require mitigation. The APM would be incorporated as part of any CPUC project approval, and SCE would be required to adhere to the APM as well as any identified mitigation measures. The APM is included in the MMRP for the Proposed Project, and the implementation of the measure would be monitored and documented in the same manner as mitigation measures. There are no APMs that would apply to potential impacts on Agriculture and Forestry Resources for the Proposed Project.

3.2.4 Environmental Analysis

Summary of Impacts

Table 3.2-1 presents a summary of the CEQA significance criteria and impacts on agriculture and forestry resources that would occur during construction, operation, and maintenance of the Proposed Project.

Table 3.2-1 Summary of Proposed Project Impacts to Agriculture and Forestry Resources

Would the proposed project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	☐	☒	☒	☐
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☒	☐
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220[g]), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104[g])?	☐	☐	☒	☐
d) Result in the loss of forest land or conversion of forest land to non-forest use?	☐	☐	☒	☐
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	☐	☒	☐	☐

Impact Discussion

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use

Construction

Construction of the Proposed Project would involve temporary disturbance in staging areas, helicopter landing zones, temporary work pads, temporary guard structure locations, conductor pulling and tensioning locations, and splice sites. Temporary construction disturbance areas are located on FMMP-designated Prime Farmland, Farmland of Statewide Importance, and Unique Farmland. The temporary construction disturbance would generally just involve vehicles traveling over the land surface in the case of helicopter landing zones, conductor pulling and tensioning, splice sites, guard structures and overland travel zones, which would not permanently convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use. Any land that may be disturbed in a staging area would be returned to preconstruction conditions following construction completion. Temporary work pads could result in permanent impacts on areas Prime Farmland, Unique Farmland, or Farmland of Statewide Importance if the temporary work pads were not returned to pre-construction conditions. Mitigation Measure AGR-1 requires restoration of areas of temporary impact within Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to pre-project conditions. Because SCE would restore areas of temporary impact to pre-project conditions, construction would not permanently convert any Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, to nonagricultural use and the impact would be less than significant with mitigation.

Operations and Maintenance

The Proposed Project includes the replacement of existing subtransmission structures with new subtransmission structures at either a one-to-one ratio, or at a better-than one-to-one ratio, where more than one existing structure would be removed for each new subtransmission structure installed. The new subtransmission structures would be installed adjacent to the existing subtransmission structures that would be removed. The proposed monopole structures would be smaller in diameter than the existing subtransmission lattice steel tower structures. As summarized in Table 2-5 in the Project Description, the Proposed Project would result in a net reduction in total permanent disturbance due to removal of existing structures. Because the Proposed Project would result in reduced permanent impact including in areas of Farmland, the Proposed Project would not result in a net conversion of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to nonagricultural use and the resulting impact would be less than significant.

Required APMs and MMs: MM AGR-1

Mitigation Measure

Mitigation Measure AGR-1: Farmland Construction Impact Mitigation

SCE shall implement the following measures for temporarily disturbed Farmland:

- The applicant shall photo or video document the conditions of temporary work pads within Farmland (i.e, meeting the definition of Prime Farmland, Unique Farmland, or Farmland of Statewide Importance as defined by the Farmland Mapping and Monitoring Program of the California Resources Agency) prior to construction to define the existing conditions of the Farmland areas.
- The applicant shall return all temporary disturbance areas in Farmlands to pre-construction conditions after the completion of construction. The applicant shall photo or video document the post-construction condition to verify it matches pre-construction conditions.
- In areas containing crops or irrigation infrastructure used to maintain crops that must be removed to gain access to temporary work areas for construction purposes, SCE will provide compensation to farmers and/or landowners for replacement of the removed crops and/or irrigation infrastructure.
- If topsoil is removed from an area to accommodate temporary construction activities, it shall be restored to preconstruction conditions within two months of the completion of construction.

Applicable Locations: Within construction areas located in Farmland as defined by the FMMP.

Performance Standards and Timing:

Before construction: Document the pre-construction condition of temporary disturbance area within Farmlands with photos or video.

During construction: N/A

After construction: Restore all temporary disturbance areas to pre-construction conditions after the completion of construction and compensate farmers and/or landowners for replacement of the removed crops and/or irrigation infrastructure.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

Construction, Operations and Maintenance

The Proposed Project would be located on lands with active Williamson Act contracts in Kern County. The Agricultural Preserve Standard Uniform Rules (Kern County, 2013) identify the erection of electric utilities as compatible use on lands under a Williamson Act contract. In addition, as discussed in Impact a) above, the Proposed Project involves replacement of existing subtransmission structures with new structures that would result in a net reduction in permanent impacts within areas under Williamson Act contracts. The areas of the existing structures on land under Williamson Act contract would be returned to agricultural use. Because electrical utilities are a compatible use on lands with Williamson Act contracts and the Proposed Project would allow for a net increase in agricultural use, the Proposed Project would have no impact from a conflict with a Williamson Act contract.

The Proposed Project is also located on lands zoned for agricultural use in the City of Bakersfield (A zoning), Kern County (A, A-1, and AWE), and Los Angeles County (A-2). The construction, operation, and maintenance of electric utility infrastructure is not listed as prohibited use in the descriptions of these zoning classifications in their jurisdiction's respective zoning ordinances. In addition, as discussed in Impact a) above, the Proposed Project involves

replacement of existing subtransmission structures with new structures that would result in a net reduction in permanent impacts within areas with agricultural zoning. Therefore, the project would not conflict with existing zoning for agricultural use. The impact would be less than significant.

Required APMs and MMs: None required.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220[g]), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104[g])?

Construction

The Proposed Project would cross 0.35 miles of SNF in Segment 1 and approximately 0.17 miles of the LPNF in Segment 2. The SNF and LPNF are zoned as forest land. No areas zoned as timberland or timberland production are located within the Proposed Project area. While the Proposed Project would require new right-of-way to construct the Proposed Project on areas zoned as forest land. The new right-of-way would replace the existing right-of-way and would not cause rezoning of any forest land.

In 2018, SCE was issued a Master Special Use Permit (MSUP) for its existing transmission and distribution easements. The Proposed Project construction activities were considered a Class II activity under the existing USFS MSUP and SCE is seeking approval from USFS to construct portions of the Proposed Project in compliance with the MSUP conditions. Therefore, construction of the Proposed Project would not conflict with zoning for forest land and the impacts would be less than significant.

Operations and Maintenance

Operation and maintenance of the Proposed Project on areas zoned as forest service land would be conducted in compliance with the USFS MSUP in the same manner as operation and maintenance activities are conducted for the existing subtransmission line. Because the Proposed Project would comply with the MSUP, the Proposed Project would not conflict with zoning for forest land. Therefore, the impact from conflict with zoning for forest land would be less than significant.

Required APMs and MMs: None required.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

Construction

The Proposed Project crosses approximately 0.35 miles of SNF in Segment 1 and approximately 0.17 miles of the LPNF in Segment 2. Both SNF and LPNF meet the definition of forest land. In addition, areas with greater than 10 percent native tree cover that meet the definition of forest land occur along Segments 2, 3, and 4 of the Proposed Project. Construction of the Proposed Project would require removal of approximately 1,689 trees located within work areas and pruning of approximately 116 trees that overhang the work areas. The trees that would be

removed during construction are dispersed along the Proposed Project alignment. Tree removal would be limited to those trees within or overhanging a work area. The tree removal would not result in loss of forest land or conversion of forest land to non-forest use because of the limited area of trees removed at each work area and because the trees are not currently used for commercial forest production. The impact would therefore be less than significant.

Operations and Maintenance
The Proposed Project would use a 10-foot vegetation free clearance zone around each structure and trimming of vegetation to comply with PRC Section 4292. The firebreak clearances required by PRC Section 4292 are applicable within an imaginary cylindrical space surrounding each pole or tower on which a switch, fuse, transformer or lightning arrester is attached and surrounding each dead end or corner pole. The vegetation clearance zone for the Proposed Project will replace the areas maintained for the existing subtransmission lines. In addition, because the proposed structures will be smaller in diameter than the existing lattice steel towers, the Proposed Project would result in a smaller permanent disturbance associated with tree trimming to maintain clearance zones and would comply with PRC Section 4292. Therefore, the impact on forest land from maintenance of the Proposed Project would be less than significant.

Required APMs and MMs: None required

a) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?

Construction
Construction of the Proposed Project may temporarily impact existing irrigation infrastructure used to maintain crops located near and/or along the subtransmission line and therefore, may result in converting farmland to non-agricultural use. In order to reduce temporary impacts to the existing irrigation infrastructure, mitigation measure AGR-1 would be implemented, and owners would be compensated for the temporary loss of irrigation infrastructure and crops. No permanent impacts to agricultural operations would occur as a result of the Proposed Project and therefore, the impact would be less than significant.

Operations and Maintenance
Operation and maintenance of the Proposed Project would not impact any existing agricultural operations because the proposed monopole structures that will be used to replace the existing lattice steel tower structures would be smaller in diameter and would result in a net reduction in total permanent disturbance due to removal of existing structures. Because the Proposed Project would result in a reduced permanent impact, impacts from operations and maintenance would be less than significant.

Required APMs and MMs: MM AGR-1

3.2.5 References

Arcadis. (2021). *Sensitive Species and Habitat Report: TLRR Gorman - Kern River 66 kV Project.* Arcadis.

Arcadis U.S., Inc. (2019). *TLRR Sensitive Species and Habitat Report.*

Arcadis U.S., Inc. (2021). *TLRR Sensitive Species and Habitat Report.*

CALFIRE. (2015, May 26). FRAP Vegetation. *FVEG15_1*. CALFIRE. Retrieved from https://map.dfg.ca.gov/metadata/ds1327.html.

CALFIRE. (2022). CAL FIRE Timber Harvesting Plans. Retrieved from https://services1.arcgis.com/jUJYIo9tSA7EHvfZ/arcgis/rest/services/CAL_FIRE_Timber_Harvesting_Plans_All_TA83/FeatureServer.

California Deparatment of Conservation. (2022, June). Farmland Mapping an Monitoring Program. Retrieved from https://www.conservation.ca.gov/dlrp/fmmp/.

California Department of Conservation. (2012, June). Williamson Act Program. Retrieved from https://www.conservation.ca.gov/dlrp/lca.

California Department of Conservation. (2021, September 29). California Important Farmland - Most Recent. Retrieved from https://gis.conservation.ca.gov/server/rest/services/DLRP/CaliforniaImportantFarmland_mostrecent/FeatureServer.

California Department of Conservation. (2022, April 22). Williamson Act Program. Retrieved from https://www.conservation.ca.gov/dlrp/lca.

California Department of Conservation. (2022b, June). Important Farmland. Retrieved from https://gis.data.ca.gov/datasets/cadoc::california-important-farmland-most-recent/about.

Census of Agriculture. (2017). 2017 Census of Agriculture Kern County Profile.

City of Arvin. (2012, August 21). General Plan. Retrieved from https://www.arvin.org/DocumentCenter/View/180/February-2019-General-Plan-Part-1-of-3-PDF.

City of Arvin. (2022, April 22). City Ordinances. Retrieved from https://arvin.org/217/Ordinances.

City of Bakersfield. (2022, April 22). Bakersfield Municipal Code. Retrieved from https://bakersfield.municipal.codes/Code.

City of Bakersfield Planning Department. (2022, 6 2). Zoning. Retrieved 9 22, 2023, from https://gis.bakersfieldcity.us/webmaps/rest/services/General/LandUse/FeatureServer/7.

County of Kern GIS. (2023, 10 12). Kern County Williamson Act-Active. Retrieved 10 17, 2023, from https://geodat-kernco.opendata.arcgis.com/datasets/8c3d1e17fcf84950ab5b9f05ada2e9aa_0/about.

Department of Conservation. (2010, July 29). Williamson Act Lands. Retrieved from https://gis.conservation.ca.gov/portal/home/item.html?id=c608c0e32810424f8f4f9d39570cc45b.

DOC. (2015). *California Farmland Conversion Report 2015.*

DOC. (2017). *Important Farmland Categories*. Retrieved August 1, 2016, from https://www.conservation.ca.gov/dlrp/fmmp/Documents/Farmland_of_Local_Importance_2016.pdf.

Esri. (2019, 12 21). Data and Maps for ArcGIS®. *(2019 - World, Europe, and United States)*. Esri.

Holland, R. F. (1986). *Preliminary Descriptions of the Terrestrial Natural Comminities of California. Nongame-Heritage Program. The Resource Agency* (Vol. III). Sacremento, California: California Deparatment of Fish and Wildlife.

Kern County. (2009, September 22). Kern County: General Plan. Land Use, Open Space, and Conservation Element. Retrieved from https://psbweb.co.kern.ca.us/planning/pdfs/kcgp/KCGPChp1LandUse.pdf

Kern County. (2013, January). Agricultural Preserve Standard Uniform Rules. Retrieved September 2023.

Kern County GIS. (2018, April 10). Bike Transportation. Kern County GIS. Retrieved from https://services5.arcgis.com/Y8jwjGUWbRjuqpG5/arcgis/rest/services/Bike_Transportation/FeatureServer.

Kern County Planning and Natural Resources Department. (2023, 7 6). Kern County Zoning 2023. ArcGIS Online. Retrieved 9 22, 2023, from https://www.arcgis.com/home/item.html?id=645d7a798b62455bb00290de973a8560.

Kern Transit. (2022). Routes and Schedules. Retrieved June 7, 2022, from https://kerntransit.org/.

Los Angeles County Department of Regional Planning. (2023, 5 18). Zoning (L.A. County Unincorporated). ArcGIS Online. Retrieved 9 22, 2023, from https://arcgis.gis.lacounty.gov/arcgis/rest/services/DRP/Open_Data/MapServer/3.

Los Angles County. (2015, October 6). General Plan. Retrieved from https://planning.lacounty.gov/long-range-planning/general-plan/.

Los Angles County. (2022, April 22). Los Angles County Zoning Ordinance. Retrieved from https://planning.lacounty.gov/luz.

Sawyer, J. O., Keeler-Wolf, T., & Evens, J. (2009). *Manual of California Vegetation.* (Vol. Second Edition). Sacremento, California: California Native Plant Society.

U.S. Forest Service. (2020, September). Special Use Permit. Retrieved from https://www.fs.usda.gov/specialuses/documents/FS-2700-4%20092020Final-RE.pdf.

USDA. (2022, May 19). Soil Data Access (SDA) Prime and other Important Farmlands. Retrieved from https://efotg.sc.egov.usda.gov/references/public/LA/Prime_and_other_Important_Farmland.html.

USDA NRCS. (1981, April 21). Farmland Protection Policy Act. Retrieved from https://www.nrcs.usda.gov/wps/portal/nrcs/main/national/landuse/fppa/.

3.3 Air Quality Resources

This section presents the environmental setting and analysis of impacts on air quality resulting from the Proposed Project. This section includes the existing air quality conditions in the Proposed Project region, applicable regulations, environmental impacts, and mitigation measures to reduce or avoid significant effects. Appendix C presents emission calculations and assumptions spreadsheets supporting the air quality analysis in this section.

3.3.1 Environmental Setting

Air Basin

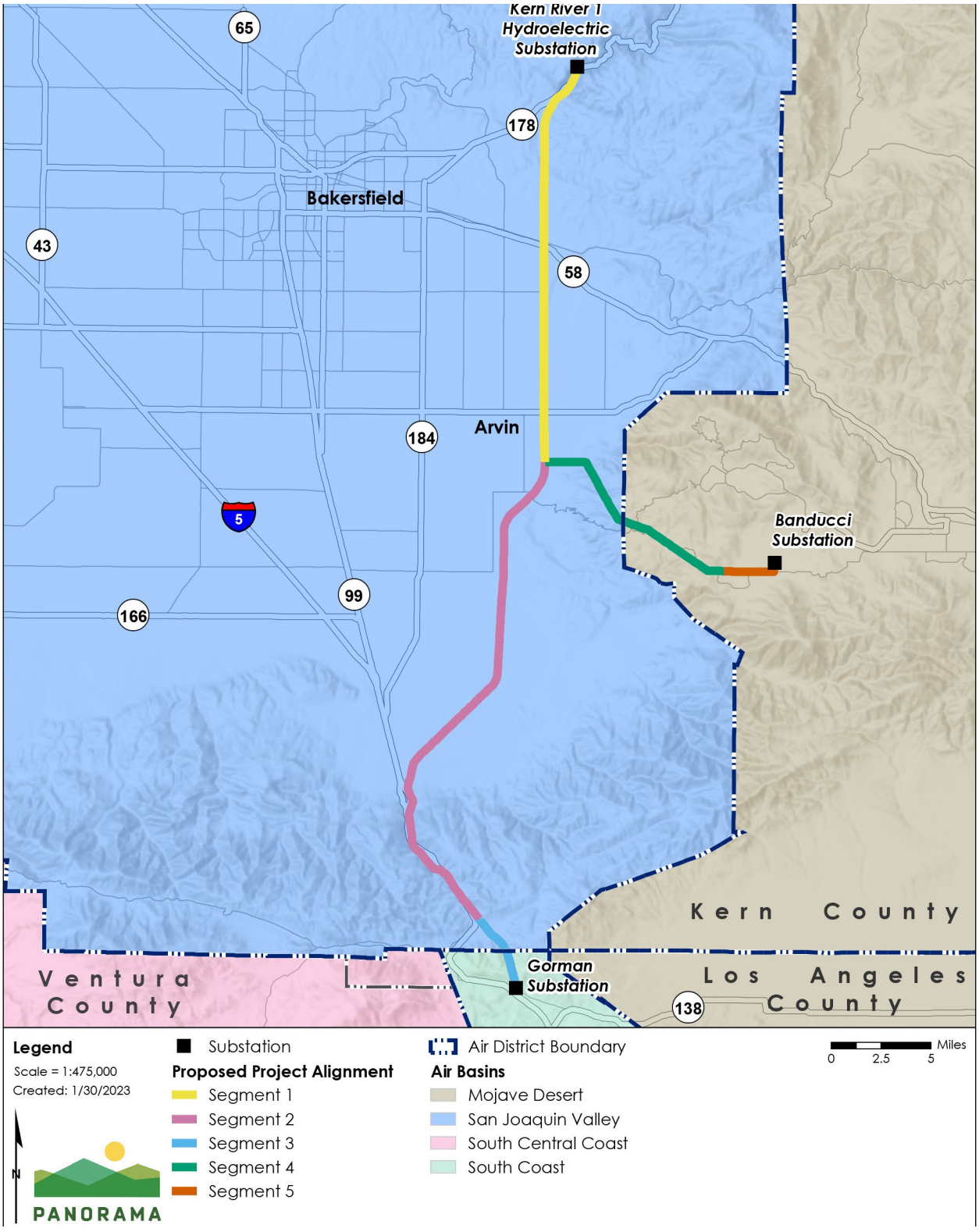
The Proposed Project area is located within three air basins: San Joaquin Valley Air Basin (SJVAB), Mojave Desert Air Basin (MDAB), and South Coast Air Basin (SCAB), which are under the jurisdictions of the San Joaquin Valley Air Pollution Control District (SJVAPCD), Eastern Kern Air Pollution Control District (EKAPCD), and South Coast Air Quality Management District (SCAQMD), respectively. The portion of the Proposed Project within each air basin and air district's jurisdiction by segment is summarized in Table 3.3-1 and shown in Figure 3.3-1.

Table 3.3-1 Air Basin and Jurisdiction by Proposed Project Segments

Project segment and length	Air basin	Air district
Segment 1 (39 miles)	SJVAB	SJVAPCD
Segment 2 (27 miles)	SJVAB	SJVAPCD
Segment 3 (2 miles)	SJVAB	SJVAPCD
Segment 3 (2 miles)	SCAB	SCAQMD
Segment 4 (6 miles)	SJVAB	SJVAPCD
Segment 4 (6 miles)	MDAB	EKAPCD
Segment 5 (3 miles)	MDAB	EKAPCD

Source: (CARB 2023)

Figure 3.3-1 Air Basins and Air Districts



Source: (CARB) 2023Climate and Meteorology

SJVAB

The SJVAB has unique geographical and meteorological challenges that present significant challenges for air quality. The San Joaquin Valley is an inter-mountain valley comprising nearly 25,000 square miles. The surrounding mountains trap pollution and block air flow, and the mild climate keeps pollutant-scouring winds at bay most the year.

The SJVAB has an "inland Mediterranean" climate that averages over 260 sunny days per year, primarily because semi-permanent high-pressure systems establish themselves over the SJVAB and deflect low-pressure systems that might otherwise bring rain and winds. The average temperature ranges from 45 to 95 degrees Fahrenheit. Precipitation in the SJVAB is confined primarily to the winter months although some precipitation usually occurs in late summer and fall. Average annual rainfall for the valley floor of the SJVAB is 9.25 inches but varies from over 20 inches in the north part of the valley to less than 5 inches in the south.

During the winter, high-pressure systems can cause the atmosphere to become stagnant for longer periods of time as winds are calm and air flow is minimal. These stagnant atmospheric conditions can also cause severe nighttime temperature inversions. Normally, temperature decreases with increasing altitude, but during temperature inversions, the normal temperature gradient is reversed, with temperatures increasing with altitude, causing warmer air to be above cooler air. Temperature inversions are common in the valley throughout the year. Since the inversion is often lower than the height of the surrounding mountain ranges, the valley effectively becomes a bowl capped with a lid that traps emissions near the surface (SJVAPCD 2015).

MDAB

The MDAB encompasses desert portions of Kern, Los Angeles, Riverside, and San Bernardino counties. Geographically, it is an assemblage of mountain ranges interspersed with long broad valleys that often contain dry lakes. The region is characterized by hot, dry summers and cool winters with little precipitation. This region is largely downwind of the Los Angeles basins and the San Joaquin Valley so that various air pollutants are transported through the MDAB through prevailing winds (MDAQMD 2023).

SCAB

The SCAB is an approximately 10,000-square-mile area and includes all of Orange County and the urban parts of Los Angeles, Riverside, and San Bernardino counties. It is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto mountains to the north and east. The topography and climate of Southern California create conditions that are highly favorable for forming air pollution in the SCAB. Warm air mass frequently descends over a cool and moist marine layer from the interaction between the ocean's surface and the lowest layer of the atmosphere. This warm upper layer forms a cap over the cooler surface layer, which traps the pollutants near the ground. Light winds in the basin also further limit ventilation (SCAQMD 2022).

Air Quality

Air Pollutants

The U.S. Environmental Protection Agency (EPA) has identified the following criteria air pollutants that are a threat to public health and welfare. These pollutants are called "criteria" air pollutants because standards have been established for each of them to meet specific public health and welfare objectives.

Ozone (O_3)

Ozone (O_3) is a respiratory irritant and an oxidant that increases susceptibility to respiratory infections and that can cause substantial damage to vegetation and other materials. Ozone is not emitted directly into the atmosphere but is a secondary air pollutant produced in the atmosphere through a complex series of photochemical reactions involving volatile organic compounds (VOC) and nitrogen oxides (NO_x). VOC and NO_x are known as *precursor compounds* for ozone. Substantial ozone production generally requires ozone precursors to be present in a stable atmosphere with strong sunlight for approximately three hours. Ozone is a regional air pollutant because it is not emitted directly by sources but is formed downwind of sources of VOC and NO_x under the influence of wind and sunlight. Ozone concentrations tend to be higher in the late spring, summer, and fall, when long sunny days combine with regional air subsidence inversions to create conditions conducive to the formation and accumulation of secondary photochemical compounds.

Sulfur Dioxide (SO_2)

SO_2 is a colorless, acidic gas with a strong odor. SO_2 is a combustion product of sulfur or sulfur-containing fuels such as coal and diesel. SO_2 is also a precursor to the formation of atmospheric sulfate and particulate matter and contributes to the potential formation of atmospheric sulfuric acid that could precipitate downwind as acid rain. SO_2 can irritate lung tissue and increase the risk of acute and chronic respiratory disease.

Carbon Monoxide (CO)

CO is a nonreactive pollutant that is a product of incomplete combustion of organic material and is mostly associated with motor vehicle traffic and, in wintertime, with wood–burning stoves and fireplaces. High CO concentrations develop primarily during winter, when periods of light wind combine with the formation of ground–level temperature inversions (typically from the evening through early morning). These conditions result in reduced dispersion of vehicle emissions. Motor vehicles also exhibit increased CO emission rates at low air temperatures.

When inhaled at high concentrations, CO combines with hemoglobin in the blood and reduces its oxygen-carrying capacity, resulting in reduced levels of oxygen reaching the brain, heart, and other body tissues. This condition is especially critical for people with cardiovascular diseases, chronic lung disease, or anemia. CO measurements and modeling were important in the early 1980s, when CO levels were regularly exceeded throughout California, but in more recent years, CO measurements and modeling are not a priority in most California air districts

due to the retirement of older vehicles, fewer emissions from new vehicles, and improvements to fuels.

Nitrogen Dioxide

When combustion temperatures are extremely high, as in aircraft, truck, and automobile engines, atmospheric nitrogen combines with oxygen to form various oxides of nitrogen. Nitric oxide (NO) and nitrogen dioxide (NO_2), generally referred to as NO_x, are the most significant air pollutants. Nitric oxide is a colorless and odorless gas that is relatively harmless to humans, quickly converts to NO_2 and can be measured. Nitrogen dioxide has been found to be a lung irritant capable of producing pulmonary edema. Inhaling NO_2 can lead to respiratory illnesses such as bronchitis and pneumonia.

NO_2 is a reddish-brown gas that is a byproduct of combustion processes. Automobiles and industrial operations are the main sources of NO_2. NO_2 may be visible as a coloring component of a brown cloud on high pollution days, especially in conjunction with high ozone levels.

Lead

Lead has a range of adverse neurotoxin health effects and was released into the atmosphere via leaded gasoline products. The phase-out of leaded gasoline in California has resulted in dramatically decreased levels of atmospheric lead. The highest concentrations of lead in air are generally found near lead smelters and general aviation airports, where piston aircraft use leaded fuel. Other stationary sources that generate lead emissions include waste incinerators, utilities, and lead-acid battery manufacturers.

Particulate Matter (PM_{10} and $PM_{2.5}$)

PM_{10} and $PM_{2.5}$ consist of airborne particles that measure 10 micrometers or less in diameter and 2.5 micrometers or less in diameter, respectively. PM_{10} (coarse particulate) and $PM_{2.5}$ (fine particulate) represent fractions of particulate matter that can be inhaled into the air passages and the lungs, causing adverse health effects. Particulate matter in the atmosphere results from many kinds of dust and fume producing industrial and agricultural operations, fuel combustion, wood burning stoves and fireplaces, and atmospheric photochemical reactions. Some sources of particulate matter, such as demolition, construction activities, and mining are more local in nature while others, such as vehicular traffic and wood burning stoves and fireplaces, have a more regional effect.

Very small particles of certain substances (e.g., sulfates, nitrates) can cause lung damage directly or can contain adsorbed gases (e.g., chlorides, ammonium) that may be injurious to health. Particulates can also damage materials and reduce visibility. Dust comprising large particles (diameter greater than 10 micrometers) settles out rapidly and is easily filtered by human breathing passages. This dust is of concern more as a soiling nuisance than as a health hazard. The remaining fractions, PM_{10} and $PM_{2.5}$, are a health concern particularly at levels above the federal and California ambient air quality standards. $PM_{2.5}$ (including diesel exhaust particles) is thought to have more adverse effects on health because these particles are so small and thus penetrate to the deepest parts of the lungs.

Acute and chronic health effects associated with high particulate levels include the aggravation of chronic respiratory diseases, heart and lung disease, coughing, bronchitis, and respiratory illnesses in children. Mortality studies since the 1990s have shown a statistically significant direct association between mortality (premature deaths) and daily concentrations of particulate matter in the air. Despite important gaps in scientific knowledge and continued reasons for some skepticism, a comprehensive evaluation of the research findings provides persuasive evidence that exposure to fine particulate air pollution has adverse effects on cardiopulmonary health.

Toxic Air Contaminants

Toxic air contaminants (TACs) are airborne substances that are capable of causing short-term (acute) and/or long-term (chronic or carcinogenic, i.e., cancer-causing) adverse human health effects (i.e., injury or illness) even when present in relatively low concentrations. Potential human health effects of TACs include birth defects, neurological damage, cancer, and death. TACs include both organic and inorganic chemical substances.

TACs may be emitted from a variety of common sources including gasoline stations, automobiles, dry cleaners, industrial operations, and painting operations. The current California list of TACs includes approximately 200 compounds, including *diesel particulate matter* (DPM) emissions from diesel-fueled engines, which was identified as a TAC by the California Air Resources Board (CARB) in 1998 (CARB 1993; 1998; CARB and Office of Environmental Health Hazard Assessment [OEHHA] 1998).

Federal laws regulate *hazardous air pollutants* (HAPs), which refers to similar types of compounds referred to as TACs under California law, and the two terms encompass essentially the same compounds. Under the 1990 Federal Clean Air Act Amendments, 189 substances were identified as HAPs; the HAPs list has been modified since 1990 through rulemaking, including both removal and additions, to now include 188 substances (EPA 2023).

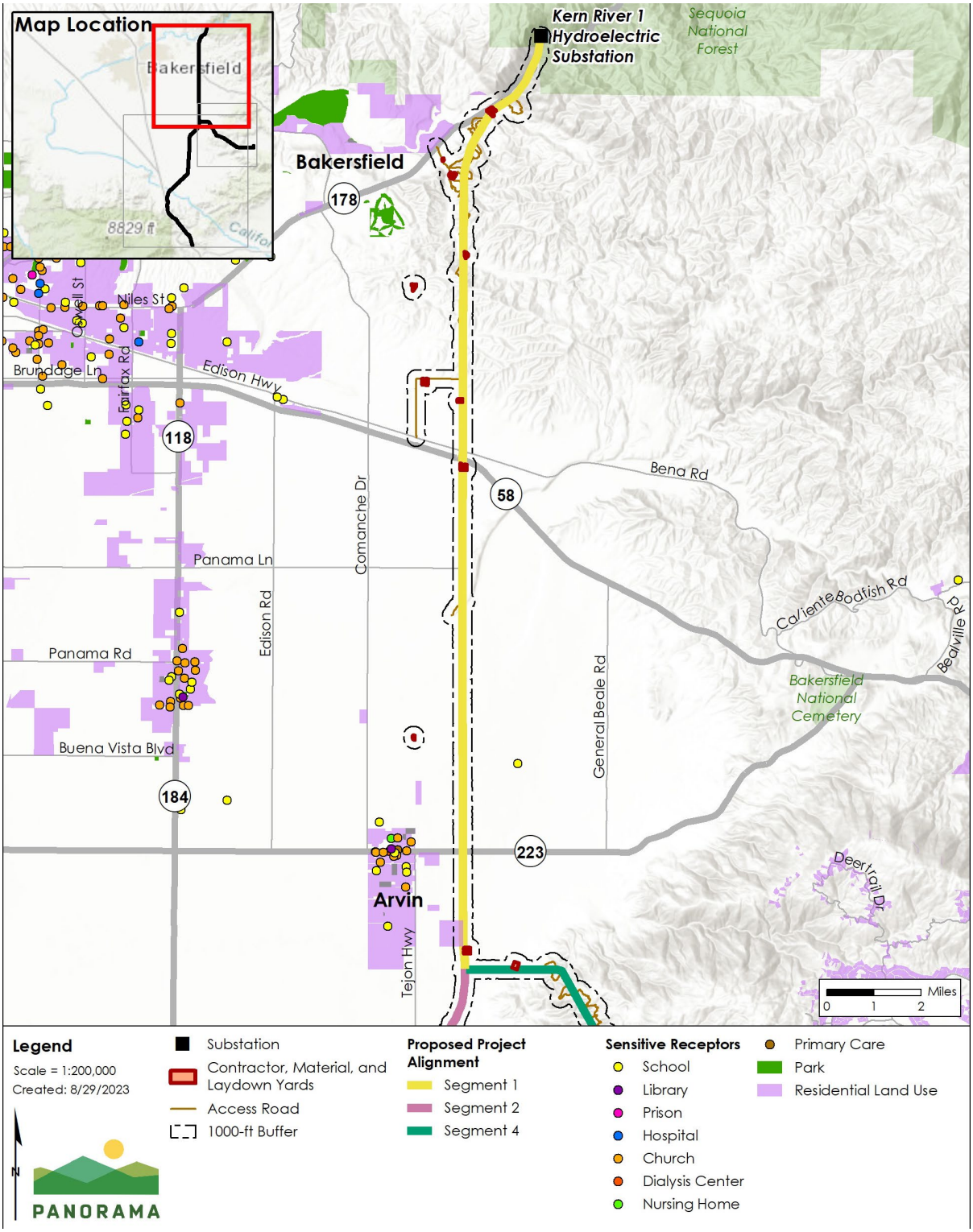
Sensitive Receptors

California Health and Safety Code section 42705.5(a)(5) states that "[s]ensitive receptor locations may include hospitals, schools, and day care centers, and such other locations as the air district board or CARB may determine." This document utilizes the SJVAPCD definition of sensitive receptor as follows:

> Sensitive Receptors: People that have an increased sensitivity to air pollution or environmental contaminants. Sensitive receptor locations include schools, parks and playgrounds, day care centers, nursing homes, hospitals, and residential dwelling unit(s). The location of sensitive receptors is needed to assess toxic impacts on public health (SJVAPCD 2015).

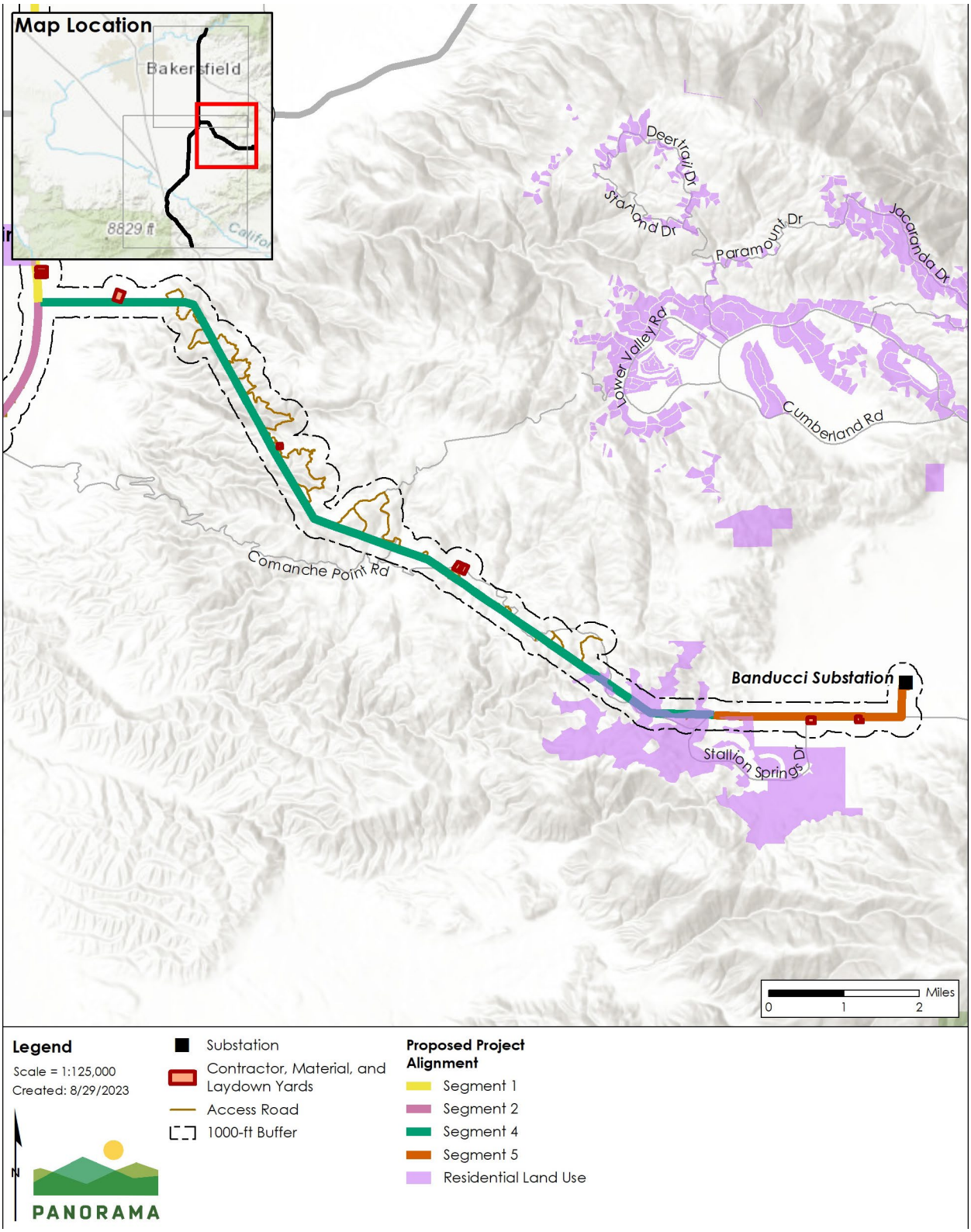
Sensitive receptors in the vicinity of the Proposed Project include residences and El Tejon School. There are no hospitals, day care centers, or retirement or nursing home facilities in the vicinity of the Proposed Project. Sensitive receptors are shown in Figure 3.3-2, Figure 3.3-3, and Figure 3.3-4. A total of seven sensitive receptors were analyzed.

Figure 3.3-2 Sensitive Receptors in the Proposed Project Vicinity



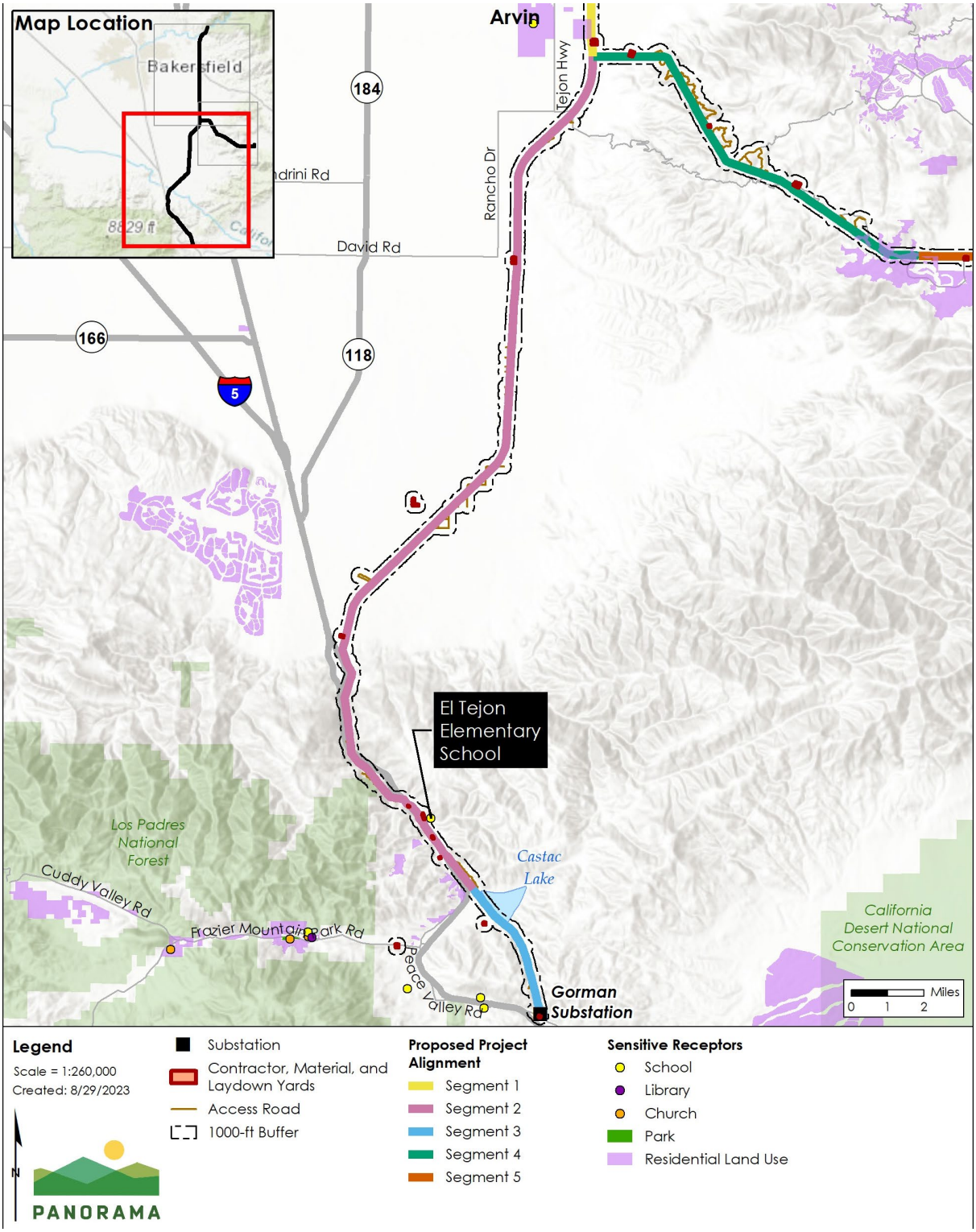
Source: (City of Arvin 2018; County of Los Angeles 2016; ESRI® and USGS 2010; Kern County GIS 2014; 2018; Kern County Planning and Natural Resources 2019; Oak Ridge National Laboratory [ORNL] and National Geospatial-Intelligence Agency [NGA] Homeland Security Infrastructure Program [HSIP] Team 2020)

Figure 3.3-3 Sensitive Receptors in the Proposed Project Vicinity



Source: (City of Arvin 2018; County of Los Angeles 2016; ESRI® and USGS 2010; Kern County GIS 2014; 2018; Kern County Planning and Natural Resources 2019; ORNL and NGA HSIP Team 2020)

Figure 3.3-4 Sensitive Receptors in the Proposed Project Vicinity



Source: (City of Arvin 2018; County of Los Angeles 2016; ESRI® and USGS 2010; Kern County GIS 2014; 2018; Kern County Planning and Natural Resources 2019; ORNL and NGA HSIP Team 2020)

Odors

Land use in the Proposed Project area is primarily open space and agriculture, with scattered rural residential and suburbanized areas. There are no stationary odor-producing land uses (e.g., landfills, refineries, confined animal feeding operations) in the Proposed Project area.

Air Quality Data Summary (2020–2022)

CARB operates an extensive network of air monitoring stations within California. The monitoring station network provides air quality monitoring data, including real-time meteorological data and ambient pollutant levels, as well as historical data. Several air monitoring stations are located near the project site measuring ozone, CO, NO_2, PM_{10}, and/or $PM_{2.5}$ (EPA Office of Air and Radiation [OAR] 2015). Table 3.3-2, below, summarizes the most recent three years of data (2020–2022) from the nearby air monitoring stations, reported in *parts per million* (ppm) or *micrograms per cubic meter* ($\mu g/m^3$). Notably, ambient monitoring stations do not include data for every pollutant. For each pollutant, the ambient monitoring station most representative of the Proposed Project site is summarized.

Table 3.3-2 contains ozone measurements from 19405 Buena Vista Boulevard in Arvin (ID 06-029-5002). The ozone standards were exceeded in 2020 through 2022. PM_{10} measurements from 3311 Manor Street in Oildale (ID 06-029-0232) are summarized. The PM_{10} standards were exceeded in 2020 through 2022. $PM_{2.5}$ measurements from 410 East Planz Road (near the airport) in Bakersfield (ID 06-029-0016) are summarized. The $PM_{2.5}$ standards were exceeded in 2020 through 2022. The PM_{10} and $PM_{2.5}$ measurements may be the result of wildfires. The exceedance of the ambient standards for ozone, PM_{10}, and $PM_{2.5}$ reflect the nonattainment status for the region and Proposed Project site. CO and NO_2 measurements from 2000 South Union Avenue in Bakersfield (ID 06-029-2012) are summarized. CO and NO_2 standards were not exceeded during 2020, 2021, and 2022. There are no SO_2 or lead ambient monitoring stations near the Proposed Project site.

Table 3.3-2 Air Quality Data Summary (2020–2022)

Pollutant/averaging period	Standard (state/federal)	Monitoring data by year 2020	2021	2022
Ozone				
Highest 1-hour (ppm)	0.090/NA	**0.133**	**0.106**	**0.110**
Highest 8-hour (ppm)	0.070/0.070	**0.104**	**0.095**	**0.091**
Particulate matter (PM_{10})				
Highest 24-hour ($\mu g/m^3$)	50/150	**277**	**421**	**148**
Annual average ($\mu g/m^3$)	20/NA	**54.0**	**49.0**	**44.7**

Pollutant/averaging period	Standard (state/federal)	Monitoring data by year 2020	2021	2022
Particulate matter ($PM_{2.5}$)				
Highest 24-hour ($\mu g/m^3$)	-/35	**159**	**70.5**	**55.6**
Annual average ($\mu g/m^3$)	12/12	**21.1**	**20.5**	**16.3**
Carbon monoxide (CO)				
Highest 1-hour (ppm)	20/35	1.75	2.89	1.59
Highest 8-hour (ppm)	9/9	1.60	1.30	0.90
Nitrogen dioxide (NO_2)				
Highest 1-hour(ppm)	0.18/0.10	0.066	0.068	0.059
Annual average (ppm)	0.030/0.053	0.013	0.012	0.013

Notes:

[a] Bold values represent exceedance of the ambient air quality standards.

[b] bµg/m3: micrograms (one-millionth of a gram) per cubic meter

[c] ppm: parts per million

Source: (EPA and OAR 2015)

Air Quality Standard Attainment Status

The EPA compares ambient air criteria pollutant measurements with National Ambient Air Quality Standards (NAAQS) to assess the status of air quality of regions within the states. Similarly, the CARB compares air pollutant measurements in California to the California Ambient Air Quality Standards (CAAQS). Based on these comparisons, regions are designated as one of the following categories:

- **Attainment:** A region is designated as attainment if air quality monitoring data demonstrates ambient concentrations of a specific pollutant are less than or equal to NAAQS or CAAQS. In addition, areas that have been re-designated from nonattainment to attainment are classified as "maintenance areas" for a 10-year period to ensure that the air quality improvements are sustained.
- **Nonattainment:** If the air quality monitoring data demonstrates that the NAAQS or CAAQS are exceeded for a criteria pollutant, then the region is designated as nonattainment for that pollutant.
- **Unclassifiable:** An area is designated as unclassifiable if the ambient air quality monitoring data are incomplete and do not support a designation of attainment or nonattainment for a criteria pollutant.
- The standards and attainment status of each CAAQS and NAAQS pollutant are shown for the SJVAB, EKAB, and SCAB Table 3.3-3.

Portions of the Proposed Project area within SJVAB are classified as nonattainment for ozone, PM_{10} and $PM_{2.5}$. Portions of the Proposed Project area within EKAB are classified as nonattainment for ozone and PM_{10}. Portions of the Proposed Project area within SCAB are classified as nonattainment for ozone, PM_{10}, $PM_{2.5}$, and lead. The Proposed Project area is within either an unclassified or attainment area for all other state and federally regulated air pollutants. Again, these nonattainment statuses are synonymous with the ambient monitoring data near the Proposed Project site.

Table 3.3-3 State and National Ambient Air Quality Standards and Attainment Status

Pollutant	State standard			National standard		
	SJAPCD	**EKAPCD**	**SCAQMD**	**SJAPCD**	**EKAPCD**	**SCAQMD**
Ozone (O_3)	**Nonattainment**	**Nonattainment**	**Nonattainment**	**Nonattainment**	**Nonattainment**	**Nonattainment**
Particulate matter (PM_{10})	**Nonattainment**	**Nonattainment**	**Nonattainment**	Attainment	**Nonattainment**	Attainment
Particulate matter ($PM_{2.5}$)	**Nonattainment**	Attainment	**Nonattainment**	**Nonattainment**	Unclassified/ attainment	**Nonattainment**
Carbon monoxide (CO)	Attainment	Unclassified	Attainment	Unclassified/ attainment	Unclassified/ attainment	Unclassified/ attainment
Nitrogen dioxide (NO_2)	Attainment	Attainment	Attainment	Unclassified/ attainment	Unclassified/ attainment	Unclassified/ attainment
Sulfur dioxide (SO_2)	Attainment	Attainment	Attainment	Unclassified/ attainment	Unclassified/ attainment	Unclassified/ attainment
Lead (Pb)	Attainment	Attainment	Attainment	Unclassified/ attainment	Unclassified/ attainment	**Nonattainment**

Source: (CARB 2022)

3.3.2 Applicable Regulations, Policies and Standards

Federal Regulations, Policies and Standards

The 1970 Federal Clean Air Act (CAA) established ambient air quality standards (AAQS) for six criteria pollutants: ozone, particle matter (PM_{10}, $PM_{2.5}$), CO, NO_2, SO_2, and lead. The six criteria air pollutants are known to have adverse impacts on human health and the environment. To protect human health and the environment, the EPA has set primary and secondary maximum ambient thresholds for criteria pollutants.

The primary standards were set to protect human health—particularly for children and the elderly as well as for individuals who suffer from chronic lung conditions (e.g., asthma,

emphysema). The secondary standards were set to protect the natural environment and prevent further deterioration of animals, crops, vegetation, and buildings. The NAAQS is comprised of the combined primary and secondary standards set by the EPA.

The 1977 CAA Amendments required each state to develop and maintain a State Implementation Plan (SIP) for each criteria pollutant that exceeds the NAAQS for that pollutant. The SIP serves as a tool to reduce pollutants that are known to cause impacts if they exceed ambient thresholds and to achieve compliance with the NAAQS. Table 3.3-2 lists the state and national standards for each pollutant regulated by the EPA.

State Regulations, Policies and Standards

The California Clean Air Act requires air districts to develop and implement strategies to attain CAAQS. The CAAQS are intended to protect public health, safety, and welfare. CARB is responsible for setting CAAQS under California Health and Safety Code section 39606. Regional air quality management districts are mandated to prepare an air quality plan specifying how federal and state standards would be met.

CARB enforces the CAAQS and works with the State's Office of Environmental Health Hazard Assessment in identifying TACs and enforcing rules related to TACs, including the Air Toxic Hot Spots Information and Assessment Act of 1987 (California Health and Safety Code §§ 44300 et seq.). Enacted to identify TAC hot spots where emissions from specific sources may expose individuals to an elevated risk of adverse health effects, this act requires that businesses or other establishments identified as significant sources of toxic emissions provide the affected population with information about health risks posed by the emissions.

CARB also regulates mobile emission sources in California (e.g., construction equipment, trucks, automobiles) and oversees the air districts. Relevant programs related to the oversight of mobile source emissions include the Off-Road and On-Road Mobile Sources Emission Reduction Programs, the Portable Equipment Registration Program (PERP), and the Airborne Toxic Control Measure for DPM from Portable Engines. The Mobile Sources Emission Reduction programs are aimed at reductions of PM_{10}, CO, NO_x, and VOCs. CARB has also adopted specific control measures for the reduction of DPM from off-road, in-use diesel vehicles (rated 25 horsepower and higher) such as backhoes, bulldozers, and earthmovers used in construction projects. Additional DPM control measures are also in place for heavy-duty, on-road diesel trucks operated by public utilities and municipalities. The PERP and Airborne Toxic Control Measure for DPM from Portable Engines provide for statewide registration and control of DPM from portable engines rated 50 horsepower and higher.

Local Regulations, Policies and Standards

The CPUC has sole and exclusive State jurisdiction over the siting and design of the Proposed Project because it authorizes the construction, operation, and maintenance of investor-owned public utility facilities. Pursuant to GO 131-D section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction.

However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters." Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the counties' and cities' regulations are not applicable as the counties and cities do not have jurisdiction over the Proposed Project. Accordingly, the following discussion of local land use laws, regulations, and policies is provided for informational purposes only.

County and regional air quality management districts and air pollution control districts are responsible primarily for regulating stationary sources at industrial and commercial facilities within their geographic areas. These districts are also responsible for preparing the air quality plans that are required under the federal CAA and the California Clean Air Act.

South Coast Air Quality Management District, Eastern Kern Air Pollution Control District, and San Joaquin Valley Air Pollution Control District have jurisdiction over air quality programs in the Proposed Project area. They regulate most air pollution sources in the Proposed Project area, except for motor vehicles, marine vessels, aircraft, agricultural equipment, and other sources regulated by CARB and EPA.

South Coast Air Quality Management District
In addition to supporting CARB and EPA air quality programs, the SCAQMD also develops plans and implements control measures for regulated pollutants in the South Coast Air Basin. The SCAQMD is required to update plans for improving air quality in the South Coast Air Basin as needed or every three years. The SCAQMD SIPs are developed within the agencies *2022 Air Quality Management Plan (SCAQMD 2022).*

On October 1, 2015, the EPA strengthened the NAAQS for ground-level ozone, lowering the primary and secondary ozone standard levels to 70 parts per billion (ppb). The South Coast Air Basin is classified as an "extreme" nonattainment area, and the Coachella Valley is classified as a "severe-15" nonattainment area for the 2015 Ozone NAAQS. The *2022 Air Quality Management Plan* was developed to address the requirements for meeting this standard and is focused on attaining the 2015 8-hour ozone standard of 70 ppb (SCAQMD 2022).

The 2022 AQMP also outlines policies and practices intended to achieve attainment levels for criteria pollutants and avoid future levels that exceed applicable standards. The control measures contained in the 2022 AQMP can be categorized as follows:

- Ozone measures: These measures provide for necessary actions to attain the 2015 8-hour ozone NAAQS in 2037, including actions to reduce NO_x and VOC emissions from both stationary (point and area) and mobile sources, as included in SCAQMD's proposed stationary and mobile source measures, as well as CARB's State Strategy for the State Implementation Plan (SIP). The mobile source measures include actions to be taken by SCAQMD, CARB and the EPA.
- Contingency measures: These measures are to be automatically implemented if the air basin fails to achieve the ozone standard by the latest statutory attainment date or a reasonable further progress requirements.

- Transportation control measures: These measures are generally designed to reduce vehicle miles traveled as included in Southern California Association of Governments 2020 Regional Transportation Plan .
- Some of the control measures achieve emissions reductions by taking advantage of existing programs, while some control measures focus on incentives, outreach, and education to bring about emissions reductions through voluntary participation and behavioral changes needed to complement regulations.

Eastern Kern Air Pollution Control District

The EKAPCD seeks to attain and maintain NAAQS and CAAQS and to ensure air pollutants do not pose a nuisance or significant health threat through the adoption of their *Reasonably Available Control Technology (RACT) State Implementation Plan for the 2008 and 2015 8-Hour Ozone National Ambient Air Quality Standards (NAAQS)* (2023) and *Ozone Attainment Plan for the 2008 and 2015, 8-Hour Ozone National Air Quality Standards (NAAQS)* (2023) (EKAPCD 2023a; 2023b).

In addition, the EKAPCD has developed and implemented approximately 135 rules and regulations designed to reduce air pollutants being emitted from local source activities. Rule 401 limits discharge into the atmosphere of visible emissions[1], and Rule 402 prevents, reduces, and mitigates fugitive dust emissions using reasonable available control measures.

San Joaquin Valley Air Pollution Control District

The SJVAPCD implements air quality programs required by state and federal mandates, enforces rules and regulations based on air pollution laws, and educates businesses and residents about their roles in protecting air quality. The SJVAPCD is responsible for managing and permitting existing, new, and modified sources of air emissions within its boundaries and has established rules and regulations to ensure compliance with local, state, and federal air quality regulations.

The SJVAPCD implements air quality plans to attain state and federal standards for the pollutants that it is currently out of attainment with, including ozone and particulate matter. The SJVAPCD air quality plans include emissions inventories to measure the sources of air pollutants, to evaluate how well different control methods have worked, and to show how air pollution will be reduced. The following attainment plans apply to SJVAB for criteria pollutants that are in nonattainment status:

Ozone

The SJVAPCD adopted the *2022 Plan for the 2015 8-Hour Ozone Standard* in December 2022 (SJVAPCD 2022). This plan satisfies Clean Air Act requirements and ensures expeditious attainment of the 70 ppb 8-hour ozone standards. The plan satisfies applicable CAA

[1] "Visible emissions violations can occur when a source produces uncontrolled smoke, dust, or other particulate matter that reduces visibility and impedes air quality" (SCAQMD, n.d.).

requirements, including reasonable further progress and reasonably available control measures, among other requirements.

Additionally, the *2020 Reasonably Available Control Technology (RACT) Demonstration for the 2015 8-Hour Ozone Standard* was adopted on June 18, 2020 (SJVAPCD 2020).

PM2.5

SJVAPCD adopted the *2018 Plan for the 1997, 2006, and 2012 PM2.5 Standards* on November 15, 2018 (SJVAPCD 2018). This plan addresses the EPA federal 1997 annual $PM_{2.5}$ standard of 15 $\mu g/m^3$ and 24-hour $PM_{2.5}$ standard of 65 $\mu g/m^3$; the 2006 24-hour $PM_{2.5}$ standard of 35 $\mu g/m^3$; and the 2012 annual $PM_{2.5}$ standard of 12 $\mu g/m^3$. This plan demonstrates attainment of the federal $PM_{2.5}$ standards as expeditiously as practicable. In addition to mobile source measures, this plan includes a comprehensive suite of fiscally responsible local measures for stationary and area sources, including measures to further reduce emissions from industrial sources, residential wood burning, and commercial charbroiling.

PM10

SJVAPCD adopted the *2007 PM_{10} Maintenance Plan* in September 2007 to assure the San Joaquin Valley's continued attainment of EPA's PM_{10} standard. EPA designated the San Joaquin Valley as an attainment/maintenance area for PM_{10} (SJVAPCD 2007). Even though EPA revoked the annual PM_{10} standard on December 18, 2006 (71 FR 61144), the *2007 Maintenance Plan and Request for Redesignation* addresses the annual and 24-hour PM_{10} standards since both standards were included in the *Amended 2003 PM_{10} Plan* that EPA approved into the SIP.

3.3.3 Applicant Proposed Measures and CPUC Environmental Measures

Applicant Proposed Measures

SCE has proposed measures (i.e., applicant-proposed measures, or APMs) to reduce environmental impacts. The significance of a given impact is considered, and a significance determination made, prior to application of any APMs. The implementation of the APMs is then considered as part of the design of Proposed Project when determining whether impacts would be significant and thus require mitigation. APMs would be incorporated as part of any CPUC project approval, and SCE would be required to adhere to the APMs as well as any additional imposed mitigation measures. The APMs are included in the MMRP for the Proposed Project (refer to Chapter 4 of this MND), and the implementation of the measures would be monitored and documented in the same manner as mitigation measures. The APMs that are applicable to the wildfire impact analysis are provided in Table 3.3-4.

CPUC Environmental Measures

The CPUC has developed additional standard measures to reduce potential impacts from wildfires. The CPUC standard measures will be included in the MMRP for the Proposed Project

and implemented during Proposed Project construction. The CPUC measure applicable for air quality is listed in Table 3.3-5

Table 3.3-4 Applicant Proposed Measures

APM number	Requirements
AIR-1	**Tier 4 Construction Equipment.** All construction equipment with rating between 100 and 750 horsepower (hp) will be required to use engines compliant with EPA Tier 4 non-road engine standards. In the event a Tier 4 engine is not available for any off-road construction equipment with rating at or higher than 100 hp, that documentation of the unavailability will be provided.

Table 3.3-5 CPUC Environmental Measures

CPUC Draft Environmental Measure	Requirement
Dust Control During Construction	The Applicant shall implement measures to control fugitive dust in compliance with all local air district(s) standards. Dust control measures shall include the following at a minimum: • All exposed surfaces with the potential of dust-generating shall be watered or covered with coarse rock to reduce the potential for airborne dust from leaving the site. • The simultaneous occurrence of more than two ground disturbing construction phases on the same area at any one time shall be limited. Activities shall be phased to reduce the amount of disturbed surfaces at any one time. • Cover all haul trucks entering/leaving the site and trim their loads as necessary. • Use wet power vacuum street sweepers to sweep all paved access road, parking areas, staging areas, and public roads adjacent to project sites on a daily basis (at minimum) during construction. The use of dry power sweeping is prohibited. • All trucks and equipment, including their tires, shall be washed off prior to leaving project sites. • Apply gravel or non-toxic soil stabilizers on all unpaved access roads, parking areas, and staging areas at project sites. • Water and/or cover soil stockpiles daily. • Vegetative ground cover shall be planted in disturbed areas as soon as possible and watered appropriately until vegetation is established. • All vehicle speeds shall be limited to fifteen (15) miles per hour or less on unpaved areas. • Implement dust monitoring in compliance with the standards of the local air district. • Halt construction during any periods when wind speeds are in excess of 50 mph.

3.3.4 Environmental Analysis

Approach to Impact Analysis

Project-specific Emission Thresholds

CPUC uses local air quality district thresholds for evaluating air quality impacts under CEQA. The Proposed Project would occur in three different air basins under the jurisdiction of three

different air districts. The follow section describes the significance thresholds established by each air quality district.

South Coast Air Quality Management District

The SCAQMD provides air quality significance in its SCAQMD Air Quality Significance Thresholds for both construction and operational emissions (SCAQMD 2023). Table 3.3-6, below, shows the thresholds of significance for a project during construction and operation phase within the SCAQMD. SCAQMD significance thresholds are in pounds per day (lbs./day).

The SCAQMD has also identified localized significance thresholds that are dependent on ambient air concentrations, the size of the construction area, and the distance to the nearest sensitive receptor (SCAQMD 2008). The nearest sensitive receptor to the Proposed Project site within the SCAB is approximately 120 feet from the Gorman substation construction area, which falls within source receptor area 15 (SCAQMD 2008). Therefore, the localized significance thresholds for a 5-acre site at a distance of 25 meters in the source receptor area 15 San Gabriel Mountains are listed in Table 3.3-7.

Table 3.3-6 SCAQMD Air Quality Significance Thresholds

Pollutant	Construction (lbs./day)	Operations (lbs./day)
NOx	100	55
ROG	75	55
PM_{10}	150	150
$PM_{2.5}$	55	55
SO_x	150	150
CO	550	550
Lead	3	3

Source: (SCAQMD, 2019)

Table 3.3-7 SCAQMD Air Quality Localized Significance Thresholds

Pollutant	Threshold (lbs./day) [a]
ROG	NA
NO_x	246
CO	1,644
SO_2	NA
PM_{10}	12
$PM_{2.5}$	6

Note:

[a] These thresholds were determined based on the assumption that the Proposed Project construction would occur within the source receptor area 15 San Gabriel Mountains, the Proposed Project construction would be at least 5 acres in area, and the receptors' distance would be approximately 25 meters.

Source: (SCAQMD 2009)

The SCAQMD health risk significance threshold is 10 in one million for *maximum individual cancer risk* (MICR) and 1.0 for the maximally exposed individual for *hazard index chronic* (HIC) (SCAQMD 2008).

Lastly, the SCAQMD also determines that if a construction project creates an odor nuisance pursuant to South Coast AQMD Rule 402, then the project would have significant air quality impact on the environment.

Eastern Kern Air Pollution Control District

The *EKAPCD Guidelines for Implementation of CEQA (Kern County Air Pollution Control District [APCD] 1999)* provides air quality significance thresholds for operation of a project. Table 3.3-8 shows these thresholds values were used in the absence of construction significance thresholds. EKAPCD significance thresholds are in tons per year (tpy).

A project would have a significant air quality impact on the environment if it would, within the EKAPCD jurisdiction:

- Cause or contribute to an exceedance of any California or National Ambient Air Quality Standard;
- Exceed the District health risk public notification thresholds; or
- Be inconsistent with adopted federal and state Air Quality Attainment Plans.

Table 3.3-8 EKAPCD Air Quality Significance Thresholds

Pollutant	Construction emission (tpy)	Operations: permitted and non-permitted activities (typ)
NO_x/ROG (indirect sources)	NA	137
NO_x/ROG	NA	25
SO_x	NA	27
PM_{10}	NA	15

Source: (Kern County Air Pollution Control District [APCD] 1999)

The EKAPCD has adopted the SCAQMD health risk significance threshold of 10 in one million for MICR and 1.0 for the maximally exposed individual for HIC.

San Joaquin Valley Air Pollution Control District

The *SJVAPCD Guidance for Assessing and Mitigating Air Quality Impacts (SJVAPCD 2015)* provides air quality significance for both construction and operational emissions. Table 3.3-9, below, shows the thresholds of significance for a project during construction and operation phase within the SJVAB. SJVAPCD significance thresholds are in tons per year (tpy).

Table 3.3-9 SJVAPCD Air Quality Significance Thresholds

Pollutant	Construction emission (tpy)	Operations: permitted and non-permitted activities (typ)
CO	100	100
NO_x	10	10
ROG	10	10
SO_x	27	27
PM_{10}	15	15
$PM_{2.5}$	15	15

Source: (SJVAPCD 2015)

The SJVAPCD health risk significance threshold is 20 in one million for MICR and 1.0 for the maximally exposed individual for HIC *(SJVAPCD 2015)*.

Cumulative Impact Thresholds

Section 15002 of the CEQA Guidelines defines a significant effect on the environment as "a substantial adverse change in the physical condition which exists in the area affected by the proposed project." The impact of a project to air quality is determined by examining the types and levels of emissions generated by the project and its impact on factors that affect air quality. Accordingly, projects should be evaluated in terms of identified air pollution thresholds.

Methodology and Assumptions

Criteria Pollutants

Project-related air quality impacts would fall into two categories: short-term impacts due to construction and long-term impacts due to project operation. First, during construction (short-term), the Proposed Project would affect local particulate concentrations primarily due to fugitive dust sources and diesel exhaust. The Proposed Project would result in replacing the existing conductor and poles associated with the approximately 65-mile subtransmission line. The operation and maintenance activities required for the reconductored power line would not change from those currently required for the existing power line; thus, no operation-related (long-term) impacts would occur. Therefore, the impact analysis is focused on construction activities that are required to install the new conductor and replace existing structures and establish required access and work areas.

SCE provided construction-related air pollutant emissions calculations and estimates for the construction activities that would be associated with the proposed Project. SCE's emission calculations were independently reviewed by the CPUC's consultant, RCH Group (RCH), and were found to be technically adequate. Short-term construction emissions that occur from activities such as removal of structures, site-grading, and construction and long-term air quality impacts related to the operation of the Proposed Project were evaluated. The analysis focuses on daily and annual emissions from construction and operational (i.e., mobile, area, stationary, and fugitive sources) activities. The air quality analysis includes a review of criteria pollutant emissions such as CO, NO_x, SO_2, PM_{10}, and $PM_{2.5}$. Because ozone is formed through chemical reactions in the atmosphere, the ozone precursors NO_x and VOC as reactive organic gases (ROG) were evaluated. Construction emissions (excluding those from helicopters), emissions from soil disturbance, and emissions from vehicle travel on paved and unpaved roads were estimated using California Emissions Estimator Model Version 2020.4.0 (CalEEMod). Helicopter emissions were estimated manually using emissions factors obtained from the Swiss Federal Office of Civil Aviation (FOCA) (Federal Office Civil Aviation [FOCA] 2015).

TACs

SCE also prepared a *health risk assessment* (HRA) to evaluate the risks to nearby sensitive receptors from exposure to TACs associated with the Proposed Project (SCE 2023). The HRA focuses on construction emissions; the primary TAC of concern is considered DPM, which results from diesel-fueled engine combustion. Because of the uncertainty in assessing cancer risk from very short-term exposures, the Office of Environmental Health Hazard Assessment (OEHHA) guidelines do not recommend assessing cancer risk for projects lasting less than two months (OEHHA 2015).

In order to evaluate health risks to sensitive receptors near staging area activities, Tier 2 screening health risk assessments were completed in accordance with the SCAQMD Risk Assessment Procedures (SCAQMD 2017). SCE has compiled a list of staging areas that have sensitive receptors located within 0.25 mile of the staging area, where the duration of activities that could generate air toxics are anticipated to occur for more than 2 months. The distance between a staging area boundary and the nearest receptor fence line was used as a conservative

estimate of receptor distance. If there was no easily identifiable receptor fence line, then the distance to the nearest receptor building or structure was used. The Tier 2 screening risk assessment was used to determine MICR and HIC for each staging area listed in Table 3.3-10. Acute (non-cancer, HIA) health risks were not assessed because there are no published acute inhalation *reference exposure levels* (RELs) for DPM. Appendix C presents supporting assumptions and methodology and detailed results for the HRA.

Table 3.3-10 Staging Areas Near Sensitive Receptors

Staging area location	Number of staging areas	Distance to nearest sensitive receptor (miles)
Gorman substation yard	1	0.039
Lebec-Clear Canyon Rd.	1	0.034
Lebec Road yard and I-5 yard	2	0.093
Banducci Road yard	1	0.035
Bakersfield Tehachapi Hwy yards	2	0.035
Kern Canyon Road yards	3	0.134
Crane Canyon Road yard	1	0.034

Source: (SCE 2023)

The construction emissions modeled using CalEEMod for the staging yards include exhaust and fugitive dust PM_{10} and $PM_{2.5}$. As a conservative estimate, DPM was assumed to be represented entirely by exhaust PM_{10}, as $PM_{2.5}$ is a subset of PM_{10}. The CalEEMod output for staging yards indicates 145.2 pounds (lbs.) of exhaust PM_{10} per year from activities at staging areas. This calculation assumes a weekly schedule of six days per week, the total annual DPM emissions from all staging areas. To determine DPM emissions from each individual staging area, the HRA assumed that the total emissions were distributed evenly between distinct staging areas by dividing the number of staging areas at that location by the total number of staging areas and applying that percentage to the total DPM emissions.

Summary of Impacts

Table 3.3-11 presents a summary of the CEQA significance criteria and impacts on air quality that would occur during construction, operation, and maintenance of the Proposed Project.

Table 3.3-11 Summary of Proposed Project Impacts to Air Quality

Would the Proposed Project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard?	☐	☒	☒	☐
c) Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	☐	☐	☒	☐

Impact Discussion

a) Would the project conflict with or obstruct implementation of the applicable air quality plans?

Overview

The analysis below considers the consistency of the Proposed Project with measures included in air quality management plans covering the Proposed Project area. The Proposed Project does not include any stationary sources and therefore would not conflict with any stationary source control measures in any air quality plan. The Proposed Project would result in air quality emissions from mobile sources during construction; therefore, the analysis below focuses on the

Proposed Project consistency with applicable mobile source control measures as summarized in Table 3.3-12

Construction

South Coast Air Quality Management District

The *2022 Air Quality Management Plan* (AQMP) (SCAQMD 2022) is the applicable air quality plan in the SCAB. EGM-03 is the only measure in the AQMP that is applicable to the Proposed Project. The Proposed Project is consistent with measure EGM-03, as summarized in Table 3.3-12. Because the Proposed Project is consistent with the applicable measure in the AQMP, the impact from conflict with the AQMP would be less than significant.

Eastern Kern Air Pollution Control District

The EKAPCD has adopted two air quality control plans, including the *Reasonably Available Control Technology (RACT) State Implementation Plan (SIP)* (2023) and *2023 Ozone Attainment Plan for 2008 & 2015 , 8-Hour Zone National Ambient Air Quality Standards* (2023) (EKAPCD 2023a; 2023b). The RACT SIP requires best available control technologies for major stationary sources of VOC and NO_x as defined by EPA. The Proposed Project is not subject to the RACT SIP because it does not include any stationary sources of pollution; therefore, the Proposed Project would not conflict with the RACT SIP, and no impact would occur.

The *2023 Ozone Attainment Plan* includes reasonably available control measures (RACM) for stationary sources and mobiles sources. The RACM for mobile sources assumes California's emission standards, fuel specifications, and incentive programs for heavy-duty vehicles represent all measures that are technologically and economically feasible within California. Because the Proposed Project would operate vehicles that meet state standards, the Proposed Project would not conflict with the *2023 Ozone Attainment Plan,* and the impact would be less than significant.

Table 3.3-12 Proposed Project Consistency with Applicable Air Quality Plan Measures

Measure	Consistency
SCAQMD 2022 Air Quality Plan	
EGM-03: Emission Reductions from Clean Construction Policy This measure proposes to develop a Clean Construction Policy (CCP) with a set of recommended control measures and approaches that can be utilized for reference and voluntary implementation by local municipalities and public agencies. The proposed approach to the CCP guidelines would consist of a hierarchy that prioritizes direct, on-site emission reductions. These emission reductions should first come from zero emission off-road construction equipment and on-road haul and material delivery trucks. If zero emission off-road and on-road equipment is not available or feasible for implementation, then the next cleanest, commercially available off-road and on-road equipment should be utilized during construction activities. The CCP has not been adopted by County of Los Angeles to date.	The Proposed Project is consistent with the measure because no CCP has been adopted by Los Angeles County. In addition, APM AIR-1 requires use of Tier 4 engine standards for heavy construction equipment, which would be consistent with the proposed control methods in the measure because it would be the cleanest feasible construction equipment.
SJVAPCD 2007 PM10 Maintenance Plan and Request for Redesignation	
Regulation VIII 8021: Construction, Demolition, Excavation, Extraction, And Other Earthmoving Activities 5.3 Speed Limitations and Posting of Speed Limit Signs on Uncontrolled Unpaved Access/Haul Roads on Construction Sites 6.3 Dust Control Plan - An owner/operator shall submit a Dust Control Plan to the APCO prior to the start of any construction activity that describes all fugitive dust control measures to be implemented before, during, and after any dust generating activity.	The Proposed Project is consistent with the measure because speed limitation on uncontrol unpaved roads and a dust control plan are required by the CPUC Environmental Measure for Dust Control During Construction.
Regulation VIII 8031 Bulk Materials Control Measures for Bulk Materials - which include handling of bulk materials, storage of bulk materials, on-site transporting of bulk materials, off-site transporting of bulk materials, outdoor transport of bulk materials with a chute or conveyor.	The Proposed Project is consistent with the measure because the CPUC Environmental Measure for Dust Control During Construction requires covering of haul trucks.

Measure	Consistency
Regulation VIII 8041 Carryout and Trackout 5.7 Cleanup of carryout and trackout that shall things such as manually sweeping and picking-up or operating a PM10-efficient street sweeper that has a pick-up efficiency of at least 80 percent as defined in Rule 8011 (General Requirements). 5.8 Carryout and trackout shall be prevented and mitigated by installing and maintaining a trackout control device.	The Proposed Project is consistent with the measure because the CPUC Environmental Measure for Dust Control During Construction requires daily street sweeping with a wet vacuum street sweeper and washing of truck tires prior to leaving the site.
Regulation VIII 8061 Paved and Unpaved Roads 5.2 On any unpaved road segment with 26 or more average daily vehicle trips, the owner/operator shall limit visible dust emissions to 20% opacity and comply with the requirements of a stabilized unpaved road by application and/or reapplication/maintenance of at least one of the listed control measures, or shall implement an APCO-approved Fugitive PM10 Management Plan as specified in Rule 8011 (General Requirements): watering; uniform layer of washed gravel; chemical/organic dust stabilizers/suppressants in accordance with the manufacturer's specifications; roadmix; paving; any other method that can be demonstrated to the satisfaction of the APCO that effectively limits VDE to 20% opacity and meets the conditions of a stabilized unpaved road.	The Proposed Project is consistent with the measure because the CPUC Environmental Measure for Dust Control During Construction requires compliance with local air district standards, and that dust be suppressed on unpaved roads and work areas by applying water or other dust suppressants.
Regulation VIII 8071 Unpaved Vehicle/Equipment Traffic Areas 5.1.1. On any unpaved road segment with 50 or more average daily vehicle trips, the owner/operator shall limit visible dust emissions to 20% opacity and comply with the requirements of a stabilized unpaved road by application and/or reapplication/maintenance of at least one of the following control measures, or shall implement an APCO-approved Fugitive PM10 Management Plan as specified in Rule 8011 (General Requirements): watering; uniform layer of washed gravel; chemical/organic dust stabilizers/suppressants in accordance with the manufacturer's specifications; vegetative materials;; paving; roadmix; any other method that can be demonstrated to the satisfaction of the APCO that effectively limits VDE to 20% opacity and meets the conditions of a stabilized unpaved road.	The Proposed Project is consistent with the measure because the CPUC Environmental Measure for Dust Control During Construction requires compliance with local air district standards, which would include the opacity thresholds and requires that dust be suppressed on unpaved roads and work areas by applying water or other dust suppressants.

San Joaquin Valley Air Pollution Control District

The *2022 Plan for the 2015 8-Hour Ozone Standard (SJVAPCD 2022)*, *2020 Reasonably Available Control Technology (RACT) Demonstration for the 2015 8-Hour Ozone Standard (SJVAPCD 2020)*, *2018 Plan for the 1997, 2006, and 2012 PM2.5 Standards (SJVAPCD 2018)*, and the *2007 PM10 Maintenance Plan (SJVAPCD 2007)* are the air quality plans applicable to the SJVAB.

The *2022 Plan for the 2015 8-Hour Ozone Standard* includes compliance with CARB off-road vehicle standards as well as District Rule 9510 for Indirect Source Review for mobile source control. District Rule 9510 requires emission reductions from construction of development projects but does not apply to utility projects. The Proposed Project would comply with CARB off-road vehicle standards and is a utility project, which is not subject to District Rule 9710. The Proposed Project would therefore not conflict with the *2022 Plan for the 2015 8-Hour Ozone Standard*, and the impact would be less than significant.

The *2020 RACT Demonstration for the 2015 8-Hour Ozone Standard* requires the adoption of RACT level requirements for major stationary sources of VOC and NO_x as defined by EPA. The Proposed Project does not include a stationary source of emissions; therefore, the *2020 RACT Demonstration for the 2015 8-Hour Ozone Standard* does not apply to the Proposed Project, and no impact would occur.

The 2018 Plan for the 1997, 2006, and 2012 PM2.5 Standards requires implementation of state mobile source reduction measures. The Proposed Project would comply with all the applicable state mobile source reduction control measures and therefore would not conflict with or obstruct the *2018 Plan for the 1997, 2006, and 2012 PM2.5 Standards*. The impact would be less than significant.

The *2007 PM_{10} Maintenance Plan* is a plan to assure the San Joaquin Valley's continued attainment of EPA PM_{10} standard since EPA designated the SJVAB as an attainment/maintenance area for PM_{10}. The Proposed Project would comply with all the applicable measures from the *2007 PM_{10} Maintenance Plan*, including Regulation VIII Rules 8011, 8021, 8031, 8041, 8061, and 8071. The Proposed Project's consistency with Regulation VIII is summarized in Table 3.3-12 The Proposed Project would be consistent with the applicable control measures in the *2007 PM_{10} Maintenance Plan* with implementation of the CPUC Environmental Measure, Dust Control During Construction; therefore, the impact would be less than significant.

Operation and Maintenance

The subtransmission line is not a source of air pollutant emissions, and operation of the subtransmission line would not generate emissions of criteria air pollutants. Maintenance activities for the Proposed Project would be similar to maintenance of the existing subtransmisison lines, but the frequency may be reduced due to replacement of aging infrastructure with new infrastructure. Because the nature and frequency of maintenance activities for the replacement subtransmission lines and infrastructure would be similar to that for the existing subtransmission lines, maintenance of the Proposed Project would not result in

increased emissions of criteria pollutants. Operation and maintenance activities would not involve new development and would not induce population growth. The Proposed Project would, therefore, not conflict with any air quality management plans, and there would be no impact.

Required APMs and MMs: CPUC Environmental Measure Dust Control During Construction.

b) Would the Proposed Project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under Federal or State ambient air quality standards?

Construction

Construction of the Proposed Project would generate emissions of criteria air pollutants. The entire Proposed Project area is in a nonattainment area for ozone and PM_{10}. Portions of the Proposed Project in SJVAB and SCAB are in nonattainment areas for $PM_{2.5}$, and the portion of the Proposed Project in the SCAB is also a nonattainment area for lead. The Proposed Project construction emissions could contribute to existing violations of the ambient air quality standards for ozone, PM_{10}, and $PM_{2.5}$ because the Proposed Project motor vehicles, helicopters, off-road equipment, and other construction equipment would directly emit criteria air pollutants and the ground disturbance could generate fugitive dust. Construction of the Proposed Project would not generate lead as the Proposed Project materials would not introduce lead to the area. The equipment used to construct the Proposed Project are itemized and detailed in Table 2-8.

Table 3.3-13, Table 3.3-14, and Table 3.3-15 summarize the annual controlled and uncontrolled emissions from construction activities in the SJVAB, EKAB, and SCAB, respectively. Controlled emissions are the estimated emissions from the Proposed Project construction activities with implementation of CPUC Environmental Measure for Dust Control During Construction.

As shown in Table 3.3-13 and Table 3.3-15, the uncontrolled construction emissions within the SJVAB and SCAB would exceed the PM_{10} thresholds established by the SJVAPCD and SCAQMD, respectively. Both the SJVAB and SCAB are nonattainment areas for PM_{10}, and exceedance of the threshold for PM_{10} would represent a cumulatively considerable net increase in generation of a criteria pollutant for which the region is in nonattainment and would thus be a significant impact. CPUC Environmental Measure Dust Control During Construction requires various measures such as watering or covering all exposed surfaces that are potentially dust-generating, phasing ground disturbing activities to reduce the amount of disturbed surfaces at one time, limiting the speed limit to 15 miles per hour on unpaved roads, and halting construction activities during periods where wind conditions are 50 miles per hour or higher. With implementation of CPUC Environmental Measure Dust Control During Construction, the Proposed Project construction emissions would not exceed SJVAPCD or SCAQMD thresholds, as shown in the controlled emissions in Table 3.3-13 and Table 3.3-15. With implementation of the CPUC Environmental Measure, the Proposed Project would not result in a cumulatively considerable net increase in any criteria pollutant for which the region is in nonattainment, and the impact would be less than significant.

Table 3.3-13 Estimated Construction Annual Air Pollution Emissions (tons/year) within SJVAB

Year/criteria	VOC	NO_x	CO	SO2	PM_{10}	$PM_{2.5}$
Uncontrolled emissions						
2024	0.18	1.72	1.23	0.01	**21.6**	2.38
2025	0.78	6.42	5.78	0.03	**83.7**	8.58
2026	1.20	4.64	5.41	0.02	**56.7**	7.54
SJVAPCD Threshold	10	10	100	27	15	15
Threshold Exceeded?	No	No	No	No	**Yes**	No
Controlled emissions						
2024	0.18	1.72	1.23	0.01	1.55	0.21
2025	0.78	6.42	5.78	0.03	5.76	0.79
2026	1.20	4.64	5.41	0.02	4.32	0.64
SJVAPCD threshold	10	10	100	27	15	15
Threshold exceeded?	No	No	No	No	No	No

Source: (SCE 2022)

Table 3.3-14 Estimated Construction Annual Air Pollution Emissions (tons/year) within EKAB

Year/criteria	VOC	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
Uncontrolled emissions						
2024	0.03	0.28	0.20	<0.01	3.47	0.38
2025	0.12	1.03	0.93	<0.01	13.5	1.38
2026	0.19	0.75	0.87	<0.01	9.11	1.21
EKAPCD threshold	25	25	-	27	15	-
Threshold exceeded?	No	No	-	No	No	-
Controlled emissions						
2024	0.03	0.28	0.20	<0.01	0.25	0.03
2025	0.12	1.03	0.93	<0.01	0.93	0.13
2026	0.19	0.75	0.87	<0.01	0.69	0.10

Year/criteria	VOC	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
EKAPCD threshold	25	25	-	27	15	-
Threshold exceeded?	No	No	-	No	No	-

Source: (SCE 2022)

Table 3.3-15 Estimated Uncontrolled Construction Annual Air Pollution Emissions (pounds/day) within SCAB

Year/criteria	VOC	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
Uncontrolled emissions						
2024	5.62	83.9	26.6	0.40	98.2	12.0
2025	8.05	55.5	35.7	0.32	113	13.2
2026	20.2	46.4	62.8	0.28	**193**	21.5
SCAQMD threshold	75	100	550	150	150	55
Threshold exceeded?	No	No	No	No	**Yes**	No
Controlled emissions						
2024	5.62	83.9	26.6	0.40	21.1	4.26
2025	8.05	55.5	35.7	0.32	22.9	4.21
2026	20.2	46.4	62.8	0.28	40.9	6.32
SCAQMD threshold	75	100	550	150	150	55
Threshold exceeded?	No	No	No	No	No	No

Source: (SCE 2022)

Operation and Maintenance

The subtransmission line is not a source of air pollutant emissions, and operation of the subtransmission line would not generate emissions of criteria air pollutants for which the region is in non attainment. Maintenance activities for the Proposed Project would be similar to those for maintenance of the existing subtransmisison lines, but the frequency may be reduced due to replacement of aging infrastructure with new infrastructure. Because the nature and frequency of maintenance activities for the replacement subtransmission lines and infrastructure would be similar to that for the existing subtransmission lines, maintenance of the Proposed Project would not result in increased emissions of criteria pollutants. Operation and maintenance activities would, therefore, not result in a cumulatively considerable net increase in criteria air

pollutants for which the region is in nonattainment, and the impact would be less than significant.

Required APMs and MMs: CPUC Environmental Measure Dust Control

c) Would the Proposed Project expose sensitive receptors to substantial pollutant concentrations?

Construction

Construction of the Proposed Project would generate DSM and fugitive dust. Diesel and jet fuel exhaust would be emitted from heavy equipment and helicopters operating at the Proposed Project work areas, and the Proposed Project ground disturbing activities would generate fugitive dust. Health effects from TACs are typically framed in terms of incremental cancer risk. Incremental cancer risk is measured by the likelihood that a person continuously exposed to TACs over a 70-year lifetime would develop cancer. OEHHA guidelines do not recommend assessing TACs for a project lasting less than two months due to the uncertainty in assessing cancer risk from very short-term exposure (OEHHA 2015). Due to the linear nature of the Proposed Project, construction activities would be spread across the approximately 63-mile-long alignment and would last between a few days and a few weeks at each construction site. Health risk impacts for construction work occurring linearly is not expected to impact any one sensitive receptor for a duration of more than 2 months; therefore, the HRA did not evaluate the health risks associated with Proposed Project construction associated with the reconductoring and pole replacement along the power line alignment.

The HRA evaluated the potential health risk impacts from the staging yards to nearby sensitive receptors because the staging yards are expected to be used for 23 months during the entirety of construction of the Proposed Project (see Table 3.3-16). The SCAQMD Tier 2 HRA methodology was used to determine MICR and HIC for DPM emissions from the staging areas, as shown in Table 3.3-16. The MICR and HIC levels for each staging yard within 0.25 mile from a sensitive receptor or Proposed Project worker is below the significance threshold of 10 in one million MICR and 1.0 for the maximally exposed individual for HIC for receptors within EKAB and SCAB and the significance threshold of 20 in one million MICR and 1.0 for the maximally exposed individual for HIC for receptors within SJVAB; which is a majority of the Proposed Project area and nearby sensitive receptors. Since the HRA determined that the MICR and HIC levels are below the significance thresholds, the Proposed Project would not expose sensitive receptors to substantial pollutant concentrations and, therefore, the impact would be less than significant.

Table 3.3-16 Staging Areas Near Sensitive Receptors

Staging area	MICR nearby sensitive receptor (per million)	MICR project worker (per million)	Chronic (HIC) nearby sensitive receptor	Chronic (HIC) project worker	MICR/HIC threshold exceedance? [a]
Gorman sub yard	3.48	0.175	0.00203	0.00203	No/No
Lebec-Clear Canyon Road	4.04	0.203	0.00236	0.00236	No/No
Lebec Road Yard and I-5 yard	2.08	0.104	0.00121	0.00121	No/No
Banducci Road yard	3.90	0.196	0.00228	0.00228	No/No
Bakersfield Tehachapi Hwy yards	7.79	0.392	0.00455	0.00455	No/No
Kern Canyon yards	1.03	0.052	0.000604	0.000604	No/No
Crane Canyon yard	4.04	0.203	0.00236	0.00236	No/No

Note:

[a] MICR threshold is 10 per million persons, HIC threshold is 1.0 within SCAB and EKAB, and MICR threshold is 20 per million persons within SJVAB.

Source: (SCE 2023)

Operation and Maintenance

Operation of the Proposed Project would not generate any air pollutants. Annual inspections and routine maintenance of the Proposed Project would occur at the same intensity, frequency, and duration as the existing inspection and maintenance activities for the existing subtransmission lines; however, maintenance activities could be reduced as aging infrastructure would be replaced with new infrastructure. SCE would continue to use helicopters for annual inspections of transmission lines in areas with no vehicle access or rough terrain. Most vehicles used along the entire alignment would be crew trucks and would not utilize diesel engines. Operation and maintenance activities would not expose sensitive receptors to substantial concentrations of pollutants that result in adverse health impacts because the operation and maintenance activities would not result in additional emissions relative to the current ongoing maintenance of SCE facilities. Impacts would be less than significant. No mitigation is required.

Required APMs and MMs: APM AIR-1

d) Would the Proposed Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

The Proposed Project would not be a source of odors or other emissions not discussed previously. The Proposed Project site is also generally located in unpopulated areas and is not located in proximity to a substantial number of people, with the exception of the small portion of the Proposed Project in Segment 4 and Segment 5, where a residential community is adjacent the Proposed Project site, as well as where El Tejon School is in proximity to Segment 2 (as shown in Figure 3.3-2, Figure 3.3-3, and Figure 3.3-4). Construction activities would not be a major source of odors from emissions from vehicles and heavy construction equipment. Use of heavy construction equipment and vehicles in proximity to residential receptors and the school would not generate odors or other emissions that would affect a substantial number of people due to the short duration of activities and the disbursement of odors from moving vehicles and equipment. The Proposed Project's impact from generation of emissions adversely affecting a substantial number of people would be less than significant.

Required APMs and MMs: None required.

3.3.5 References

California Air Resources Board (CARB). 1993. The Identification of Federal Hazardous Air Pollutants as Toxic Air Contaminants. Available: https://ww2.arb.ca.gov/resources/documents/carb-identified-toxic-air-contaminants.

———. 1998a. Executive Summary for the "Proposed Identification of Diesel Exhaust as a Toxic Air Contaminant."

———. 1998b. "The Toxic Air Contaminant Identification Process: Toxic Air Contaminant Emissions from Diesel-Fueled Engines." Fact sheet. https://ww2.arb.ca.gov/sites/default/files/2020-02/factsht1.pdf.

———. 2022. "Maps of Current State and Federal Area Designations." 2022. https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations.

———. 2023. "California Air Districts." Feature Service. https://www.arcgis.com/home/item.html?id=d2721065c3824b0cb69928256d6b6fc6.

City of Arvin. 2018. "Arvin Zoning Ordinance Map." Feature Server. Vector digital data. "Sensitive Receptors in the Proposed Project Vicinity" generated by Panorama, Environmental, Inc.: Using Arc GIS (August 29, 2023). https://services.arcgis.com/jDGuO8tYggdCCnUJ/arcgis/rest/services/Arvin_Zoning_Ordinance_Map/FeatureServer.

County of Los Angeles. 2016. "Public Elementary Schools." Map service. Vector digital data. "Sensitive Receptors in the Proposed Project Vicinity" created by Panorama Environmental, Inc.: Using ArcGIS August 28, 2023. https://data.lacounty.gov/datasets/50584b00f5674f989a982821d81c97d3_49/about.

Eastern Kern Air Pollution Control District (EKAPCD). 2023a. Ozone Attainment Plan for the 2008 and 2015, 8-Hour Ozone National Ambient Air Quality Standards (NAAQS). Available: http://www.kernair.org/Main_Pages/Subpages/Rules_Sub/CEQA_Guidelines.html.

———. 2023b. Reasonably Available Control Technology (RACT) State Implementation Plan (SIP) for the 2008 and 2015 8-Hour Ozone National Ambient Air Quality Standards. Available: http://www.kernair.org/Main_Pages/Subpages/Info_Sub/Attainment.html.

ESRI® and U.S. Geological Survey (USGS). 2010. "USA Geographic Names Information System Churches." Shapefile. Geospatial data. Last updated December 27,2023. https://www.arcgis.com/home/item.html?id=2dc11432d7d94d0db943961e3710c719.

Federal Office Civil Aviation (FOCA). 2015. Guidance on the Determination of Helicopter Emissions. Edition 2. https://www.bazl.admin.ch/dam/bazl/de/dokumente/Fachleute/Regulationen_und_Grundlagen/guidance_on_the_determinationofhelicopteremissions.pdf.download.pdf/guidance_on_the_determinationofhelicopteremissions.pdf.

Kern County Air Pollution Control District (APCD). 1999. Guidelines for Implementation of the California Environmental Quality Act (CEQA) of 1970, as Amended.

Kern County GIS. 2014. "Kern Schools." "Sensitive Receptors in the Proposed Project Vicinity" generated by Panorama Environmental, Inc.: Using Arc GIS (August 29, 2023). https://maps.kerncounty.com/H5/index.html?viewer=KCPublic.

———. 2018. "Public Libraries." "Sensitive Receptors in the Proposed Project Vicinity" created by Panorama Environmental, Inc.: Using Arc GIS (August 29, 2023).

Kern County Planning and Natural Resources. 2019. "Kern County General Plan." Feature Service. Geospatial data. "Sensitive Receptors in the Proposed Project Vicinity" generated by Panorama Environmental, Inc.: Using Arc GIS August 29, 2023. https://geodat-kernco.opendata.arcgis.com/datasets/575bd48fb01c44899334301c8e6da015_0/about.

Mojave Desert Air Quality Management District (MDAQMD). 2023. Federal 70 Ppb Ozone Attainment Plan (Western Mojave Desert Nonattainment Area). Victorville, CA.

Oak Ridge National Laboratory (ORNL) and National Geospatial-Intelligence Agency (NGA) Homeland Security Infrastructure Program (HSIP) Team. 2020. "Prison Points." Feature Service. Vector digital data. "Sensitive Receptors in the Proposed Project Vicinity" generated by Panorama Environmental, Inc.: Using Arc GIS (August 29, 2023). https://www.arcgis.com/home/item.html?id=2a33288266bd44eabd80e7559474cd23.

Office of Environmental Health Hazard Assessment (OEHHA). 2015. Air Toxics Hot Spots Program Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments. Air, Community, and Environmental Research Branch Office of Environmental Health Hazard Assessment California Environmental Protection Agency. Available: https://oehha.ca.gov/air/crnr/notice-adoption-air-toxics-hot-spots-program-guidance-manual-preparation-health-risk-0.

San Joaquin Valley Air Pollution Control District (SJVAPCD). 2007. PM10 Maintenance Plan and Request for Redesignation. Available: https://ww2.valleyair.org/rules-and-planning/air-quality-plans/.

———. 2015. Guidance for Assessing and Mitigating Air Quality Impacts. http://www.valleyair.org/transportation/GAMAQI.pdf.

———. 2018. Plan for the 1997, 2006, and 2012 PM2.5 Standards. Available: https://ww2.valleyair.org/rules-and-planning/air-quality-plans/.

———. 2020. Reasonably Available Control Technology (RACT) - Demonstration for the 2015 8-Hour Ozone Standard. https://www.valleyair.org/Air_Quality_Plans/docs/2020-RACT-Demonstration.pdf.

———. 2022. Plan for the 2015 8-Hour Ozone Standard. Available: https://ww2.valleyair.org/rules-and-planning/air-quality-plans/ozone-plans/2022-ozone-plan-for-the-san-joaquin-valley/.

South Coast Air Quality Management District (SCAQMD). 2008. Final Localized Significance Threshold Methodology. Available: http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf.

———. 2009. "Appendix C: Mass Rate LST Look-up Table." In Final Localized Significance Threshold Methodology. Available: http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf.

———. 2017. Risk Assessment Procedures for Rules 1401, 1401.1 and 212. Version 8.1. http://www.aqmd.gov/docs/default-source/permitting/rule-1401-risk-assessment/riskassessproc-v8-1.pdf?sfvrsn=12.

———. 2022. 2022 Air Quality Management Plan. Available: http://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan.

———. 2023. South Coast AQMD Air Quality Significance Thresholds. Available: http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook.

———. n.d. "Visible Emissions, Public Nuisance & Fugitive Dust." Accessed October 19, 2023. https://www.aqmd.gov/home/rules-compliance/compliance/inspection-process/visible-emissions-public-nuisance-fugitive-dust.

Southern California Edison (SCE). 2022. "SCE Deficiency Report 1 - GKR Appendix B Emissions Calc AQ Files." XLS. Table.

———. 2023. "Health Risk Assessment."

U.S. Environmental Protection Agency (EPA). 2023. "Initial List of Hazardous Air Pollutants with Modifications." Reports and Assessments. December 7, 2023. https://www.epa.gov/haps/initial-list-hazardous-air-pollutants-modifications.

U.S. Environmental Protection Agency (EPA) Office of Air and Radiation (OAR), Office of Air Quality Planning and Standards. 2015. "Air Quality System (AQS) Monitoring Network." Map service. Using Arc GIS August 25, 2023. Updated weekly. https://gispub.epa.gov/arcgis/rest/services/OAR_OAQPS/AQSmonitor_sites/MapServer.

3.4 Biological Resources

This section presents the environmental setting and analysis of potential impacts on biological resources that would result from implementation of the Proposed Project. This section describes the environmental setting, existing biological resources, and applicable federal, state, and local laws and regulations as well as mitigation measures that would be implemented to reduce or avoid potential significant adverse effects that could result from the Proposed Project.

3.4.1 Definitions

Special Status Species

A *special status species* in a species that is legally protected under the California Endangered Species Act (CESA) and/or federal Endangered Species Act (ESA), or under other regulations, as well as any species considered sufficiently rare by the scientific community and/or regulatory agencies to qualify for such status. These species are classified under the following categories:

- Species listed or proposed for listing as threatened or endangered under the federal ESA (50 CFR § 17.12 [listed plants] and § 17.11 [listed animals]) or through notices in the *Federal Register* [FR], referred to in this document as *proposed species*
- Species that are candidates for possible future listing as threatened or endangered under the federal ESA (61 FR § 40, February 28, 1996), referred to in this document as *candidate species*
- Species listed or proposed for listing by the State of California as threatened or endangered under the CESA (14 CCR § 670.5) or that are listed as "fully protected" by the State of California
- Plants listed as rare or endangered under the California Native Plant Protection Act (California Fish and Game Code §§ 1900 et seq.)
- Species that meet the definitions of rare and endangered under CEQA Guidelines section 15380, which provides that a plant or animal species may be treated as "rare or endangered" even if not included in a State or federal lists
- Plant species considered to be rare, threatened, or endangered in California according to the California Native Plant Society's (CNPS's) California Rare Plant Rank (CRPR), with a CRPR of 1A, 1B, 2A, or 2B as well as certain rank 3 and 4 species with local significance (CNPS 2001)
- Species designated by the CDFW as Species of Special Concern (SSC)
- Species designated as *sensitive species* by the USDA Forest Service (USDA Forest Service 2005)
- Species protected under the federal Bald and Golden Eagle Protection Act (BGEPA) (U.S. House of Representatives 1940)
- Species protected under the Migratory Birds Treaty Act (USFWS 2020e)
- Species listed on the U.S. Fish and Wildlife's Service's (USFWS's) Birds of Conservation Concern list, the 2014 State of the Birds Watch List, or the Partners in

Flight Watch List (North American Bird Conservation Initiative [NABCI] 2014; Rosenberg et al. 2016; USFWS 2021)

- Bats considered by the Western Bat Working Group {WBWG) to be "high" or "medium" priority (WBWG n.d.) (Western Bat Working Group, 2023)

Sensitive Natural Communities

Sensitive natural communities are those identified by CDFW's Rarity Ranking (CDFW 2023), which follows NatureServe's Heritage Methodology (Faber-Langendoen et al. 2016), in which communities are given a G (global) and S (state) rank based on their degree of imperilment (as measured by rarity, trends, and threats). Communities with a state rarity ranking of S1 (critically imperiled), S2 (imperiled), or S3 (vulnerable) are considered sensitive by CDFW.

Biological Survey Area

The area surveyed for biological resources is referred to as the *biological survey area* (BSA). The BSA covers the Proposed Project site (i.e., the physical limits of all proposed work areas), which comprises a 150-foot survey corridor (approximately 75 feet on either side of the centerline) along the entire Proposed Project subtransmission line alignment and a 100-foot buffer around each existing tower footing location (i.e., known pulling/tensioning sites and laydown areas) as well as access routes, including existing routes to be modified and new access routes. The BSA buffers were designed to (1) cover areas where potential indirect effects on biological resources (e.g., dust, invasive species) could occur and (2) accommodate minor changes in design (such as changes to work areas and/or additions/deletions or changes to the locations of pole/structures) while minimizing the need to conduct additional surveys.

3.4.2 Approach to Data Collection

The biological resources analysis is based on literature review and database queries, vegetation mapping, habitat assessments, focused surveys for special status species, and a delineation of wetlands and other potentially jurisdictional waters of the U.S. and waters of the State, including riparian areas. Appendix D of this IS/MND presents supporting biological resources studies, including the following:

1. Sensitive Species and Habitat Report (Arcadis U.S., Inc. 2021b)
2. Biological Technical Memorandum: Tipton Kangaroo Rat (*Dipodomys nitratoides nitratoides*) Reconnaissance Evaluation (McCormick Biological, Inc. 2022)
3. Protocol-level Blunt-nosed Leopard Lizard Survey Report (MESA Biological LLC 2023)
4. Jurisdictional Delineation Report (ICF, 2024)
5. Tree Assessment Summary Report (Arcadis U.S., Inc. 2021a)
6. Blunt-nosed Leopard Lizard Minimization and Avoidance Strategy (ICF 2024)
7. Tehachapi Slender Salamander and Kern Canyon Slender Salamander Survey Report (ICF, 2024)

Database Review

The following databases and publicly available data sources were reviewed to develop a list of special status plant and wildlife species and other sensitive biological resources that could occur in the Proposed Project area:

- California Natural Diversity Database (CDFW n.d.)
- California Sensitive Natural Community List (CDFW 2023)
- California Native Plant Society's (CNPS's) Inventory of Rare and Endangered Plants of California (CNPS n.d.)
- The Calflora Database (Calflora 2023)
- eBird website (eBird, n.d.) (eBird, 2023)
- California Herps: A Guide to the Amphibians and Reptiles of California website (Nafis 2020)
- U.S. Fish & Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) system (USFWS 2023)
- USFWS Critical Habitat GIS dataset (USFWS 2015)
- USFWS recovery plans and status reviews for listed species (USFWS 1998; 2010a; 2010b; 2011; 2013; 2020a; 2020b; 2020c; 2020d; 2020e)
- Habitat modeling for listed species including Tipton Kangaroo rat and blunt nosed-leopard lizard (Prior-Magee and McKerrow 2018)
- USDA Forest Service sensitive plant and animal lists (USDA Forest Service 2013a; 2013b)
- U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) soil survey maps (NRCS Staff n.d.)
- USFWS National Wetland Inventory (USFWS 2024)

Field Surveys

Biological surveys were conducted for sensitive plant and wildlife resources in May of 2017, April and May of 2018, and April 2019[1] (Arcadis U.S., Inc. 2021b). Survey efforts focused on species whose geographic range overlapped the Proposed Project area, had potential habitat present, and had extant, accurate records. Conditions assessed for habitat include vegetation communities, elevation, soils, aquatic resources, and other geologic features.

Special Status Plant Surveys

Botanical surveys for special status plants within the BSA were conducted between May 15 and May 19, 2017, and April 29 and May 2, 2018. Botanical surveys near the Gorman substation were conducted between April 15 and April 19, 2019. Surveys were conducted during the

[1] Surveys are more than four years old. Species assumed or likely to be present within the Proposed Project BSA survey area are listed in Table 3.4-2. Subsequent surveys would be required for special status species prior to construction, including protocol-surveys for blunt-nosed leopard lizard.

appropriate blooming season for target special status plant species that were likely to be present along the Proposed Project subtransmission line alignment (Arcadis U.S., Inc. 2021b).

Special Status Wildlife Surveys

The BSA was surveyed by Arcadis for special status wildlife resources between May 15 and May 19, 2017, and April 29 and May 2, 2018. Additional surveys were conducted near the Gorman substation between April 15 and April 19, 2019 (Arcadis U.S., Inc. 2021b). During the 2017 surveys, three separate teams, each consisting of four wildlife biologists and two botanists (six people in total) surveyed the BSA. The wildlife biologists walked parallel transects generally spaced at 33-foot intervals, contingent on terrain and accessibility, while the botanists conducted meandering transects. Each team had a designated senior biologist who served as a team lead to ensure proper coverage of the survey area. During the 2019 surveys, the Gorman substation area was surveyed by a team of three botanists and two wildlife biologists.

Surveys were primarily focused around each transmission tower location as well as known pulling/tension work areas and staging/laydown yards, with additional meandering surveys along the subtransmission line alignment. When observed, special status plant and wildlife species were positively identified, and *global positioning system* (GPS) data for each observation were collected (Arcadis U.S., Inc. 2021b). Teams also recorded the number of individuals for each observation, and phenology (e.g., blooming status) for plants or breeding status (e.g., nesting, denning) for wildlife was noted. When feasible, reference sites of special status plant species were visited prior to or during special status plant surveys to assess blooming status as well as to review plant characteristics to enhance field identification during surveys. Wildlife surveys also included searching for and identifying species' diagnostic signs, including audible calls, prints, scat, nests, skeletal remains, burrows, and habitat features (e.g., rock or debris piles, cavities, snag trees, rock outcrops) that might attract and/or support special status species. Natural communities mapped during the field surveys (as described below) were evaluated for suitability to support listed special status wildlife species and habitat along with elevation, topography, and other environmental variables.

Burrowing Owl Surveys

A Phase 1 burrowing owl habitat assessment (California Burrowing Owl Consortium 1997) was conducted within the BSA. Phase 2 surveys were conducted at 30-foot intervals within the BSA to detect burrowing owls and burrows within the BSA. Visual surveys were also conducted of an additional buffer of 200 feet on either side of the BSA. This additional visual survey included surveyors positioned at the outer widths of the BSA, extending visual coverage using binoculars for burrowing owls and burrows beyond the BSA. Surveyors documented burrowing owl sightings, burrows, and burrowing owl sign (e.g., whitewash, pellets, feathers). The burrowing owl surveys were conducted to evaluate general habitat suitability and establish presence of the species in the area.

Blunt-nosed Leopard Lizard Habitat Assessment and Focused Surveys

Focused surveys for blunt-nosed leopard lizard were completed in accordance with the protocol requirements listed in "Approved Survey Methodology for the Blunt-Nosed Leopard Lizard"

(CDFW 2019). The focused surveys covered 133.3 acres over seven separate areas of suitable blunt-nosed leopard lizard habitat. The focus area for the surveys was defined by evaluating habitat conditions along the Proposed Project alignment. Areas with steeply sloping terrain and hillsides, developed infrastructure, cattle grazed pastures, and active agricultural lands were omitted from the focus areas. Surveys were conducted at 10-meter transects consistent with CDFW protocols due to the height and density of vegetation to ensure visual coverage of the entire study area. Surveys were conducted between May 26 and September 29, 2023, during the blunt-nosed leopard lizard active period of April to September. The results of the focused survey and habitat assessment are provided in Appendix D.

Tipton Kangaroo Rat Reconnaissance Surveys

McCormick Biological, Inc., conducted a reconnaissance survey for federally and state listed Tipton kangaroo rat (*Dipodomys nitratoides nitratoides*) within the BSA on November 15, 16, and 18, 2021 (McCormick Biological, Inc. 2022). The purpose of this reconnaissance survey was to evaluate the potential for suitable habitat for Tipton kangaroo rat to occur within the Proposed Project area. The survey consisted of a windshield evaluation of the entire Proposed Project alignment and meandering transects within potential habitat where necessary to evaluate suitability. Additionally, certain portions of the alignment, due to lack of access, were evaluated using binoculars. Each portion of the alignment traversing undeveloped lands was evaluated based on habitat conditions, the historic range of Tipton kangaroo rat, and habitat requirements for the species. Only Segment 2 of the Proposed Project was determined to have suitable habitat, based on the presence of kangaroo rat burrows, contiguous undeveloped natural lands, and the location of Segment 2 on or near the eastern edge of the published range for Tipton kangaroo rat. The surveys were not conducted at a protocol level and were not intended to establish presence or absence of the species.

Tehachapi Slender Salamander and Kern Canyon Slender Salamander Surveys

ICF conducted focused surveys for the Tehachapi slender salamander (*Batrachoseps stebbinsi*; TSS), a species listed as threatened under California Endangered Species Act (CESA), and Kern Canyon slender salamander (*Batrachoseps simatus*; KCSS), a species listed as threatened under the CESA and a candidate species for threatened status under the federal Endangered Species Act (FESA). These surveys were conducted within the three focal areas that may contain these sensitive salamanders: Tejon and Stallion Springs, where TSS does or may occur, and the lower Kern River Canyon, where KCSS may occur. Field surveys were conducted between February 12 and March 14, 2024 and efforts were general, non-restricted herpetological surveys within appropriate habitat within the Proposed Project area, generally around the base of towers and along power lines. No TSS were located during the survey efforts. However, KCSS were located at four of the project sites in this area, all representing new localities for the species: M1-T1, M1-T2, M1-T3, and the northern CA 178 Guard Site.

Vegetation Mapping

Vegetation communities were mapped within the BSA using the CDFW-CNPS Protocol for the Combined Vegetation Rapid Assessment (CNPS 2022) and the California Manual of Vegetation, Second Edition (Sawyer, Keeler-Wolf, and Evens 2009), including the updated California

Natural Community List (CDFW 2023). Vegetation was mapped using rapid assessment forms and GPS data collected at the approximate boundary between community types within the BSA. In most cases, the minimum mapping unit followed a 1-acre to 2-acre minimum mapping unit consistent with the National Vegetation Classification Standard for vegetation mapping; however, in some locations, vegetation communities were mapped at a finer scale, especially if a sensitive natural community was observed.

Native Tree Survey

The native tree survey documents the initial assessments conducted by Arcadis between November 15 and 19 and December 7 and 10, 2021, of native trees in all potential disturbance locations within the Proposed Project area as well as associated access roads (Arcadis U.S., Inc. 2021a). Tree assessment data collected includes tree species, locations, number of trunks, *diameter at breast height* (dbh), approximate height, qualitative tree health (i.e., excellent, good, fair, poor, or dead), and current conditions (e.g., fire scars, fungal infestation, trees previously subject to pruning). All native trees with a single trunk at least 8 inches dbh or multiple trunks of greater than 2 inches dbh with a combined dbh of at least 8 inches were documented. The 8-inch dbh size standard was used consistent with the Los Angeles County standard for oak tree permits. A tree was assessed if it occurred within a potential disturbance area or if its canopy touched or overlapped potential disturbance areas or access roads. Non-native trees were not assessed.

Delineation of Wetlands

A delineation of wetlands and other waters of the State was conducted for the BSA in December 2023 and January 2024 (ICF, 2024). The wetland field delineation methodology followed the routine on-site determination method described in the Corps of Engineers Wetland Delineation Manual (USACE 1987) as well as regional approaches identified in the Final Regional Supplement to the Corps of Engineers Wetland Delineation Manual Arid West Region (Version 2.0) (USACE 2008). The boundaries of non-tidal, non-wetland water features were delineated at the OHWM as defined in 33 CFR section 328.3 and in accordance with A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States, A Delineation Manual (Lichvar and McColley 2008).

3.4.3 Environmental Setting

The description of existing conditions for biological resources is an analysis based on the data collection described in Section 3.4.2 and professional judgment of qualified professionals.

Vegetation Communities

Vegetation communities and other land cover types observed during surveys of the BSA are listed in Table 3.4-1, below. The distribution of vegetation types is determined by topography, soils and geology, hydrology, slope exposure, climate, land use history, and fire history. The vegetation types in and around the BSA consist primarily of upland vegetation types, sometimes partially dissected by desert washes, roadways, or developed areas where all or most of the natural vegetation has been removed. Thirty-three vegetation types were identified on or near the Proposed Project area during the 2017–2019 surveys (Arcadis U.S., Inc. 2021b).

Descriptions and locations of all vegetation communities are provided in the Appendix D: Sensitive Species and Habitat Report (Arcadis U.S., Inc. 2021b).

Sensitive Natural Communities and Habitats

Table 3.4-1, below, lists sensitive natural communities mapped within the BSA during surveys. In addition, sensitive natural communities are shown in Appendix D, "Sensitive Vegetation Communities Mapbook", and are described and mapped in the Sensitive Species and Habitat Report, provided in Appendix D. In some cases, a vegetation community alliance is not sensitive but some vegetation associations within the alliance are considered sensitive even though their rarity ranking is S4 (CDFW 2023). In addition to the sensitive natural communities listed in Table 3.4-1, riparian, ephemeral wash, and wetland communities are generally treated as sensitive in California because of the abundance of special status plant and wildlife species that can occupy these habitats even if they are not ranked S3 or above. These additional communities considered sensitive within the BSA include mulefat thickets (*Baccharis salicifolia* Association), Baltic and Mexican rush marshes (*Juncus arcticus* var. *balticus* Association), and salt grass flats (*Distichlis spicata – Hordeum murinum* Association).

Table 3.4-1 Vegetation Communities in the BSA

Vegetation alliance	Vegetation association (or land cover description)	California State rarity ranking
Fremont cottonwood forest and woodland	*Populus fremontii – Salix lasiolepis* Association	S3.2
	Populus fremontii – Salix (laevigata, lasiolepis, lucida subsp. lasiandra) Association	S3.2
Shining willow groves	*Salix lucida* subsp. *lasiandra* Association	S3.2
	Salix lucida subsp. *lasiandra / Urtica urens – Urtica dioica* Association	S3.2
California buckeye groves	*Aesculus californica* Association	S3
California sycamore – coast live oak riparian woodlands	*Platanus racemosa – Salix laevigata / Salix lasiolepis – Baccharis salicifolia* Association	S3
Valley oak riparian forest and woodland	*Quercus lobata – Salix lasiolepis* Association	S3
	Quercus lobata – Salix laevigata Provisional Association	S3
Valley oak woodland and forest	Quercus lobata / Annual Grass-Herb Woodland Association	S3
Goodding's willow – red willow riparian woodland and forest	*Salix laevigata* Association	S3
	Salix laevigata / Salix lasiolepis Association	S3
Blue oak woodland and forest	*Quercus douglasii – Aesculus californica* / grass Association	S4
	Quercus douglasii – Pinus sabiniana Association	S4

Vegetation alliance	Vegetation association (or land cover description)	California State
	Quercus douglasii – Quercus lobata Association	S4 [1]
	Quercus douglasii / Bromus spp. – *Daucus pusillus* Association	S4
	Quercus douglasii / Eriogonum fasciculatum / herbaceous Association	S4
Mixed oak forest and woodland	*Mixed oak – Aesculus californica* / grass Association	S4
Canyon live oak forest and woodland	*Quercus chrysolepis* Association	S5
Scalebroom scrub	*Lepidospartum squamatum* / ephemeral annuals Association	S3
Acton's and Virgin River brittle brush – net-veined goldeneye scrub	*Encelia actonii* Association	S3
California joint-fir – longleaf joint-fir scrub	*Ephedra californica* / annual – perennial herb Association	S3
Arroyo willow thickets	*Salix lasiolepis – Salix lucida* Association	S3
	Salix lasiolepis Association	S4 [1]
Narrowleaf goldenbush – bladderpod scrub	*Cleome isomeris* Association	S4 [1]
Cheesebush – sweetbush scrub	*Ambrosia salsola* Association	S4
Tucker oak chaparral	*Quercus john-tuckeri* Association	S4
Wedge-leaf ceanothus chaparral, buck brush chaparral	*Ceanothus cuneatus* Association	S4
Mulefat thickets	*Baccharis salicifolia* Association	S5[2]
California buckwheat scrub	*Eriogonum fasciculatum* Association	S5
Rubber rabbitbrush scrub	*Ericameria nauseosa* Association	S5
Tamarisk thickets	*Tamarix* spp. Association	none
Yerba mansa – Nuttall's sunflower – Nevada goldenrod alkaline wet meadows	*Anemopsis californica* Provisional Association	S2
	Solidago (*confinis, spectabilis*) Provisional Association	S2
American bulrush marsh	*Schoenoplectus americanus / Lepidium latifolium* Association	S3.2

Vegetation alliance	Vegetation association (or land cover description)	California State rarity ranking
Ashy ryegrass – creeping ryegrass turfs	*Leymus triticoides – Bromus* spp. – *Avena* spp. Association	S3
Common monkey flower seeps	*Mimulus guttatus* Association	S3
Needle grass – melic grass grassland	*Nassella cernua* Association	S3S4 [1]
Baltic and Mexican rush marshes	*Juncus arcticus* var. *balticus* Association	S4 [2]
Saltgrass flats	*Distichlis spicata – Hordeum murinum* Association	S4 [2]
Wild oats and annual brome grasslands	*Bromus diandrus* – Mixed herbs Association	none
	Bromus hordeaceus – Amsinckia menziesii – Hordeum murinum Association	none
Red brome or Mediterranean grass grasslands	*Bromus rubens* – Mixed herbs Association	none
Cheatgrass – medusahead grassland	*Bromus tectorum – Bromus diandrus* Association	none
Perennial pepper weed – prickly lettuce patches	*Lepidium latifolium* Association	none

Notes:

1. Alliance is not sensitive, but the Association is designated as sensitive on the 2020 CDFW Natural Community List

2. Vegetation community not considered sensitive by state rank but generally considered sensitive in California Alliance rarity rankings (CDFW 2023; Sawyer, Keeler-Wolf, and Evens 2009)

NatureServe state rarity ranks:

S1: Fewer than 6 viable occurrences statewide and/or up to 518 hectares

S2: 6 to 20 viable occurrences statewide and/or 518 to 2,590 hectares

S3: 2 to 100 viable occurrences statewide and/or 2,590 to 12,950 hectares

S4: Greater than 100 viable occurrences statewide, and or more than 12,950 hectares

S5: Demonstrably secure because of its statewide abundance

Additional threat ranks:

.1: Very threatened

.2: Threatened

.3: No current threat known

Source: (Arcadis U.S., Inc. 2021b)

Special Status Species

The full list of potentially occurring special status plant and wildlife species that was developed for the biological field surveys can be found in the Sensitive Species and Habitat Report

contained in Appendix D (Arcadis U.S., Inc. 2021b). Additional assessments for special status plant and wildlife species were conducted with reviews of publicly available databases and subsequent field surveys as described above. The probability of occurrence in the BSA was determined for each of these species using the following criteria:

- **Present:** Species detected during recent surveys within the BSA.
- **High potential:** Species with known recent (i.e., last 25 years) recorded occurrences/populations in the BSA or nearby and for which highly suitable habitat occurs within the BSA. Suitable habitat includes all necessary elements to support the species (e.g., habitat type, cover, food resources).
- **Moderate potential:** Species with known recent (i.e., last 25 years) recorded occurrences/populations nearby but for which suitable habitat in the BSA is moderately disturbed. Suitable habitat could be fragmented or small in size. A "moderate potential" determination was also made when suitable habitat occurs within the BSA but the Proposed Project area is at the edge of the species' range or when there are no reported occurrences nearby.
- **Low potential.** Species with few known recent (i.e., last 25 years) recorded occurrences/populations nearby and for which suitable habitat within the BSA is highly disturbed or extremely limited. "Low potential" was determined when a species has known historical (i.e., more than 25 years) recorded occurrences/populations from the site or nearby but suitable habitat in the BSA has been severely reduced or disturbed since past documentation as well as when a potentially suitable habitat for the species is present within the BSA but the reported extant range is far outside the BSA.
- **Absent.** Species with no known occurrences or suitable habitat in the BSA.

Special status plant and wildlife species with a moderate or high potential to occur in the BSA are identified in Table 3.4-2, below. Descriptions of these species and their habitat requirements are provided in Appendix D, "Special Status Species Considered within the Proposed Project Area". Details about observed special status species, including habitat requirements, species descriptions, and life history are provided in Appendix D: Sensitive Species and Habitat Report (Arcadis U.S., Inc. 2021b). Locations of special status species observations are provided in Appendix D, "Biological Resources Mapbook".

Table 3.4-2 Special Status Species with Moderate to High Potential to Occur in the Proposed Project BSA

Species	Conservation status	Habitat requirements	Number observed or nearest occurrence	Potential to occur
Plants				
Adobe yampah (*Perideridia pringlei*)	CRPR4.3	Serpentinite soils in chaparral, cismontane woodland, coastal scrub, and pinyon juniper woodland at elevations ranging from 300 to 1,800 feet Blooming period: April–June	Three observations totaling 50 individuals in Segment 4	Present
Bakersfield cactus (*Opuntia basilaris* var. *treleasei*)	FE CE CRPR1B.1	Sandy or gravelly substrate in chenopod scrub, cismontane woodland, and valley and foothill grassland at elevations ranging from 400 to 4,760 feet Blooming period: March–May	Two observations totaling 300 individuals in Segment 1	Present
Calico monkeyflower *(Mimulus pictus)*	CRPR 1B.2	Open areas in granitic soils between 440 and 4,100 feet, often with blue oak and oak gooseberry nearby. Blooming period: March–May	Seven observations totaling 15 individuals in Segment 4	Present
Comanche Point layia *(Layia leucopappa)*	CRPR 1B.1	Vernally wet, whitish clay soils on flats in chenopod scrub and grassland vegetation at elevations ranging from 330 to 1,050 feet Blooming period: March–April	Nine CNDDB records in the southern end of the San Joaquin Valley within 1 mile of the Proposed Project area; one occurrence recorded 0.25 mile east of the BSA in 2016	Moderate
Fort Tejon woolly sunflower *(Eriophyllum lanatum* var. *hallii)*	USFS-S CRPR 1B.1	Rocky soils in foothill woodland and chaparral at elevations ranging from 3,500 to 4,670 feet Blooming period: May–August	Nearest occurrence recorded 2004, 4 miles east of Segments 2 and 3, northeast of Castac Lake	Moderate
Kern mallow (*Eremalche parryi* subsp. *kernensis*)	FE CRPR 1B.2	Dry sandy to clay soils in pinyon juniper woodlands, foothill, and valley grasslands and at the edges of chenopod scrublands at elevations ranging from 330 to 3,300 feet Blooming period: March–May	One observation in Segment 1 with 150 individuals and a second observation of one individual located near Comanche Point in Segment 4	Present

Species	Conservation status	Habitat requirements	Number observed or nearest occurrence	Potential to occur
Palmer's mariposa lily (*Calochortus palmeri* var. *palmeri*)	USFS S CRPR 1B.2	Moist areas in chaparral, lower montane coniferous forest, and meadows and seeps at elevations ranging from 2,330 to 7,200 feet Blooming period: April–July	One 2014 CNDDB record approximately 0.75 mile southeast of Segment 2 at Comanche Point, and one 2013 record 0.65 mile southwest of the Gorman substation in Segment 3	Moderate
Piute Mountains navarretia *(Navarretia setiloba)*	USFS S CRPR 1B.1	Depressions in gravelly loam to clay soils in valley and foothill grasslands, oak and foothill woodlands, and pinyon juniper woodlands at elevations ranging from 1,640 to 6,900 feet Blooming period: April–July	Seven observations totaling 313 individuals, located within Segments 1, 2, and 4	Present
San Joaquin adobe sunburst *(Pseudobahia peirsonii)*	FT CE CRPR 1B.1	Heavy adobe clay soils in grasslands and woodlands along the eastern and southern margins of the San Joaquin Valley and adjacent foothills at elevations ranging from 320 to 3,000 feet Blooming period: March–May	One 2016 CNDDB record 3 miles southeast of Segment 4 in the western Tehachapi Mountains east of Comanche Point; additional observations in this portion of the Tehachapi Mountains reported in CCH	Moderate
San Joaquin bluecurls *(Trichostema ovatum)*	CRPR 4.2	Disturbed sites in chenopod scrub and valley and foothill grassland at elevations from 215 to 1,050 feet Blooming period: June–October	Over 7,500 individuals observed in 17 locations in Segment 1 near the Kern River drainage	Present
Tejon poppy (*Eschscholzia lemmonii* subsp. *kernensis*)	CRPR 1B.1	Heavy clay soils in grasslands and chenopod scrub at elevations ranging from 650 to 3,300 feet Blooming period: March–May	Six CNDDB records within 2 miles of the Proposed Project area; one 2002 record overlapping Segment 2 within Fort Tejon State Historic Park; Two records reported within 0.7 mile east of Segment 2 on slopes above Comanche Point: one in 2012 and one in 2017	High

Species	Conservation status	Habitat requirements	Number observed or nearest occurrence	Potential to occur
Tracy's eriastrum *(Eriastrum tracyi)*	USFS-S CRPR 3.2	Rocky shale or clay soils in chaparral and woodlands at elevations ranging from 1,310 to 5,840 feet Blooming period: April–June	Five 2007 CNDDB records northeast and southeast of Castac Lake, mostly upslope from Segment 3, with closest occurrence within 0.5 mile of Segment 3 near the Crane Valley	Moderate
Invertebrates				
Crotch's bumble bee (*Bombus crotchii*)	SC	Suitable habitat for the Crotch's bumble bee includes grasslands and shrublands supporting their preferred pollinator plants including buckwheat (*Eriogonum*), milkweed (*Asclepias*), lupine (*Lupinus*), poppy (*Eschscholzia*), and pincushion (*Chaenactis*)	Historic locations include the Cummings and Tehachapi Valleys, the area near Grapevine, Fort Tejon State Historic Park, and near the Gorman substation.	High
Monarch butterfly-California Overwintering Population *(Danaus plexippus plexippus)*	FC USFS S	Suitable roosting habitat includes eucalyptus or other roost trees with similar structure that enables the monarch butterflies to cluster and remain warm through the winter months, with a nearby source of nectar. Requires milkweed (*Asclepias* spp.) as host plants for caterpillars.	One individual was observed in the southern portion of Segment 2 north of the mouth of Grapevine Canyon.	Present
Amphibians				
Tehachapi slender salamander *(Batrachoseps stebbinsi)*	CT	Wet canyons supporting woodlands and forests on north-facing slopes and near streambanks that are seasonally shaded	Recent CNBBD record approximately 0.02 mile northeast of the BSA, along Grapevine Creek in Segment 2	High
Kern Canyon slender salamander (*Batrachoseps simatus*)	CT, FC	Inhabit north-facing riparian areas in narrow canyons shaded with willows and cottonwoods, as well as wooded hillsides supporting oaks and pines near wet creek margins, seeps, talus and exposed chaparral	Four observed in Segment 1 along the Kern River within the Kern River Canyon. Overlaps with the BSA.	Present

Species	Conservation status	Habitat requirements	Number observed or nearest occurrence	Potential to occur
Western spadefoot *(Spea hammondii)*	SSC FC	Primarily, grassland habitats in open areas within woodlands, shrublands, washes, and floodplains in sandy or gravelly soils; vernal pools and seasonal ponds essential for breeding	Two western spadefoot adults observed in Segment 4 at the edge of a stock pond located 0.01 mile away	Present
Yellow-blotched salamander (*Ensatina eschscholtzii croceater*)	USFS-S WL	Evergreen and deciduous forests, under rocks, logs, and other surface debris, especially on shaded north-facing areas near creeks or streams	Recent occurrences overlapping the BSA within Fort Tejon State Historic Park and 2 miles north of the Gorman substation.	High
Reptiles				
Bakersfield legless lizard *(Anniella grinnelli)*	SSC	Moist, loose soils within leaf litter and debris coverings; sparsely vegetated areas of dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces with sycamores, cottonwoods, or oaks	Recent CNDDB record reported approximately 0.2 mile east of the BSA in Caliente Creek in the Sand Ridge Preserve	Moderate
Blunt-nosed leopard lizard *(Gambelia sila)*	FE CE CFP	Rodent burrows for utilization as shelter and sparse vegetation in grassland and low scrub habitat with low topographic relief for forage; often along washes and drainages in well-drained soils	Recent occurrences within 0.5 to 1 mile; suitable habitat in the BSA in annual grassland and open scrub habitat in the San Joaquin Valley, foothills of the Tehachapi Mountains north and south of Comanche Point, and near the California aqueduct between Wheeler Ridge and Grapevine. No BNLL were observed during focused surveys in 2023.	High
California legless lizard *(Anniella pulchra)*	SSC	Cool, moist sandy or loamy substrates, especially with a layer of leaf litter, such as open stream terraces with deciduous overstory	Recent CNDDB occurrence record 1.8 miles east of the Gorman substation	Moderate

Species	Conservation status	Habitat requirements	Number observed or nearest occurrence	Potential to occur
Coastal whiptail (*Aspidoscelis tigris stejnegeri*)	SSC	Desert to semi-arid areas with sparse vegetation, including chaparral, woodland, and riparian habitats	Recent CNDDB occurrence record of an adult approximately 1.8 miles east of the BSA in the Tehachapi Mountains east of the Gorman substation	Moderate
Coast horned lizard (*Phrynosoma blainvillii*)	SSC	Sandy washes and friable soils in areas with scattered low shrubs in a variety of vegetation types, including grasslands, shrublands, and woodlands	Recent CNDDB occurrence record 0.1 mile east of the alignment in the Tehachapi Mountains between Castac Lake and the Gorman substation	Moderate
San Joaquin coachwhip (*Masticophis flagellum ruddocki*)	SSC	Open, dry, and treeless areas with little or no cover, including valley grassland and saltbush scrub	Two San Joaquin coachwhips were observed during focused BNLL surveys conducted in spring 2023. One individual was found on Comanche Point Front and the other on Comanche T-Segment.	Present
Southern California legless lizard (*Anniella stebbinsi*)	USFS-S SSC	Moist warm loose soil with plant cover; sparsely vegetated areas of beach dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces with sycamores, cottonwoods, or oaks	Recent CNDDB occurrence record in 2008 reporting one individual 0.7 mile south of Mt. Adelaide summit, east of Segment 1	Moderate
San Bernadino ringneck snake (*Diadophis punctatus modestus*)	USFS-S	Moist habitats such as wet meadows, rocky hillsides, gardens, farmland, grassland, chaparral, mixed coniferous forests, woodlands	One adult observed in 2000 in Live Oak Canyon, Pastoria Creek near Segment 2	Moderate

Species	Conservation status	Habitat requirements	Number observed or nearest occurrence	Potential to occur
Birds				
Bald eagle (*Haliaeetus leucocephalus*)	USFS-S CE CFP	Large trees, snags, and sometimes cliffs for nesting, along large rivers, lakes, and reservoirs	Recent CNDDB occurrence records overlapping the BSA near Edmonston Pumping Plant Road and the California Aqueduct, including wintering eagles; numerous eBird observations within Kern River Canyon, Caliente Creek, Brite Lake, Grapevine Creek, Castac Lake, and Quail Lake to the east of the Gorman substation; no occurrence records of nesting	High
Burrowing owl (*Athene cunicularia*)	BCC SSC	Gently sloping to flat, open terrain with sparse low-growing vegetation, often in association with burrowing mammals	One burrowing owl and two active burrow observations in Segment 4 southeast of Arvin and east of the California Aqueduct	Present
California condor (*Gymnogyps californianus*)	FE CE CFP	Large areas of open foothill grassland, oak savannas and woodlands, rocky shrublands, and coniferous forests below 9,000 feet; caves and cliff ledges, often in deep canyons, for nesting	Recent CNDDB and eBird occurrence records within the BSA, including a 2015 eBird observation of 19 condors less than 0.6 mile south of Segment 4 near Stallion Springs as well as in Grapevine Canyon; no nesting habitat within 2.5 miles; critical habitat occurs within portions of the Proposed Project area	High
California horned lark (*Eremophila alpestris actia*)	WL	Inhabits open grassland or herbaceous dominated vegetation areas or within scattered low shrubs; nests generally found on the ground in depressional areas	One observation within the BSA in an agricultural field north of the California Aqueduct at the southern end of the San Joaquin Valley	Present

Species	Conservation status	Habitat requirements	Number observed or nearest occurrence	Potential to occur
Cooper's hawk (*Accipiter cooperii*)	WL	Forest species, generally among woodlands; nest sites mainly in riparian growths of deciduous trees, such as canyon bottoms on river floodplains and live oaks	Two separate individuals observed flying within the BSA, one near Castac Lake and the other in the San Joaquin Valley at the base of the Grapevine	Present
Costa's hummingbird *(Calypte costae)*	BCC	Mostly dry and open habitats having a good variety of plant life, such as washes and streams in deserts, lower parts of dry canyons, and coastal sage scrub	One individual observed within the BSA in an open area in mixed oak woodland north of Fort Tejon State Historic Park	Present
Ferruginous hawk (*Buteo regalis*)	WL	Very open and dry country, including dry grassland, sagebrush plains, saltbush and greasewood flats, rangeland, and desert; in winter, also agricultural country, including over plowed fields	One CNDDB occurrence record from 2004 in the BSA east of Segment 5 on Tejon Ranch	High
Golden eagle (*Aquila chrysaetos*)	CFP WL	Cliff-walled canyons for nesting; large trees and open areas within foothills, mountain areas, sage-juniper flats, and deserts	One eagle and one active, occupied nest observed in a tower located on an adjacent alignment within 0.1 mile of the BSA; two individuals observed in Crane Canyon along Segment 3	Present
Grasshopper sparrow (*Ammodramus savannarum*)	SSC	Rather dry fields and prairies, especially those with fairly tall grass and weeds and a few scattered shrubs; also, nesting in overgrown pastures and hayfields and sometimes in fields of other crops	One CNDDB occurrence record from 2004 in the BSA west of Quail Lake near the Gorman substation	High
Loggerhead shrike (*Lanius ludovicianus*)	SSC	Lowlands and foothills; open habitats with scattered shrubs, trees, posts, fences, utility lines, or other perches	Two loggerhead shrikes observed within the BSA: one foraging in Blue Oak Woodland above Little Sycamore Canyon in the western Tehachapi Mountains and one foraging in a wash supporting mulefat thickets just southeast of Grapevine	Present

Species	Conservation status	Habitat requirements	Number observed or nearest occurrence	Potential to occur
Northern harrier (*Circus hudsonius*)	BCC SSC	Freshwater and coastal salt marshes as well as grasslands and open scrub habitats	One individual observed foraging within the BSA west of Castac Lake	Present
Oregon vesper sparrow (*Pooecetes gramineus affinis*)	BCC SSC	In winter, primarily lowlands such as those south of San Francisco Bay and west of the Sierra Nevada; for foraging, grasslands, meadows, pastures, and roadsides	One adult observed foraging in a mosaic of annual brome grasslands and scattered bladderpod shrubs southeast of Grapevine at the base of the Tehachapi Mountains	Present
Prairie falcon (*Falco mexicanus*)	WL	Wide variety of habitats including perennial grasslands, rangeland, agricultural fields, and desert areas; require sheltered cliff ledges for cover and will usually nest on cliff ledges that overlook large, open areas	Four prairie falcons observed flying over the BSA; two observed south of the Kern River and northeast of Edison, one southeast of Arvin and west of Bear Valley Springs, and one near Grapevine	Present
Purple martin *(Progne subis)*	SSC	Woodland edges, clearings in mountain forest, and lowland desert with giant saguaro; for nesting, cavities in trees, often in old woodpecker holes, or large cactus	One individual observed sitting on a power line 2.4 miles southeast of Power Line Road in Arvin; nearest nest to the BSA observed near Grapevine Peak less than 1 mile to the east	Present
Swainson's hawk (*Buteo swainsoni*)	CT	For foraging, grasslands with scattered trees, riparian areas, savannas, and agricultural fields that support rodent populations; for nesting, solitary trees or small groves of trees along streams or fields	One individual observed flying over the BSA near Tejon Creek in Segment 2; numerous eBird observation records within the BSA near Segment 1 between Kern River Canyon and Arvin, around Stallion Springs in Segment 4, and from Wheeler Ridge to Gorman in Segments 2 and 3	Present

Species	Conservation status	Habitat requirements	Number observed or nearest occurrence	Potential to occur
Tri-colored blackbird *(Agelaius tricolor)*	BCC CT SSC	Wetlands, swamps, and cattail or tule marshes; for foraging, fields and farms; for nesting, marsh habitats in bulrushes, willows, or other riparian vegetation at the water's edge, sometimes in tall growth in drier fields	Eight individuals observed in marshes along Grapevine Creek in Segment 2	Present
White-faced ibis *(Plegadis chihi)*	WL	For foraging, marshes, flooded pastures, and irrigated fields, including salt marsh but with preference for freshwater marsh; for nesting, dense marsh or low shrubs and trees over water	One individual observed north of Castac Lake in Segment 2	Present
Vaux's swift (*Chaetura vauxi*)	BCC SSC	For nesting, typically coniferous or mixed hardwood forest; for foraging, forest openings, especially above streams and in old growth stands with large hollow trees and snags	One individual observed foraging on the west side of Castac Lake in Segment 3	Present
Yellow warbler (*Setophaga petechia*)	SSC	For foraging, shrubby thickets and woodlands, particularly along watercourses and in wetlands; for nesting, trees including willows, alders, and cottonwoods	One individual observed foraging on the west side of Castac Lake in Segment 3	Present
Mammals				
American badger *(Taxidea taxus)*	SSC	Grasslands, shrub steppe, desert, dry forest, parkland, and agricultural areas; for denning, friable soils that allow the excavation of den sites and support burrowing prey species	No individuals observed within the BSA; three active dens observed: one near a tributary to Cottonwood Creek in Segment 1 and two on the north-facing slopes of the Tehachapi Mountains in Segment 3	Present

Species	Conservation status	Habitat requirements	Number observed or nearest occurrence	Potential to occur
Pallid bat (*Antrozous pallidus*)	USFS S, SSC	Rocky outcrop areas in open, desert, grassland, shrubland, woodland, and forest communities where they commonly roost in rock crevices, caves, and mine tunnels and man-made structures	Observed roosting under the railroad trellis over Caliente Creek 2 miles upstream of Hwy 58 near Segment 1.	Moderate
San Joaquin kit fox (*Vulpes macrotis mutica*)	FE, CT	Desert and grasslands such as those found in California's San Joaquin Valley, with preference for minimal shrubs and grasses; for denning, may use dens constructed by other animals or human-made structures such as culverts or abandoned pipelines	Potential active burrow observed within the BSA at the base of the western foothills of the Tehachapi Mountains in Segment 2; one individual observed in the BSA in Crane Canyon in Segment 3	Present
Tipton kangaroo rat (*Dipodomys nitratoides nitratoides*)	FE, CE	Grasslands and scrub communities; soft friable soils in areas not subject to seasonal flooding areas	One recent CNDDB occurrence record from 1999, 0.8 mile from the BSA; burrows observed within the BSA, in Segments 1 and 2	Moderate

Notes:

Federal/state listing abbreviations:

- FE: Federally listed as endangered
- FT: Federally listed as threatened
- FC: Candidate for federal listing
- CE: State of California listed as endangered
- CT: State of California listed as threatened
- BCC: USFWS Bird of Conservation Concern
- USFS-S: USDA Forest Service sensitive
- CFP: CDFW fully protected
- SSC: CDFW Species of Conservation Concern
- SC: Candidate for State listing
- WL: CDFW Watch List

California Rare Plant rarity rankings:

- 1B: Rare, threatened, or endangered in California and elsewhere
- 2B: Rare, threatened, or endangered in California, but more common elsewhere
- 4: Limited distribution
- X.1: Seriously threatened in California (>80% threatened/high degree of threat)
- X.2: Fairly threatened in California (20%–80% threatened/moderate degree of threat)
- X.3: Not very threatened in California (<20% threatened/low degree of threat)

SOURCE: (CDFW n.d.; Arcadis U.S., Inc. 2021b; Calflora 2023; eBird, n.d.; McCormick Biological, Inc. 2022; MESA Biological LLC 2023; USFWS 2023; WBWG n.d.)

Wetlands and Riparian Areas

The total area of wetlands and riparian areas that were observed within the BSA are summarized in Table 3.4-3. In addition to wetlands, riparian areas occur along streams and tributaries within the BSA, as shown in Appendix D, "Jurisdictional Waters Mapbook". Additional information on wetlands and riparian areas is provided in the Wetlands and Other Waters Jurisdictional Delineation Report, provided in Appendix D (ICF, 2024).

Table 3.4-3 Wetlands and Riparian Areas within the BSA

Wetlands and riparian areas	Acres
Wetlands	1.718
Riparian areas	18.706

Source: (ICF, 2024)

Native Trees

Native trees documented in the Proposed Project area and along associated access roads are summarized in Table 3.4-4 (Arcadis U.S., Inc. 2021a). Native tree locations are shown in Appendix D, "Biological Resources Mapbook".

Table 3.4-4 Native Trees in the Proposed Project BSA and Work Areas

Species	Total native trees in the BSA	Live trees within anticipated work areas	Dead trees within anticipated work areas	Trees rooted outside work areas
Arroyo willow (*Salix lasiolepis*)	47	44	none	3
Blue elderberry *(Sambucas nigra* subsp. *caerulea)*	17	14	none	3
Blue oak (*Quercus douglasii*)	1,008	629	50	329
Box elder (*Acer negundo*)	4	4	none	none
California buckeye (*Aesculus californica*)	43	19	none	24
California juniper (*Juniperus californica*)	6	6	none	none
California sycamore *(Platanus racemosa)*	13	10	none	3
Canyon live oak (*Quercus chrysolepis*)	8	1	1	6
Common buttonbush (*Cephalanthus occidentalis*)	1	none	none	1

Species	Total native trees in the BSA	Live trees within anticipated work areas	Dead trees within anticipated work areas	Trees rooted outside work areas
Foothill pine (*Pinus sabiniana*)	21	16	none	5
Fremont cottonwood *(Populus fremontii)*	91	73	3	15
Goodding's black willow *(Salix gooddingii)*	6	5	none	1
Interior live oak (*Quercus wislizeni var. wislizeni*)	32	26	2	4
Red willow (*Salix laevigata*)	203	157	27	19
Shining or yellow willow *(Salix lucida* or *S. lasiandra)*	4	2	1	1
Valley oak (*Quercus lobata*)	152	87	9	56
Velvet ash (*Fraxinus velutina*)	7	7	none	none
Unknown oak (*Quercus* spp.)	11	1	10	none
Unknown willow (*Salix* spp.)	8	none	8	none
Unknown dead tree	7	none	7	none
TOTAL	**1,689**	**1,101**	**118**	**470**

Source: (Arcadis U.S., Inc. 2021a)

Critical Habitat

Critical habitat designated for the California condor (*Gymnogyps californianus*) overlaps part of Segment 2 in the Tehachapi Mountains north of Fort Tejon State Historic Park, and a small portion overlaps Segment 3 in Crane Canyon (USFWS 2015). Additional critical habitat for the California condor occurs south of Segments 4 and 5 west of Cummings Mountain but does not overlap the Proposed Project area. Proposed critical habitat for the Kern Canyon slender salamander (*Batrachoseps simatus*) and the relictual slender salamander (*Batrachoseps relictus*) is located in Kern River Canyon, near the Kern River substation and northern terminus in Segment 1 but does not overlap with the Proposed Project area. Figure 3.4-1 shows the locations of designated and proposed critical habitats within 5 miles of the Proposed Project area.

Habitat Conservation Plans and Natural Community Conservation Plans

Tehachapi Uplands Multiple Species Habitat Conservation Plan

The Tehachapi Uplands Multiple Species Habitat Conservation Plan (TUMSHCP) is intended to protect wildlife habitat and enhance species conservation on 141,866 acres of Tejon Ranch lands and is the first such plan to focus primarily on conserving habitat for the California condor. It includes a conservation strategy intended to avoid, minimize, and mitigate to the maximum

extent practicable any impacts that would occur to covered species as the result of the covered activities. The plan covers 27 listed and unlisted species that may be taken or otherwise affected by ongoing ranch activities and future low-density residential and commercial development activities on a portion of the Tejon Ranch. Under the plan, and consistent with the Tejon Ranch Conservation and Land Use Agreement between Tejon Ranch and the Sierra Club, National Audubon Society, Natural Resources Defense Council, Endangered Habitats League, and Planning and Conservation League, no land development would be allowed within approximately 93,522 acres of covered lands, including a designated California condor study area. The areas covered by the TUMSHCP include Tejon Ranch lands and the areas of preserve lands defined for Tejon Ranch, as shown in Figure 3.4-2 are consistent with the TUMSHCP preserve areas. The TUMSHCP assumed development would be clustered near I-5.

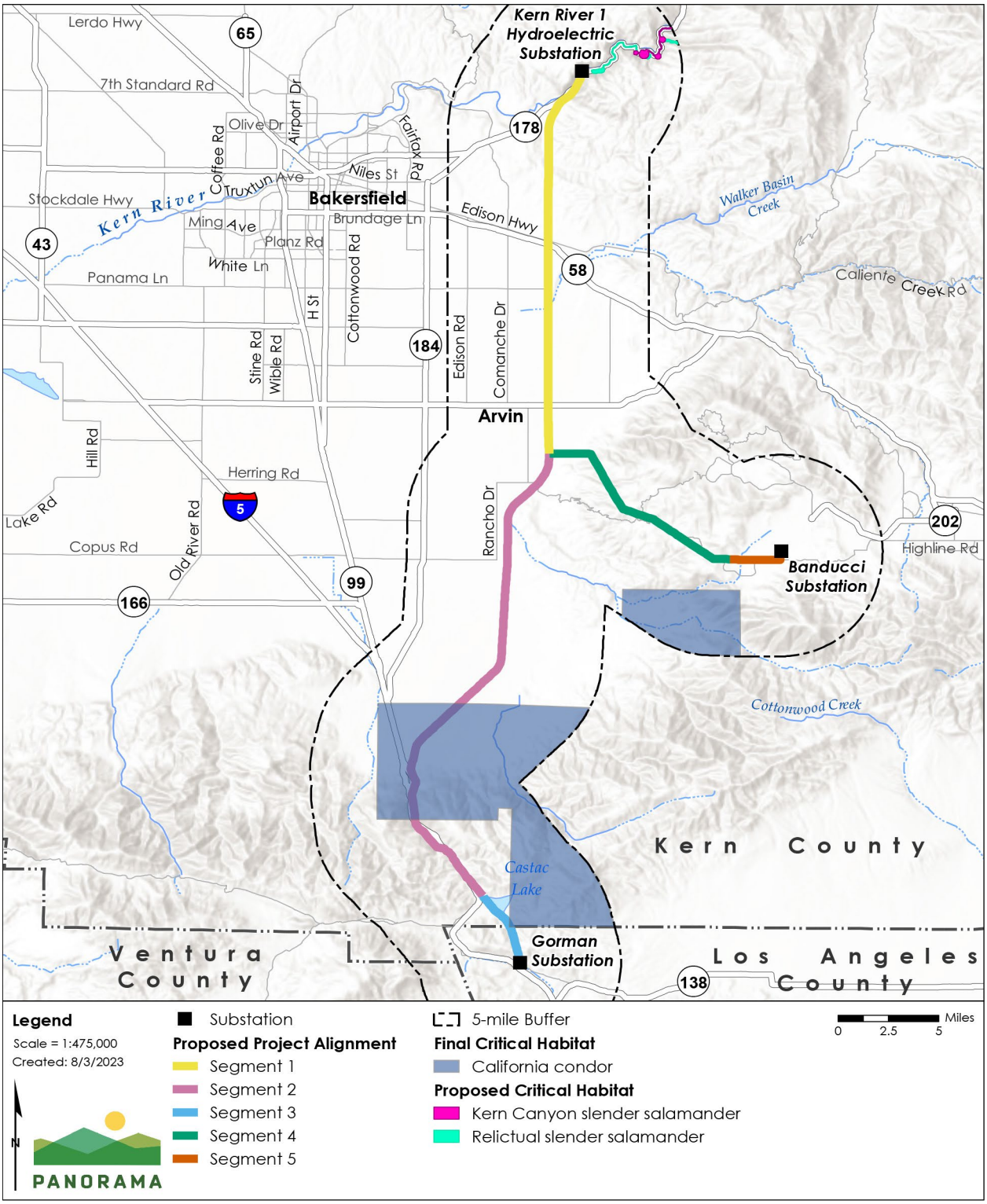
Preserve Areas

Preserve areas and conservation easements within the Proposed Project area and vicinity are shown in Figure 3.4-2. Portions of Segment 1 are located in the Bakersfield Cactus Ecological Reserve and Sand Ridge Reserve. A portion of Segment 1 near the Kern River substation is within a Sequoia Riverlands Trust conservation easement, and a Portion of Segment 3 is within the Tejon Ranch Conservancy.

Wildlife Corridors

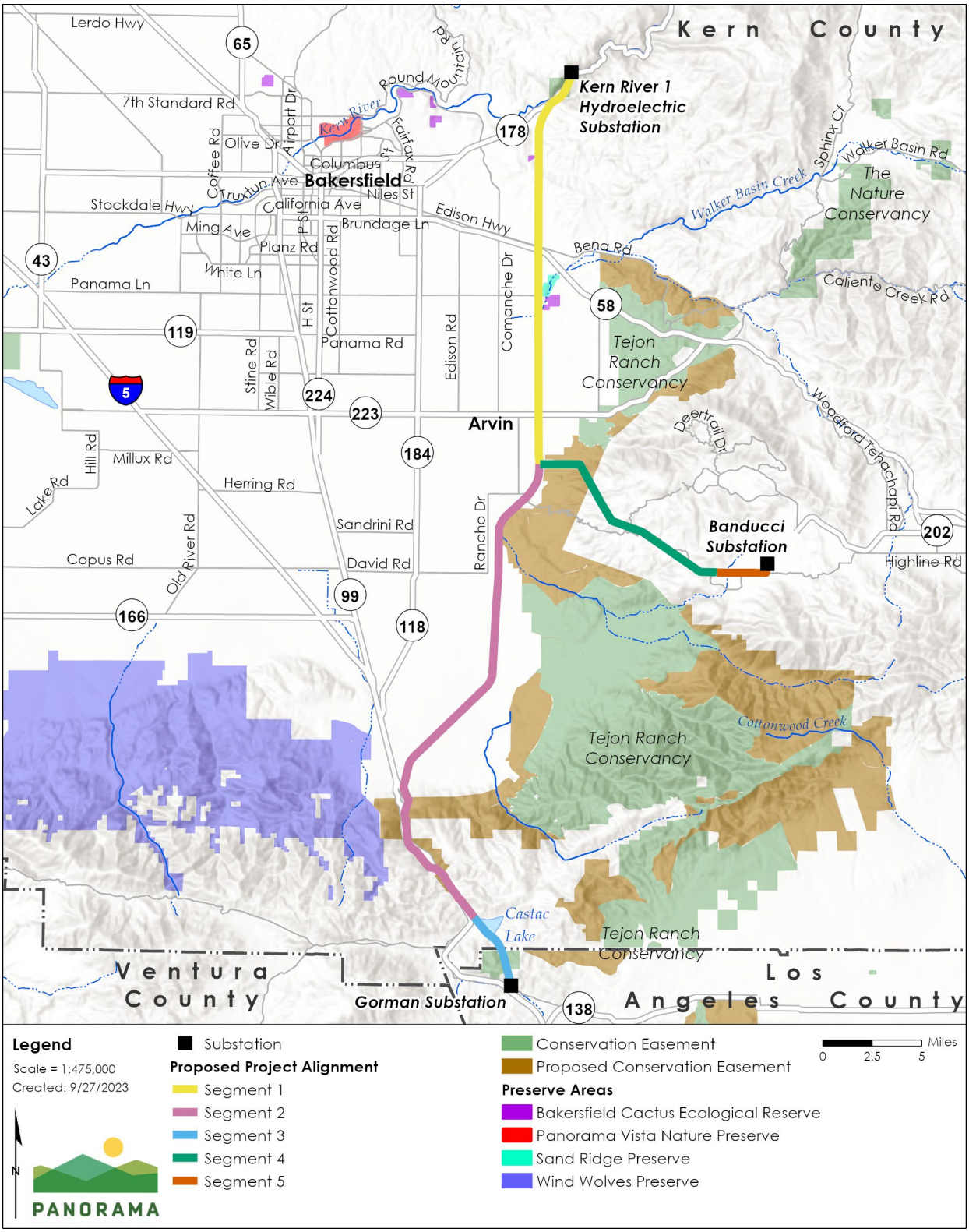
A *wildlife corridor* is a landscape feature that connect suitable habitat in regions otherwise fragmented by rugged terrain, changes in vegetation, or human development.

Figure 3.4 1 Critical Habitat within the Proposed Project Vicinity



Source: (USFWS 2015)

Figure 3.4-1 Preserve Areas within the Proposed Project Vicinity



Source: (GreenInfo Network 2022b); Preserve Areas (GreenInfo Network 2022a)

Migrating avian species use habitats within the Proposed Project area as stopovers on their journey to wintering sites and nesting areas. Other terrestrial species utilize canyons and natural drainages that intersect the Proposed Project area and extend from the San Joaquin Valley to higher elevations in the Tehachapi Mountains. Kern River Canyon at the northern end of Segment 1 and Crane Canyon through the Tehachapi Mountains at the southern end of Segment 2 are also significant migration corridors for many species. The northwestern end of the San Andreas Significant Ecological Area (SEA) also overlaps the southern portion of Segment 3 (as shown in Figure 3.4-3). The San Andreas SEA is an important habitat linkage between the Santa Clara River Watershed, San Gabriel Mountains, Antelope Valley, and Tehachapi Mountains (Los Angeles County Department of Regional Planning 2022).

3.4.4 Applicable Regulations, Policies and Standards

Federal, state, and local regulations were reviewed for applicability to the Proposed Project.

Federal

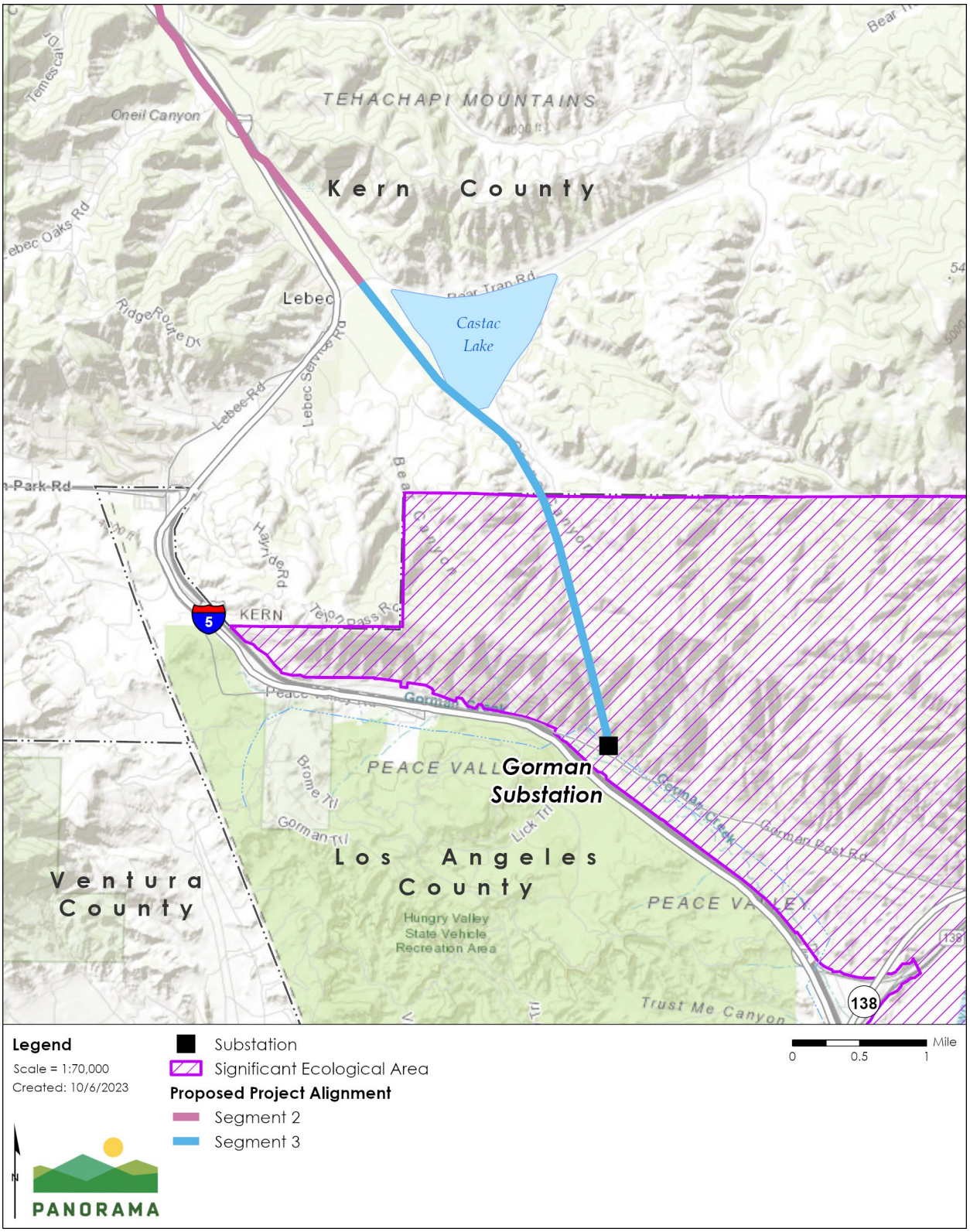
Endangered Species Act

The federal ESA (16 U.S.C. §§ 1531 et seq.) provides protection for plants and animals listed as threatened or endangered by USFWS and the National Marine Fisheries Service (NMFS). Section 9 of the ESA (50 CFR § 17.3) prohibits the take, possession, sale, or transport of any federal ESA-listed species. *Take* is defined as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct" (16 U.S.C. § 1532(19)). Code of Federal Regulation title 50 part 17.3 further defines the term *harm* in the definition of *take* to mean any act that actually kills or injures a federally listed species, including significant habitat modification or degradation. (50 C.F.R. § 17.3(c)(3)). For endangered species of plants, the federal ESA prohibits removing, cutting, digging up, damaging, or destroying any listed plant on areas under federal jurisdiction as well as on non-federal land in knowing violation of state law. (16 U.S.C. § 1538(a)(2)(B).)

The federal ESA requires the federal government to designate critical habitat for any species listed under the federal ESA but also allows areas to be excluded from critical habitat. (16 U.S.C. § 1533(b)(2)). *Critical habitat* is a specific area occupied by the species that is "essential for the conservation" of a threatened or endangered species and that "may require special management considerations or protection." (16 U.S.C. § 1532(5)(A)(i)). Critical habitat may also include specific areas outside the geographical area occupied by the species if the agency determines that the area itself is essential for conservation. (16 U.S.C. § 1532(5)(B)).

Section 7 of the federal ESA requires federal agencies to consult with USFWS and/or NMFS for any federal activity that may affect any federally listed species or its critical habitat. (16 U.S.C. § 1536.) Section 10 of the ESA provides for issuance of incidental take permits for private actions that have no federal involvement through the development of a Habitat Conservation Plan (HCP). (16 U.S.C. § 1539.) Effects to federally listed species with no lead federal agency require preparation of an HCP, management agreement, and an analysis prepared in compliance with NEPA.

Figure 3.4-2 Significant Ecological Areas within the Proposed Project Vicinity



Source: (Los Angeles County Department of Regional Planning 2019)

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 U.S.C. §§ 703 et seq.) prohibits the take of protected migratory bird species without prior authorization by the USFWS. *Take* is defined broadly under the MBTA to include actions to pursue, hunt, capture, kill, collect, possess, sell, barter, and/or transport migratory birds, or to attempt such activities. (16 U.S.C. § 703(a).) *Take* refers to both live and deceased birds and their parts, including feathers, nests, and eggs. The list of migratory bird species protected by the law is published by USFWS and was most recently updated in 2020. (50 CFR § 10.13) (USFWS 2020e) All federal project actions must comply with this act; therefore, they cannot result in unauthorized take of migratory birds.

Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (Eagle Act) (16 U.S.C. § 668), enacted in 1940, provides for the protection of the bald eagles and the golden eagles by prohibiting, except under certain specified conditions, the take, possession, and commerce of such birds (U.S. House of Representatives 1940). The 1972 amendments increased penalties for violating provisions of the Eagle Act or regulations issued pursuant thereto and strengthened other enforcement measures. Under the Eagle Act, the destruction of a nest or take of any eagle or egg is prohibited. This prohibition includes the possession, sale, purchase, barter, offer to sell, purchase, or barter, transport, export, or import of any bald or golden eagle, alive or dead, including any part, nest, or egg unless allowed by permit. (16 U.S.C. §§ 668–668d). *Disturb* means to agitate or bother a bald or golden eagle to a degree that causes or is likely to cause (1) injury to an eagle; (2) a decrease in its productivity by substantially interfering with normal breeding, feeding, or sheltering behavior; or (3) nest abandonment by substantially interfering with normal breeding, feeding, or sheltering behavior. (50 C.F.R. § 22.)

Clean Water Act

The Clean Water Act of 1972 (CWA) (33 U.S.C. §§ 1251 et seq.) establishes the basic structure for regulating discharges of pollutants into the waters of the United States (WOTUS) and regulating water quality standards for surface waters. Under the CWA, the Environmental Protection Agency (EPA) has implemented pollution control programs, such as setting wastewater standards for industry, and has developed national water quality criteria recommendations for pollutants in surface waters. The CWA made it unlawful to discharge any pollutant from a point source into navigable waters unless a permit is obtained. EPA's National Pollutant Discharge Elimination System (NPDES) permit program controls discharges.

Waters of the United States

On August 29, 2023, the EPA and Department of the Army issued a final rule to amend the final "Revised Definition of 'Waters of the United States'" rule, published in the *Federal Register* on January 18, 2023. This final rule conforms the definition of "waters of the United States" to the U.S. Supreme Court's May 25, 2023, decision in the case of *Sackett v. Environmental Protection Agency.* Parts of the January 2023 final rule are invalid under the Supreme Court's interpretation of the Clean Water Act in the *Sackett* decision. Therefore, the agencies have amended key aspects of the regulatory text to conform to the Court's decision.

WOTUS are defined as (40 C.F.R., § 120.2(a)):

1. Waters which are:
   a. Currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
   b. The territorial seas; or
   c. Interstate waters;
2. Impoundments of waters otherwise defined as waters of the United States under this definition, other than impoundments of waters identified under paragraph (a)(5) of this section;
3. Tributaries of waters identified in paragraph (a)(1) or (2) of this section that are relatively permanent, standing or continuously flowing bodies of water;
4. Wetlands adjacent to the following waters:
   a. Waters identified in paragraph (a)(1) of this section; or
   b. Relatively permanent, standing or continuously flowing bodies of water identified in paragraph (a)(2) or (a)(3) of this section and with a continuous surface connection to those waters;
5. Intrastate lakes and ponds, streams, or wetlands not identified in paragraphs (a)(1) through (4) of this section that are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the waters identified in paragraph (a)(1) or (a)(3) of this section.

WOTUS do not include prior converted cropland (40 C.F.R., § 120.2(b)(2)). Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with the EPA.

Section 401 – Water Quality Certification

Under Section 401 of the CWA, a federal agency may not issue a permit or license to conduct any activity that may result in any discharge into WOTUS unless either a Section 401 water quality certification is issued or the certification requirement is waived. States and authorized tribes where the discharge would originate are generally responsible for issuing water quality certifications. In cases where a state or tribe does not have authority, the EPA is responsible for issuing certification.

Section 404 – Permitting for Dredge and Fill Activities in Wetlands and Waters of the U.S.

Section 404 of the CWA authorizes USACE to regulate the discharge of dredged or fill material to wetlands and other WOTUS. The USACE issues individual site-specific or general (Nationwide) permits for such discharges. Nationwide permits are a type of general permit issued to cover activities that the USACE has determined to have minimal adverse effects, such as routine maintenance (e.g., Nationwide Permit 3) or utility line activities (e.g., Nationwide Permit 12). Each NWP specifies particular conditions that must implemented by the permittee.

Forest Service Manual 2670 Sensitive Species
Forest Service Manual (FSM) 2670 provides direction and policy for the protection of sensitive species and calls for the development and implementation of management practices to ensure that species do not become threatened or endangered because of Forest Service actions (USDA Forest Service 2005). It requires a review of all activities or programs that are planned, funded, executed, or permitted for possible effects on federally listed or Forest Service sensitive (FSS) species (FSM 2672.4) (USDA Forest Service 2005).

State

California Endangered Species Act
The CESA (Cal. Fish & G. Code §§ 2050 et seq.) establishes the policy of the state to conserve, protect, restore, and enhance rare, threatened, or endangered species and their habitats. Section 2052 require that "mitigation measures or alternatives to address a particular impact on a candidate species, threatened species, or endangered species…shall be roughly proportional in extent to any impact on those species that is caused." Section 2080 prohibits the take of a species listed by CDFW as threatened or endangered under the CESA. The state definition of *take* is "to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill" (Cal. Fish & G. Code § 86.) Pursuant to section 2081 of the code, CDFW "authorize, by permit, the take of endangered species, threatened species, and candidate species" when that take is "incidental to an otherwise lawful activity" and the "impacts of the authorized take shall be minimized and fully mitigated".

California Environmental Quality Act Guidelines, Section 15380
Although threatened and endangered species are protected by specific federal and state statutes, CEQA Guidelines section 15380(b) provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria. Pursuant to its rarity status, any impacts to rare species could be considered a significant effect on the environment. (CEQA Guidelines § 15382.) This section was included in CEQA primarily to deal with situations in which a public agency is reviewing a project that may have a significant effect on, for example, a candidate species that has not been listed by either USFWS or CDFW. Thus, CEQA provides an agency with the ability to protect a species from the potential impacts of a project until the respective government agencies have an opportunity to designate the species as protected, if warranted. CEQA also calls for the protection of other locally or regionally significant resources, including natural communities.

California Native Plant Protection Act
California's Native Plant Protection Act (Cal. Fish & G. Code, §§ 1900–1913) requires all State agencies to use their authority to carry out programs to conserve endangered and rare native plants. Provisions of the act prohibit the taking of listed plants from the wild and require notification to CDFW at least 10 days in advance of any change in land use in order to allow CDFW to salvage listed plant species that otherwise would be destroyed.

Project proponents are required to conduct botanical inventories and consult with CDFW during project planning to comply with the provisions of this act and sections of CEQA that

apply to rare or endangered plants. Removal of rare plants by publicly or privately owned public utilities may occur in compliance with certain provisions of the NPPA (Cal. Fish & G. Code § 1913; 14 C.C.R. § 786.9(d)).

California Desert Native Plants Act

The purpose of the CDNPA (Cal. Food & Agr. Code §§ 80001 et seq.) is to protect certain species of California desert native plants from unlawful harvesting on both public and privately owned lands. The CDNPA only applies within the boundaries of the counties of Imperial, Inyo, Kern, Los Angeles, Mono, Riverside, San Bernardino, and San Diego. Within these counties, the CDNPA prohibits the harvest, transport, sale, or possession of specific native desert plants unless a valid permit or wood receipt and required tags and seals are obtained from the sheriff or commissioner of the county where collecting will occur.

State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State

In 2019, the State Water Resources Control Board (SWRCB) adopted a State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (Procedures). The Procedures consist of four major elements: 1) a wetland definition; 2) a framework for determining if a wetland feature is a water of the state; 3) wetland delineation procedures; and 4) procedures for the submittal, review, and approval of applications for Water Quality Certifications and Waste Discharge Requirements for dredge or fill activities. On April 6, 2021, the State Water Resources Control Board adopted a resolution to confirm that the "State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State" is in effect as state policy for water quality control.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act of 1967 (Cal. Wat. Code §§ 13000 et seq.) requires the SWRCB and the nine Regional Water Quality Control Boards (RWQCBs) to adopt water quality criteria to protect waters of the State. These criteria include the identification of beneficial uses, narrative and numerical water quality standards, and implementation procedures. Under the act, the RWQCB must prepare and periodically update water quality control basin plans. Each basin plan sets forth water quality standards for surface water and groundwater as well as actions to control nonpoint and point sources of pollution to achieve and maintain these standards. Projects that affect wetlands or waters must meet waste discharge requirements of the RWQCB, which may be issued in addition to a water quality certification or waiver under Section 401 of the CWA. The Proposed Project site is under the jurisdiction of the Central Valley RWQCB and Los Angeles RWQCB and associated basin plans.

California Fish and Game Code §§ 1600–1617, Lake and Streambed Alteration Agreement

If a project includes alteration of the bed, banks, or channel of a stream or of the adjacent riparian vegetation, then a Lake and Streambed Alteration Agreement (LSAA) may be required from CDFW. California Fish and Game Code sections 1600 through 1616 regulate activities that could alter the flow, bed, banks, channel, or associated riparian areas of a river, stream, or lake, which are considered "waters of the State." Altered or artificial watercourses valuable to fish

and wildlife are also subject to CDFW jurisdiction, as are dry washes that carry water during storm events. The law requires any person, state, or local governmental agency or public utility to notify CDFW before beginning an activity that may do one or more of the following:

- Divert or obstruct the natural flow of any river, stream, or lake
- Change the bed, channel, or bank of any river, stream, or lake
- Use material from any river, stream, or lake
- Deposit or dispose of material into any river, stream, or lake

Additional California Fish and Game Code for Species Protection

The California Fish and Game Code requires State agencies to comply with regulations that promote the protection and conservation of threatened and endangered species. Regulations in place relevant to the Proposed Project are described below.

Migratory Birds and Raptors

It is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, take or possess any birds of prey, and take or possess any migratory non-game bird as designated under the MBTA pursuant to Sections 3503, 3503.5, and 3513 of California Fish and Game Code, respectively.

Fully Protected Species

California Fish and Game Code sections 3511, 4700, 5050 and 5515 designate 37 species of wildlife as fully protected in California. The classification of fully protected provides additional protection to those animals that are rare or face possible extinction. Most fully protected species have also been listed as threatened or endangered species under CESA. Fully protected species may not be taken or possessed at any time, and no licenses or permits may be issued for their take except for collection necessary for scientific research or relocation of the species for the protection of livestock, or if they are a covered species whose conservation and management is provided for in a Natural Community Conservation Plan (NCCP).

Fur-bearing Mammals

The following are fur-bearing mammals: pine marten, fisher, mink, river otter, gray fox, red fox, kit fox, raccoon, beaver, badger, and muskrat. Under section 4000 and 4001 of the California Fish and Game Code, notwithstanding any other provision of this code or regulations adopted pursuant to this code, it is unlawful for any person to trap any fur-bearing mammal for purposes of recreation or commerce in fur. The raw fur of a fur-bearing mammal otherwise lawfully taken pursuant to this code or regulations adopted pursuant to this code may not be sold.

Local and Regional

The CPUC has sole and exclusive jurisdiction over the siting and design of the Proposed Project. Pursuant to CPUC General Order 131-D, Section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies

regarding land use matters." Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the counties' and cities' regulations are not applicable as the counties and cities do not have jurisdiction over the Proposed Project. Accordingly, the following discussion of local biological resource laws, regulations, and policies is provided for informational purposes only.

Kern County General Plan

The Kern County General Plan Land Use, Open Space, and Conservation Element guides the long-term conservation of natural resources and preservation of available open space areas (Kern County Planning Department 2009). The Conservation and Open Space Element contains a number of goals and policies relevant to the analysis of biological resources for the Proposed Project, as described below.

Threatened or Endangered Species

- Threatened or endangered plant and wildlife species should be protected in accordance with State and federal laws.
- The County should work closely with State and federal agencies to assure that discretionary projects avoid or minimize impacts to fish, wildlife, and botanical resources.
- The County will seek cooperative efforts with local, State, and federal agencies to protect listed threatened and endangered plant and wildlife species through the use of conservation plans and other methods promoting management and conservation of habitat lands.
- Riparian areas will be managed in accordance with USACE and CDFW rules and regulations to enhance the drainage, flood control, biological, recreational, and other beneficial uses while acknowledging existing land use patterns.

Oak Tree Conservation

- Oak woodlands and large oak trees shall be protected where possible and incorporated into project developments.
- Promote the conservation of oak tree woodlands for their environmental value and scenic beauty.

Surface Water

- Discretionary projects shall analyze watershed impacts and mitigate for construction-related and urban pollutants, as well as alterations of flow patterns and introduction of impervious surfaces as required by CEQA, to prevent the degradation of the watershed to the extent practical.

Los Angeles County General Plan

The Los Angeles County General Plan Conservation and Natural Resources Element guides the long-term conservation of natural resources and preservation of available open space areas (Los Angeles County Department of Regional Planning 2022). The Conservation and Natural Resources Element contains a number of goals and policies relevant to the analysis of biological resources for the Proposed Project, as described below.

Regional Habitat Linkages
Biological resources and important habitat areas in the unincorporated areas are part of a greater habitat linkage that extends beyond Los Angeles County boundaries. Significant Ecological Areas (SEAs) provide important habitat linkages.

Riparian Habitats, Streambeds, and Wetlands
The County is dedicated to preserving its remaining wetlands and supports the wetland reclamation and conservation efforts of other public agencies and numerous non-profit organizations. In addition to County policy and regulation, projects that are subject to CEQA and located in a wetland are forwarded to applicable state and federal agencies for further review and permitting requirements.

Woodlands
The County's oak woodlands are an important resource that provides an abundance of aesthetic, ecological, and economic benefits to residents. Oak woodland habitats are the most diverse terrestrial ecosystems in California. Similarly, riparian woodlands, California walnut, juniper, and Joshua tree woodlands provide habitat for multiple species within a concentrated area.

Los Angeles County Code of Ordinances

Significant Ecological Areas (Ordinance 2019-0072)
This ordinance establishes regulations to conserve the unique biological and physical diversity of the natural communities found within SEAs by requiring development to be designed to avoid and minimize impacts to SEA resources. These requirements will help ensure the long-term survival of the SEAs and their connectivity to regional natural resources. This ordinance regulates development within SEAs with Protected Tree Permits (22.102.080), Development Standards (22.102.090), and Natural Open Space Preservation Requirements (22.102.100). SEA protected trees are as follows:

- All Joshua trees (*Yucca brevifolia*) and California juniper (*Juniperus californica*) are protected, regardless of size.
- Native riparian species and trees listed as rare by California Native Plant Society are protected at 3-inch dbh.
- Native coniferous species are protected at 5-inch dbh.
- Native upland hardwood species are protected at 6-inch dbh.
- Additionally, for all listed native trees with multiple trunks, the tree is protected if the combined diameter of the two largest trunks equals 8 inches or more (LA County Planning, 2023).

This ordinance does not apply to legally required fuel modification and brush clearance activities (approved by the Fire Department) associated with existing legal structures for the purpose of fire protection or to emergency or routine maintenance by a public utility necessary to protect or maintain essential components of an existing utility or transmission system.

Oak Tree Permit (Ordinance 2019-0004)

The Oak Tree Permit is established: (a) to recognize oak trees as significant historical, aesthetic, and ecological resources, and as one of the most picturesque trees in Los Angeles County, lending beauty and charm to the natural and manmade landscape, enhancing the value of property and the character of the communities in which they exist; and (b) to create favorable conditions for the preservation and propagation of this unique, threatened plant heritage, particularly those trees which may be classified as heritage oak trees, for the benefit of current and future residents of the County. Damaging or removing certain oak trees under this ordinance is prohibited (with exemptions), and a person shall not cut, destroy, remove, relocate, inflict damage, or encroach into a protected zone of any tree of the oak genus that meets the following criteria:

- 25 inches or more in circumference (eight inches in diameter) as measured four and one-half feet above mean natural grade; in the case of an oak with more than one trunk, whose combined circumference of any two trunks is at least 38 inches (12 inches in diameter) as measured four and one-half feet above mean natural grade, on any lot within the unincorporated area of the County.
- Any tree that has been provided as a replacement tree, pursuant to section 22.174.070 (Conditions of Approval), on any lot within the unincorporated area of the County, unless an Oak Tree Permit is first obtained as provided by this Chapter.

This ordinance does not apply to emergency or routine maintenance by a public utility necessary to protect or maintain an electric power or communication line or other property of a public utility.

Metropolitan Bakersfield General Plan

The Metropolitan Bakersfield General Plan Conservation Element addresses the conservation and management of biological and other natural resources (City of Bakersfield 2002). The Conservation Element contains goals and policies relevant to the analysis of biological resources for the Proposed Project, including the following:

- Goal 1: Conserve and enhance Bakersfield's biological resources in a manner which facilitates orderly development and reflects the sensitivities and constraints of these resources.
- Goal 2: Conserve and enhance habitat areas for designated "sensitive" animal and plant species.
- Policy 1: Direct development away from "sensitive biological resource" areas, unless effective mitigation measures can be implemented.
- Policy 2: Preserve areas of riparian vegetation and wildlife habitat within floodways along rivers and streams, in accordance with the Kern River Plan Element and channel maintenance programs designed to maintain flood flow discharge capacity.
- Policy 3: Discourage, where appropriate, the use of off-road vehicles to protect designated sensitive biological and natural resources.

- Policy 4: Determine the feasibility of enhancing sensitive biological habitat and establishing additional wildlife habitat in the study area with State and/or Federal assistance.
- Policy 5: Determine the locations and extent of suitable habitat areas required for the effective conservation management of designated "sensitive" plant and animal species.
- Policy 6: Investigate the feasibility of including natural areas selected for the habitat conservation plan as a component of the regional park system.

City of Arvin General Plan

The City of Arvin General Plan Conservation and Open Space Element guides the preservation and management of natural resources and open space (City of Arvin 2012). The Conservation and Open Space Element contains goals and policies relevant to the analysis of biological resources for the Proposed Project, including the following:

- Goal 6: Preserve wildlife, endangered and/or rare species and natural habitats and eco-systems in the Arvin Planning area.
- Policy CO-6.1 Protect sensitive and significant ecological areas of unique vegetation and wildlife.
- Policy CO-6.2 Protect from extinction the identified endangered species which recognize the Arvin area as part of their natural range.
- Policy CO-6.3 Consider the establishment of protected open space areas, planted with native valley vegetation, to serve as wildlife habitat and natural laboratory for public education purposes.
- Policy CO-6.4 Implement a relocation program for any rare and/or endangered animal species found in urbanized areas.

3.4.5 Applicant Proposed Measures

SCE proposed certain measures to reduce environmental impacts. In those instances where the CPUC has determined an applicant proposed measure (APM) would not reduce potential impacts to below the level of significance, the Draft IS/MND identifies mitigation measures that would reduce potential impacts to below the level of significance. SCE has agreed to implement all such mitigation measures in place of the relevant APM(s). Those APMs that the CPUC has determined would reduce the potential impacts of the Proposed Project to below the level of significance are discussed below. In such cases, the significance of the impact is first considered prior to application of the APM(s), and a significance determination is made. The implementation of APMs is considered as part of Proposed Project when determining whether impacts would be potentially significant and thus would require mitigation. These APMs would be incorporated as part of any CPUC project approval, and SCE would be required to adhere to the APMs as well as any identified mitigation measures. The APMs are included in the Mitigation Monitoring and Reporting Program (MMRP) for the Proposed Project, and the implementation of the measures would be monitored and documented in the same manner as mitigation measures. The APMs that are applicable to the biological resources analysis are provided in Table 3.4-5, below.

Table 3.4-5 Applicant Proposed Measures for Biological Resources Impacts

APM number	Requirements
BIO-HERP-5	**Tehachapi Slender Salamander** **Pre-construction survey/Construction monitoring.** Prior to initial ground-disturbing activities, a qualified Tehachapi Slender Salamander (TSS) biologist will conduct focused surveys within areas identified as habitat for this species. Biological monitors shall monitor construction activities impacting areas identified as occupied or potentially occupied TSS habitat. If TSS are observed and relocation is required, SCE will obtain the necessary permits or authorizations to relocate salamander individuals to the closest habitat area containing talus, as required by California Department of Fish and Wildlife (CDFW) in applicable permits or habitat conservation plans. **Avoid and minimize impacts**. All project activities located within areas identified as TSS habitat shall implement the following avoidance and minimization measures: • Limited Operating Period. If occupied habitat is identified, no construction activities will occur during the TSS active period without coordination with CDFW, February through April, in work areas impacting TSS occupied habitat. • Project activities occurring in habitat located within oak woodlands and ravines shall avoid displacing rocks, logs, bark, and other debris in thick leaf litter, near talus slopes. Trapped Animal Prevention. All auger holes, trenches, pits, or other steep-sided excavations that may pose a hazard to TSS will be either constructed with escape ramps (earthen or wooden) or securely covered when unattended to prevent entrapment. At the start and end of each workday, and just before backfilling, all excavations will be inspected for trapped animals. If found, trapped animals will be removed by the qualified biologist and relocated to outside the Project footprint, as required in all applicable permits or habitat conservation plans.
BIO-MAM-2	**San Joaquin kit fox** **Pre-construction survey/Construction monitoring.** Within 30 days prior to initial ground-disturbing activities, a qualified biologist will conduct surveys within areas identified as habitat for San Joaquin kit fox. Known and potential dens shall be monitored for evidence of kit fox use by placing an inert tracking medium or an infra-red beam camera at the entrance and monitoring for at least five consecutive nights. A qualified biologist will monitor construction activities within occupied kit fox habitat. If SJKF occupancy is determined at a given site during pre-construction surveys, SCE will follow all take permit conditions and resource management plan requirements to address SJKF; USFWS and CDFW will be consulted prior to conducting work as required by the permits **Agency consultation and den avoidance** If there are known or potential SJKF dens within project impact areas or project activities within den exclusion zone distances, CDFW and U.S. Fish and Wildlife Service (USFWS) will be consulted to ensure project activities will not impact the species. The following exclusion zones will be established for SJKF dens in accordance with the 2011 USFWS Standardized Recommendations for Protection of the San Joaquin Kit Fox: • Potential and atypical dens. An exclusion zone with a minimum radius of 50 feet as measured outward from the entrance or cluster of entrances will be maintained. Potential dens include any hole of any appropriate size for SJKF. Atypical dens may include any man-made structure, pipes, culverts, and similar structures with a diameter of approximately 4-inches or greater. • Known/occupied dens. An exclusion zone with a minimum radius of 100 feet as measured outward from the entrance or cluster of entrances will be maintained.

APM	Requirements
	• Natal/pupping dens. If a den is identified as known/occupied during the breeding season (February through September), the den will be demarcated with a 200-foot buffer. • Actions within exclusion zones will be limited to essential vehicle and equipment travel on authorized roads and foot traffic and will be monitored by a qualified biologist. No modification to existing occupied or natal dens can occur without authorization from USFWS and/or CDFW and in accordance with the 2011 USFWS Standardized Recommendations for Protection of the San Joaquin Kit Fox. Natal/pupping dens will not be destroyed until the pups and adults have vacated. If a den can be avoided by construction, but the exclusion zone can't be, then the den can have a one-way door installed or the entrance plugged once confirmed not to be occupied; one-way doors will be removed at the end of construction. If a den cannot be avoided by construction, the den might be able to be removed but may require additional mitigation, such as the creation of artificial dens. Dens in which no activity was detected may be closed by a qualified biologist following agency guidelines. **Avoid and minimize impacts**. The following avoidance and minimization measures shall be implemented for all project activities located within areas identified as SJKF habitat: • Limited Operating Period. Within occupied SJKF areas, SCE shall restrict work to daylight hours, except during an emergency, in order to avoid nighttime activities when kit fox may be present on access roads. • Disposal of Trash. Trash and food items will be contained in closed containers and removed daily to reduce attractiveness to opportunistic predators. • Pets Prohibited. Employees will not bring pets or other animals to the GKR Project area, unless the animal is ADA compliant. • Vehicle Travel. During construction-related activities, motor vehicles will be limited to maintained roads, designated routes, and areas identified as being permanently or temporarily affected by construction within the Project footprint. Motor vehicle speeds along Project routes and access roads within areas identified as habitat for SJKF will not exceed 20 miles per hour. • Trapped Animal Prevention. All auger holes, trenches, pits, or other steep-sided excavations that may pose a hazard to SJKF will be either constructed with escape ramps (earthen or wooden) or securely covered when unattended to prevent entrapping SJKF. At the start and end of each workday, and just before backfilling, all excavations will be inspected for trapped animals. Any SJKF found will be allowed to escape unimpeded. If a SJKF is trapped and does not leave on its own, a qualified biologist will move the animal according to agency authorizations, if there is no agency authorization, the fox shall not be moved (unless in imminent danger) until the USFWS and/or CDFW has been contacted and further guidance has been received. Cover Construction Materials. All construction pipes, culverts, or similar structures with a diameter of approximately four (4) inches or greater that are stored for one or more overnight periods will be thoroughly inspected for SJKF before the pipe is subsequently buried, capped, otherwise used or moved in any way. Likewise, all construction equipment with the potential to entrap SJKF (e.g., water buffalos, barrels, bins) will be covered or secured by turning over or tipping on their side to prevent trapping SJKF. All water tanks and containers will have tight fitting lids and will be checked to ensure the lids are closed and properly secured. Any SJKF found will be allowed to escape unimpeded. If a SJKF is trapped and does not leave on its own, a qualified biologist will move the animal according to agency authorizations, if there is no agency authorization, the fox shall not be moved (unless in imminent danger) until the USFWS and/or CDFW has been contacted and further guidance has been received.
BIO-RES-2	**Develop Invasive Plant Management Plan.** SCE shall prepare and implement an Invasive Plant Management Plan (IPMP). This plan shall include measures designed to avoid the introduction and spread of new nonnative invasive plant species (invasive plants) and minimize the spread of existing

APM number	Requirements
	invasive plants resulting from project activities. The IPMP shall be submitted to the CPUC and for review and approval prior to the start of construction. For the purpose of the IPMP, invasive plants shall include plants that (1) are invasive and rated high or moderate for negative ecological impact in the California Invasive Plant Inventory Database (Cal-IPC, 2006), or (2) aid and promote the spread of wildfires (such as Bromus tectorum (cheatgrass), Brassica tournefortii (Sahara mustard), and Bromus madritensis spp. Rubens (red brome)) or (3) identified by USFS as special concern. The IPMP will be implemented throughout project pre-construction, construction, and restoration phases. **Invasive Plant Management Plan** The IPMP will include the information defined in the following sections: **Assessment.** An assessment of the GKR Project's potential to cause spread or introduction of invasive plants into new areas, or to introduce new invasive plants into the ROW. This section will list known and potential invasive plants occurring on the ROW and in the project region and identify threat rankings and potential for project-related occurrence or spread for each species. This section will identify control goals (e.g., eradication, suppression, or containment) for invasive plants of concern with potential to occur on the ROW. **Pre-construction invasive plant inventory.** SCE shall inventory of all invasive plants of concern in areas (both within and outside the ROW) subject to project-related vegetation removal/disturbance, overland travel (drive and crush), and ground-disturbing activity. The invasive plants inventory area shall also include vehicle and equipment access routes within the ROW and all project staging and storage yards. Invasive plants of concern shall be mapped by area of occurrence and percent cover. The map will be updated with new occurrences at least once a year. **Pre-construction invasive plants treatment.** Invasive plant infestations identified in the pre-construction invasive plants inventory shall be evaluated to identify potential for project-related spread and potential benefits (if any) of pre-construction treatment. Pre-construction treatment will consider the specific invasive plants, potential seed banks, or other issues. The IPMP will identify any infestations to be controlled or eradicated prior to project construction. Control and follow-up monitoring of pre-construction invasive plants treatment sites will follow methods identified in appropriate sections of the IPMP. **Prevention.** The IPMP will specify methods to minimize potential transport of new invasive plant seeds onto the ROW, or from one section of the ROW to another. The ROW may be divided into "weed zones," based on invasive plants of concern in the ROW. The IPMP will specify inspection procedures for construction equipment entering the GKR Project area. Vehicles and equipment may be inspected and cleaned at entry points to specified sections of the ROW, and before leaving work sites where invasive plants of concern must be contained locally. Construction equipment shall be inspected to ensure it is free of any dirt or mud that could contain invasive plant seeds, roots, or rhizomes, and the tracks, outriggers, tires, and undercarriage will be carefully washed, with special attention being paid to axles, frame, cross members, motor mounts, underneath steps, running boards, and front bumper/brush guard assemblies. Other construction vehicles (e.g., pick-up trucks) that will be frequently entering and exiting the site will be inspected and washed on an as-needed basis. Tools such as chainsaws, hand clippers, pruners, etc., shall be cleaned of dirt and mud before entering project work areas. All vehicles will be washed off-site when possible. If off-site washing is infeasible, on-site cleaning stations (including air washing) will be set up at specified locations to clean equipment before it enters the work area. Wash stations will be located away from native habitat or special-status species occurrences. Wastewater from cleaning stations will not be allowed to run off the cleaning station site. When vehicles and equipment are washed, a daily log must be kept stating the location, date and time, types of equipment,

APM number	Requirements
	methods used, and personnel present. The log shall contain the signature of the responsible crewmember. Written or electronic logs shall be available to CPUC monitors on request. Erosion control materials (e.g., straw bales) must be certified free of invasive plant seed ("weed-free") before they are brought onto the site. The IPMP must prohibit on-site storage or disposal of mulch or green waste that may contain invasive plant material. Mulch or green waste will be removed from the site in a covered vehicle to prevent seed dispersal and transported to a licensed landfill or composting facility. The IPMP will specify guidelines for any soil, gravel, mulch, or fill material to be imported into the GKR Project area, transported from site to site within the GKR Project area, or transported from the GKR Project area to an off-site location, to prevent the introduction or spread of invasive plants to or from the GKR Project area. **Monitoring.** The IPMP shall specify methods to survey for invasive plants of concern during pre-construction, construction, and restoration phases; and shall specify qualifications of specialists responsible for invasive plant monitoring and identification. It must include a monitoring schedule to ensure timely detection and immediate control of new invasive plant infestations to prevent further spread. Surveying and monitoring for invasive plant infestations shall occur at least two times per year, to coincide with the early detection period for early season and late season invasive plants. The monitoring section shall also describe methods for post-eradication monitoring to evaluate success of control efforts and any need for follow-up control. **Control.** The IPMP must specify manual and chemical invasive plant control methods to be employed. The IPMP shall include only invasive plant control measures with a demonstrated record of success for target invasive plants, based on the best available information. The plan shall describe proposed methods for promptly scheduling and implementing control activity when any project-related invasive plant infestation is located (e.g., located on a project disturbance site), to ensure effective and timely invasive plant control. Invasive plant infestations must be controlled or eradicated as soon as possible upon discovery, and before they go to seed, or when appropriate with the goal to prevent further spread. All proposed invasive plant control methods must minimize disturbance to native vegetation, limit ingress and egress to defined routes, and avoid damage to any environmentally sensitive areas (ESAs) identified within or adjacent to the ROW. New infestations by invasive plants of concern will be treated at a minimum of once annually until eradication, suppression, or containment goals are met. Invasive plant occurrences can be considered eradicated when no new seedlings or resprouts are observed for three consecutive years, or a single season where new seedlings or resprouts are observed in reference populations but not at the control site. Invasive plant control efforts may cease when eradication is complete. Manual control shall specify well-timed removal of invasive plants or their seed heads with hand tools; seed heads and plants must be disposed of in accordance with guidelines from the relevant County Agricultural Commissioners, if such guidelines are available. The focus of weed abatement will be manual control. Chemical controls will be avoided. If chemical controls are indicated for specific invasive species, the following guidelines shall be followed. The chemical control section must include specific and detailed plans for any herbicide use. It must indicate where herbicides will be used, which herbicides will be used, and specify techniques to be used to avoid drift or residual toxicity to native vegetation or special-status plants, consistent with the National Invasive Species Management Plan (NISC, 2008). All herbicide applications will follow U.S. Environmental Protection Agency label instructions and will be in accordance with federal, state, and local laws and regulations. Only state-approved herbicides may be used. Herbicide treatment will be implemented by a Licensed Qualified Applicator. Herbicides shall be applied in accordance with product labels and applicator licenses. Herbicides shall not be applied during or within 24 hours of high confidence predicted

APM number	Requirements
	rain. Only water-safe herbicides shall be used in riparian areas or within channels (engineered or not) where they could run off into downstream areas. Herbicides shall not be applied in high wind conditions. 1. **Reporting schedule and contents.** The IPMP shall specify reporting schedule and contents of each report.
HAZ-1	**Prepare a Hazardous Materials Management Plan.** SCE will prepare and implement a Hazardous Materials Management Plan (HMMP)/Hazardous Materials Business Plan (HMBP) during project construction. The plan will outline proper hazardous materials handling, use, storage and disposal requirements, as well as hazardous waste management procedures. This plan will be developed to ensure that all hazardous materials and wastes will be handled and disposed of according to applicable rules and regulations. The HMMP will address the types of hazardous materials to be used during the project, hazardous materials storage, employee training requirements, hazard recognition, fire safety, first aid/emergency medical procedures, hazardous materials release containment/control procedures, hazard communication training, PPE training, and release reporting requirements. It will also include fueling and maintenance procedures for helicopters and construction equipment. If on site refueling is necessary, BMPs shall be implemented in accordance with the project SWPPP. Refueling stations and fuel tanks will be located, maintained, and operated during construction in accordance with applicable laws and regulations pertaining to hazardous materials. If more than 1,320 gallons of petroleum products in containers greater than 55-gallons, a SPCC plan must be created prior to products being brought on-site. All construction personnel, including environmental monitors, will be made aware of local, state and federal emergency response reporting guidelines for accidental spills.
HAZ-3	**Prepare and Implement a Project-Specific Fire Management Plan.** A Fire Prevention and Emergency Response Plan will be developed to ensure the health and safety of construction workers, SCE personnel, and the public during Project construction. The Plan shall cover: • The purpose and applicability of the plan • Responsibilities and duties • Project areas where the plan applies • Procedures for incorporating Red Flag Warnings, Fire Potential Index (FPI), Project Activity Level (PAL), and equivalent indicators in determining fire weather related work restrictions • Procedures for fire reporting, response, prevention, and evacuation routes • Coordination procedures with federal and local fire officials • Crew training, including fire safety practices and restrictions • Fire suppression and communication equipment required to be on hand during construction • Method for verification that Plan protocols and requirements are being followed • Post-construction fire prevention and response measures The Project-specific Fire Prevention and Emergency Response Plan for construction of the project will be prepared by SCE and submitted to CPUC, CALFIRE, Inyo, Kern and San Bernardino counties, and local municipal fire agencies for review at least 30 days prior to initiation of construction. SCE will address all comments received from reviewing agencies and provide the final Fire Prevention and Emergency Response Plan to reviewing agencies for approval prior to initiating construction activities.

3.4.6 Environmental Analysis

Summary of Impacts

Table 3.4-6 presents a summary of the CEQA significance criteria and impacts on biological resources that would occur during the construction and operation and maintenance phases of the Proposed Project.

Table 3.4-6 Summary of Proposed Project Impacts to Biological Resources

Would the proposed project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	☐	☒	☐	☐
c) 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?	☐	☒	☐	☐
d) 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?	☐	☒	☐	☐
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☒	☐	☐
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☐

Impact Discussion

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service? (Less than significant with mitigation)

Construction

Direct Impacts

Special Status Plants
Special status plant species would be directly impacted by vegetation removal, grading, and rehabilitation and use of access roads. Vegetation removal and grading would occur at structure work areas. Vegetation in stringing sites would be impacted from the use of construction equipment and personnel accessing the areas. All existing access and spur roads are expected to require rehabilitation work, including re-grading and repairing the existing roadbeds to provide access to the construction work areas, which would remove vegetation from the roadway. Areas that support special status plant species would be impacted by construction-related habitat loss or modification of habitats. The impacts on special status species occurring in the Proposed Project area are discussed below.

Bakersfield cactus, Kern mallow, calico monkeyflower and Piute mountains navarretia: Grading and removal of vegetation from Proposed Project work areas and rehabilitation of access roads would directly impact the following:

- A population of 300 Bakersfield cactus that partially overlaps work areas
- 150 individuals of Kern mallow within work areas
- Six Calico monkeyflower within work areas
- 180 individuals of Piute mountain navarettia entirely within work areas and two populations (totaling 133 individuals) of Piute mountain navarettia that partially overlap work areas.

Given the federal and state endangered status of Bakersfield cactus, federal endangered status of Kern mallow, and rare and severely threatened rank of Calico monkeyflower and Piute mountain navarettia, the Proposed Project has the potential to have a significant direct impact on these species.

Mitigation Measures MM Biology-1 defines specific requirements for new surveys of rare plants and performance standards for salvage of special status plants that cannot be avoided. MM Biology-2 requires that certain performance standards and timeframes be met during restoration that would allow populations of special status plant species to remain viable in disturbed areas. Mitigation Measure Biology-3 requires worker training for avoidance of environmentally sensitive areas, including special status plant locations. Because MM Biology-1 requires avoidance measures where feasible and salvage and replanting for unavoidable impacts, MM Biology-2 requires temporarily disturbed areas to be restored to conditions

comparable to pre-construction conditions, and MM Biology-3 includes worker training, which would avoid significant impacts from loss of special status species habitat and population viability, the impacts on Bakersfield cactus, Kern mallow, calico monkeyflower, and Paiute mountain navarretia would be less than significant with mitigation.

Adobe Yampah and San Joaquin Bluecurls: Grading and removal of vegetation from structure work areas, pull sites, and access roads would impact 50 individuals of Adobe yampah and approximately 4,800 individuals of San Joaquin bluecurls (of 7,000 observed during surveys). Adobe yampah has a CRPR rank of 4.3, and San Joaquin bluecurls has a CRPR rank of 4.2. Plants with a CRPR rank of 4 are of limited distribution or infrequent throughout a broader area in California. The X.2 rank denotes that the plant is moderately threatened in California, and the X.3 means it is not very threatened. CRPR rank 4 plants are not protected by CDFW or USFWS and do not usually require avoidance unless an occurrence represents a locally unique resource. Impacts on CRPR rank 4 plants could be significant if the populations are at the periphery of the species' range, are located in areas where the taxon is especially uncommon or has sustained heavy losses, or are exhibiting unusual morphology or occurring on unusual substrates. The populations of Adobe yampah and San Joaquin bluecurls that would be impacted by the Proposed Project occur throughout the region of Proposed Project area, and neither population is unusual. Due to the larger regional populations of both species, the Proposed Project impacts would not have a substantial adverse impact on either species, and the Proposed Project's construction impacts would be less than significant.

Other special status plants: Several special status plants listed in Table 3.4-2 were not detected during surveys but have a high to moderate potential to occur in the Proposed Project area due to the presence of suitable habitat and known occurrences of these species nearby. While species with a moderate or high potential to occur were not detected in the work area during planning surveys, they could occur in Proposed Project work areas and access roads at the time of construction, and the special status plant species could be impacted by vehicle access, grading, and vegetation removal. Direct impacts on other individual federally or State-listed plant species and CRPR rank 1B and 2B species would be significant because these species are threatened and populations are limited across the state. Absent mitigation, direct impacts to special status plants with a moderate or high potential to occur in the area would be significant. MM Biology-1 requires specific criteria for pre-construction surveys during blooming season, avoidance measures, and a Salvage and Replanting Plan for special status plants that cannot be avoided. MM Biology-2 requires that performance standards and timeframes are met during restoration that would allow populations of these species to remain viable in disturbed areas. MM Biology-1 requires avoidance where feasible and salvage and replanting for unavoidable impacts and MM Biology-2 requires temporarily disturbed areas to be restored to conditions comparable to pre-construction conditions, which would avoid significant impacts from loss of special status plant species habitat and population viability. Because the mitigation would avoid and minimize impacts on individuals, offset any unavoidable impacts, and provide habitat restoration, the impacts on special status plants would be less than significant with mitigation.

Special Status Invertebrates

Crotch's bumblebee: Crotch's bumble bee foraging and nesting habitat is present throughout the majority of the Proposed Project area, and individuals have been observed habitat similar to that found in the to the Proposed Project area in Kern County. Crotch's bumblebee nest underground in burrows and can establish a new nest each year. If a nest of Crotch's bumble bee were to occur in the Proposed Project area at the time of construction, the impact from destruction of a nest would be significant. In addition, the impact on suitable habitat for Crotch's bumble bee would be significant. MM Biology-4 requires focused surveys for Crotch's bumble bee a season prior to construction, pre-construction surveys immediately prior to construction, monitoring of nest avoidance for any Crotch's bumblebee in proximity to a work area, and compensatory mitigation for impacts on Crotch's bumblebee habitat. With implementation of Mitigation Measure Biology-4, the impact on Crotch's bumble bee would be less than significant with mitigation.

Monarch butterfly. One individual monarch butterfly was observed in the southern portion of Segment 2 north of the mouth of Grapevine Canyon. No milkweed was present in this location. Suitable roost sites for the monarch butterfly are absent within the Proposed Project area, but monarchs may pass through the Proposed Project area during migrations. The monarch is not known to overwinter or breed in the Proposed Project area. Due to the absence of suitable larval host plants (i.e., milkweed) or roost habitat within the Proposed Project area, the Proposed Project would not have a substantial effect on monarch butterfly as limited numbers of monarch butterfly would be expected to pass through the Proposed Project area, and no habitat would be affected.

Special Status Amphibians

Tehachapi slender salamander, yellow-blotched salamander and Kern Canyon slender salamander. Tehachapi slender salamander, yellow-blotched salamander and Kern Canyon slender salamander have a high potential to occur in the Proposed Project area because of the presence of suitable habitat and recent occurrences within the Proposed Project area. Tehachapi slender salamander, yellow-blotched salamander, and Kern Canyon slender salamander generally have similar habitat requirements, including shaded (often north-facing) woodlands with down logs and debris near streams or other sources of water. Tehachapi slender salamander, yellow-blotched salamander, and Kern Canyon slender salamander could be injured or killed during construction activities as the Proposed Project includes access and work within suitable habitat and both species often hide under rocks, logs, or other surface debris. Construction would also result in direct permanent and temporary loss of suitable habitat for Tehachapi slender salamander, yellow-blotched salamander and Kern Canyon slender salamander. Approximately 63 acres of suitable habitat would be temporarily disturbed from construction work areas and staging/laydown yards, and less than 4 acres would be permanently impacted. Injury or mortality to either species and loss of suitable habitat would be a significant impact. SCE has proposed APM HERP-5 for protection of Tehachapi slender salamander, which requires pre-construction surveys and monitoring, limited operating periods (LOPs) in Tehachapi slender salamander habitat, avoidance of disturbing or displacing habitat

elements, and relocation (in compliance with any required permits). While the APM would reduce impacts on individual Tehachapi slender salamander, the APM would not address the yellow-blotched salamander or Kern Canyon slender salamander and would not address habitat loss, therefore, impacts on yellow-blotched salamander and Kern Canyon slender salamander would be potentially significant absent mitigation. MM Biology-2 requires that certain performance standards and timeframes be met during restoration that would ensure the restoration of temporal impact areas is comparable to pre-project conditions. MM Biology-5 requires pre-construction surveys to be performed by a qualified biologist no more than 30 days prior to construction and requires qualified biological monitors to be present and implement species avoidance practices at all times during construction in areas where yellow-blotched salamander and Kern Canyon slender salamander have been located and in areas of suitable habitat to minimize impacts on individuals. MM Biology-6 requires compensatory mitigation for permanent impacts to habitat for Tehachapi slender salamander and Kern Canyon slender salamander.

Western spadefoot: Two adult western spadefoots were observed at the edge of a stock pond within the Proposed Project area along Segment 4, and adults could be present within grassland habitats surrounding this pond, where potential breeding occurs. Western spadefoots could potentially be injured or killed from construction activities, including vehicle and equipment travel on access roads, burrow destruction from grading of work pads and stringing sites in upland aestivation habitat, or entrapment in excavations, and there is a potential significant impact from injury or mortality absent mitigation. MM Biology-5 requires pre-construction surveys be performed by a qualified biologist no more than 7 days prior to construction in each work area and requires qualified biological monitors to be present at all times during construction in areas where western spadefoot has been located and in areas of suitable habitat and allows the biologist to halt construction activities to ensure construction activities do not harm individuals. With implementation of MM Biology-5, direct impacts on western spadefoot would be less than significant with mitigation.

Construction would also result in direct permanent and temporary loss of suitable habitat for western spadefoot. Suitable habitat for the western spadefoot is present in grasslands and grassy openings in oak woodlands in the lower slopes and valleys of the Tehachapi Mountains in Segments 3 and 4 with a nearby source of ponded or slow-moving water (including ponds, vernal pools, and intermittent streams). Absent mitigation, temporary impacts on suitable habitat would be significant if the area of temporary impacts were not adequately restored. MM Biology-2 requires that certain performance standards and timeframes are met during restoration that would ensure the restoration of temporary impact areas is comparable to pre-Project conditions and would not result in permanent loss or degradation of habitat. Impacts on habitat for western spadefoot would, therefore, be less than significant with implementation of mitigation.

Special Status Reptiles

Blunt-nosed leopard lizard: Blunt-nosed leopard lizard has a high potential to occur the Proposed Project area due to the presence of suitable habitat in multiple locations along the

Proposed Project alignment. Because blunt-nosed leopard lizards live in underground burrows, individuals can go undetected during general biological clearance surveys. The species is fully protected in California, and take is prohibited by CDFW. Impacts on blunt-nosed leopard lizard, including mortality or capture of the species resulting from construction activities, would be a significant impact. SCE has proposed the "SCE Gorman Kern River Project Blunt-nosed Leopard Lizard Minimization and Avoidance Strategy," enclosed in Appendix D, which includes the following activities for blunt-nosed leopard lizard in suitable habitat:

- Pre-Project protocol surveys in all suitable habitat for blunt-nosed leopard season during seasons prior to construction (planning/permitting phase)
- Pre-construction surveys within 14 days of ground disturbing activities
- Clearance sweeps on the day of construction
- Excavation of inactive burrows within the work area one year prior to construction
- Implementation of burrow management procedures for active burrows within 15 meters of construction including burrow exclusion and excavation to avoid blunt-nosed leopard lizard

The proposed blunt-nosed leopard lizard minimization and avoidance strategy includes detailed procedures to ensure avoidance of mortality of any blunt-nosed leopard lizard. As a result, the impact on individual blunt-noised leopard lizard from construction activities would be less than significant.

The Proposed Project would temporarily disturb suitable habitat for blunt-nosed leopard lizard and would permanently impact up to 23 acres of suitable habitat. Absent mitigation, loss of suitable habitat for blunt-nosed leopard lizard would be a significant impact. Therefore, MM Biology-2 would be implemented and requires SCE to prepare and implement a Revegetation, Restoration, and Monitoring Plan, including specific procedures and performance standards to ensure temporarily disturbed habitats are adequately restored following construction. Where impacts cannot be fully offset by habitat restoration, MM Biology-6 would require compensatory mitigation to offset the permanent and temporary loss of suitable habitat for blunt-nosed leopard lizard. Mitigation for permanent impacts would be provided at a minimum ratio of 1:1 and temporary impacts at a ratio of 0.5:1 unless a higher ratio were required by authorizations issued under FESA for blunt-nosed leopard lizard. Because temporary impacts on suitable habitat for blunt-nosed leopard lizard would be restored and permanent and temporal impacts on blunt-nosed leopard lizard habitat would be compensated for, the impact on blunt-nosed leopard lizard would be less than significant with mitigation.

Bakersfield legless lizard, California legless lizard, Southern California legless lizard, coastal whiptail, coast horned lizard, San Joaquin coachwhip, and San Bernadino ringneck snake: Bakersfield legless lizard, California legless lizard, Southern California legless lizard, coastal whiptail, coast horned lizard, San Joaquin coachwhip, and San Bernadino ringneck snake have a high or moderate potential to occur within the Proposed Project area because of the presence of potentially suitable habitat and recent occurrences within the BSA, but these species were not observed during biological surveys. Construction of the Proposed Project could result in direct

impacts on special status reptile species with a moderate or high potential to occur in the Proposed Project area were the species to move into the area at the time of construction and were injured or killed during construction activities. Injury or mortality of Bakersfield legless lizard, California legless lizard, Southern California legless lizard, coastal whiptail, coast horned lizard, San Joaquin coachwhip, and San Bernadino ringneck snake would be a significant impact absent mitigation. Therefore, MM Biology-5 would be implemented to avoid impacts to these species. MM Biology-5 requires pre-construction surveys to be performed by a qualified biologist no more than 7 days prior to construction and requires qualified biological monitors with authority to halt construction to be present at all times during construction in areas where these species have been located and in areas of suitable habitat to ensure construction activities do not harm individuals. Implementation of MM Biology-5 would avoid direct impacts on Bakersfield legless lizard, California legless lizard, coastal whiptail, coast horned lizard, and San Joaquin coachwhip, and impacts would be less than significant with mitigation.

Construction would also result in direct permanent and temporary loss of suitable habitat for Bakersfield legless lizard, California legless lizard, coastal whiptail, coast horned lizard, and San Joaquin coachwhip. Temporary and permanent impacts on suitable habitat would not substantially impact Bakersfield legless lizard, California legless lizard, coastal whiptail, coast horned lizard, and San Joaquin coachwhip because the habitat impacts would be limited and dispersed along the Proposed Project alignment, and the habitat is common throughout the region. The temporary and permanent habitat impacts on Bakersfield legless lizard, California legless lizard, coastal whiptail, coast horned lizard, and San Joaquin coachwhip would therefore be less than significant.

Special Status Birds

There are numerous special status birds that have the potential to occur within the Proposed Project area that could be affected by construction, including 16 special status avian species observed during focused biological field surveys for the Proposed Project area. Most of the special status bird species with potential to occur in the Proposed Project area are protected under the MBTA or BGEPA, and many also have additional state and/or federal protection status (see Table 3.4-2). This impact analysis generally addresses special status avian species as a whole since the impacts from construction noise or vegetation removal would be similar across most species. However, some species are discussed in greater detail below due to impacts specific to these species.

Special status birds can be found in a wide variety of natural and developed environments, and their habitat and nesting characteristics vary greatly by species. Special status birds and their nests could be found at any location in the Proposed Project area; however, the potential for nesting activity is greater in grasslands, woodlands, riparian areas, and coniferous forests. The Proposed Project would involve vegetation removal and ground-disturbing activities in work areas and access routes located in grassland, woodland, and forests, where there is a high potential for encountering nesting birds during the nesting season (generally, February 1–September 15). Tree and vegetation removal or vegetation trimming could destroy nests of special status birds that nest in trees and bushes. Grading and other earth disturbing activities

could destroy nests of special status birds that nest on the ground (e.g., California horned lark, burrowing owl, northern harrier). Destruction of an active special status bird nest is considered a significant impact. Construction activities would also produce noise and vibration from the use of heavy construction equipment (e.g., trucks, drill rigs, excavators) and helicopters. Construction noise and vibration could disturb nesting behavior, depending on the type of construction activity, site-specific conditions, and species sensitivity to noise and vibration. Noise and vibration from construction equipment and helicopters could disturb nesting birds and result in the failure or abandonment of an active special status or migratory bird nest. Causing nest failure or abandonment could result in the mortality of egg embryos and the violation of State and federal laws governing the protection of birds and their nests, which would be a significant impact.

Mitigation Measure Biology-8 requires development and implementation of a Nesting Bird Management Plan (NBMP) that includes requirements for buffers that shall be established around any active nest that is found. The buffer specifications would be based on the specific nature of the bird species (or groups of species), conservation status, and tolerance to human activities and require smaller or larger buffer radii specified as appropriate, with 300 feet being the general standard and 500 feet being the standard for raptors. The Nesting Bird Management Plan would include restrictions for construction activities as well as nest monitoring and reporting to ensure that the measure is appropriately implemented and construction disturbances do not cause nest failure or abandonment. Because Mitigation Measure Biology-8 specifies protocols to avoid disturbance of an active nest, impacts would be less than significant. Construction of the Proposed Project would require ground disturbance, vegetation clearance zones, and tree removal, which would result in direct permanent and temporary loss of suitable habitat for special status birds. Temporary and permanent impacts on suitable habitat would not substantially impact special status birds because the impacts would be limited and dispersed along the Proposed Project alignment. Unaffected suitable foraging and nesting habitat surrounds the Proposed Project area, and birds would be able to avoid disturbance areas and travel to more suitable surrounding habitat. The impact on special status bird species from habitat loss because of the Proposed Project would therefore be less than significant.

Burrowing owl: Burrowing owls are particularly susceptible to harm from activities involving ground disturbance, such as grading and excavating. A single burrowing owl and two active burrows were observed within the Proposed Project alignment. Suitable burrowing owl habitat occurs within Segments 1 through 4 of the Proposed Project. Proposed Project ground-disturbing activities such as grading and vegetation removal could result in the destruction of burrows, disruption of breeding behavior, and injury to or mortality of owls, including the loss of eggs or chicks, resulting in a significant impact absent mitigation. MM Biology-9 would be implemented to avoid impacts on burrowing owls. MM Biology-9 requires buffers for burrowing owl to be determined by CDFW guidelines and would also require measures to reduce disturbance within buffer areas, such as installation of visual or sound barriers, prior to passive relocation as well as implementation of worker training per MM Biology-3. Burrowing owls can withstand some levels of disturbance, and MM Biology-9 requires that passive

relocation be considered only after other measures to reduce impacts from disturbance are implemented. Because MM Biology-9 would avoid potential for mortality or injury of a burrowing owl or eggs, the impact on burrowing owls from ground-disturbing activities would be less than significant with mitigation.

Construction of the Proposed Project would result in direct permanent and temporary loss of suitable habitat for burrowing owls. Over 462 acres of suitable habitat for burrowing owl would be temporarily disturbed by construction, and approximately 26 acres of permanent impacts would occur. Temporary impacts would be significant absent mitigation. MM Biology-2 requires that certain performance standards and timeframes are met during restoration that would ensure that habitat values are properly restored in all temporary impact areas. In addition, MM Biology-9 requires construction of replacement burrows within buffer areas determined by CDFW guidelines if relocation of burrowing owls is required and there are insufficient burrows within areas of suitable habitat. Permanent impact areas at new structure/pole locations in suitable habitat would be offset by the removal of the existing subtransmission poles/structures from suitable habitat areas. Because any impacted burrows would be replaced and temporary habitat impacts would be restored, construction impacts on burrowing owls from habitat loss resulting from the Proposed Project would be less than significant with mitigation.

Golden eagle: Golden eagles have been observed foraging and nesting within the Proposed Project area. Golden eagles are particularly sensitive to noise and other anthropogenic disturbances and are prone to abandonment of nest sites, especially in newly established territories. Typical construction activities (e.g., most ground-based equipment) could impact nesting behavior of golden eagle for up to approximately 0.5 mile. High-disturbance construction activities such as helicopter operations could impact nesting behavior of golden eagle for up to 1 mile from the location of the activity. Mitigation Measure Biology-10 requires golden eagle nest surveys when construction activities are scheduled to occur in or near golden eagle nesting habitat from January 1 to August 31 to determine if any eagle nests are active within a 1-mile radius. If nesting eagles are observed, a buffer of 1 mile would be established around the nest if in line of sight of construction activity and 0.5 mile if not in line of sight, to be determined with USFWS concurrence. Because Mitigation Measure Biology-10 includes procedures to avoid disturbance of a golden eagle nest, including avoidance buffers, the impact on golden eagles from construction activities and associated disturbances would be less than significant.

Construction would also result in direct permanent and temporary loss of suitable foraging habitat for golden eagles. While golden eagles can nest in the existing transmission structures and trees along the alignment, the loss of habitat from removal of transmission structures and removal of trees from the wooded areas of the alignment would not significantly impact the species because there is surrounding natural nesting habitat that would not be affected by the Proposed Project. Temporary impacts on foraging habitat would not substantially impact this species because the impacts would be limited and dispersed along the Proposed Project alignment and unaffected foraging habitat surrounds the Proposed Project, which would

remain available to golden eagles. Permanent impacts from the new subtransmission poles in suitable foraging habitat for golden eagles would be offset by the removal of the existing subtransmission poles and towers/structures along the existing alignment. Impacts from habitat loss would, therefore, be less than significant.

Swainson's hawk: A Swainson's hawk was observed foraging within the Proposed Project area. Swainson's hawks are particularly sensitive to changes in disturbance levels (e.g., new activity in a formerly undisturbed location) and are prone to abandonment of nest sites. Construction activities could impact nesting behavior of Swainson's hawk for up to 0.5 mile and could cause nest abandonment, which would be a significant impact absent mitigation. MM Biology-8 requires that Swainson's hawk nest surveys be performed by a qualified biologist prior to construction and prohibits any new disturbances, habitat conversions, or other Project-related activities that may cause nest abandonment or forced fledging within 0.5 mile of an active nest between March 1 and September 15, which is the Swainson's hawk breeding season in the Project area. Because MM Biology-11 specifies requirements for pre-construction surveys and avoidance of Swainson's hawk nests, impacts to Swainson's hawks from construction activities and associated disturbances would be less than significant with mitigation.

Construction would also result in direct permanent and temporary loss of suitable foraging habitat for Swainson's hawks. Temporary impacts on foraging habitat would not substantially impact this species because the impacts would be limited and dispersed along the Proposed Project alignment and the unaffected foraging habitat surrounding the Proposed Project area would remain available to Swainson's hawks. Over 1,000 large trees would require removal for construction of the Project, which would result in loss of nesting habitat. However, the areas of tree removal for the Proposed Project occur in areas of forest where there is substantial surrounding habitat, and the removal of isolated patches of trees along the alignment would not substantially impact the species; therefore, the impact would be less than significant.

California condor: Portions of Segments 2 and 3 of the Proposed Project are located within critical habitat for California condor (approximately 62 acres), and suitable foraging habitat is present within undeveloped areas of the Proposed Project in the Tehachapi Mountains. It is unlikely that a condor would be nesting within the vicinity of the Proposed Project area as the nearest nesting habitat is over 2.5 miles away from the Proposed Project. However, this species may be present foraging in and around the Proposed Project area. Construction would result in direct permanent and temporary loss of suitable foraging habitat for California condors. No nesting habitat would be affected. Temporary impacts on foraging habitat would not substantially impact this species because the impacts would be limited and dispersed and would only last a few days in each work area, and unaffected foraging habitat surrounding the Proposed Project area would remain available to California condors. Permanent impacts to suitable foraging habitat for California condors from installation of new subtransmission poles/structures would be offset by the removal of the existing subtransmission poles and structures. Impacts to California condor from construction within suitable foraging habitat would be less than significant.

Special Status Mammals

American badger: American badger has a moderate potential to occur in and adjacent Proposed Project work areas and access routes located in woodland, forest, and grassland habitats. Construction activities could result in disturbing or collapsing an active den or otherwise harming individual badgers. Injuring or killing an American badger, or destroying an active American badger den, would be a significant impact absent mitigation. MM Biology-121 requires pre-construction surveys for active American badger dens within 7 days prior to grading or vegetation clearing in work areas or use of overland access routes. Should active dens be located, MM Biology-12 would require work exclusion buffers of 250 feet for maternal dens and 50 feet for non-maternal dens to avoid impacts from noise on breeding or behavior or, if badger dens could not be avoided, passive relocation. MM Biology-12 would avoid substantial direct impacts on American badger, and the impact would therefore be less than significant with mitigation.

Construction of the Proposed Project would require ground disturbance, which could result in direct permanent and temporary loss of suitable habitat for American badgers, including denning sites. Temporary impacts on foraging habitat would not substantially impact this species because the impacts would be limited and dispersed along the Proposed Project alignment, and unaffected foraging habitat surrounding the Proposed Project would remain available. Disturbance to habitat for badgers would be significant if it resulted in the permanent loss of habitat available for dens and foraging near den sites. MM Biology-2 requires that certain performance standards and timeframes are met during restoration that would ensure the restoration of temporary impact areas is comparable to pre-Project conditions and would not result in a permanent loss of habitat. Permanent impacts on habitat from the new subtransmission poles/structures would be offset by the removal of the existing subtransmission poles/structures. Impacts from habitat loss would be less than significant.

San Joaquin kit fox: San Joaquin kit fox has been observed in and adjacent the Proposed Project work areas and access routes located in grassland habitats. Construction activities could result in disturbing or collapsing an active den or otherwise harming individual foxes. Injuring or killing a San Joaquin kit fox, or destroying an active den, would be a significant impact. SCE has proposed APM-MAM-2 for protection of San Joaquin kit fox, which includes exclusion zones and destruction of unoccupied dens to prevent them from becoming occupied dens. Because the APM defines protocols for avoidance and minimization of impacts on San Joaquin kit fox, the impact on San Joaquin kit fox would be less than significant.

Construction of the Proposed Project would require ground disturbance and vegetation removal, which would result in direct permanent and temporary loss of suitable habitat for San Joaquin kit foxes. Approximately 235 acres of suitable habitat for San Joaquin kit foxes would be temporarily disturbed by construction, and approximately 12 acres of permanent impacts would occur. Temporary impacts could become permanent loss of habitat if these areas were not restored, and the permanent loss of this amount of suitable habitat for San Joaquin kit fox would be significant. MM Biology-2 requires that certain performance standards and timeframes are met during restoration that would ensure the restoration of temporary impact

areas is comparable to pre-Project conditions and would not result in a permanent loss of habitat. MM Biology-13 requires compensatory mitigation for permanent impacts on San Joaquin kit fox habitat at a minimum 1:1 ratio. Because MM Biology-2 would ensure proper restoration of temporary impacts and MM Biology-13 requires compensatory habitat mitigation for permanent impacts, the impact on San Joaquin kit fox from habitat loss would be less than significant with mitigation.

Tipton kangaroo rat: Tipton kangaroo rat has moderate potential to occur in the Proposed Project work areas and access routes located in grassland or scrubland habitats with soft friable soils. Construction activities could result in disturbing or collapsing an active burrow or otherwise harming individual kangaroo rats. Injuring or killing a Tipton kangaroo rat, or destroying an active burrow, would be a significant impact. Mitigation Measure Biology-14 requires pre-construction surveys for Tipton kangaroo rat, flagging and 30-foot buffers for avoidance, limited operating periods, and measures to avoid vehicle collisions or entrapment by equipment or trenching. The Proposed Project's construction impacts on Tipton kangaroo rat would be less than significant with implementation of Mitigation Measure Biology-14.

Construction of the Proposed Project would require ground disturbance and vegetation removal, which would result in direct permanent and temporary loss of suitable habitat for Tipton kangaroo rats. Approximately 18 acres of suitable habitat for Tipton kangaroo rats would be temporarily disturbed by construction, and less than 1 acre of permanent impacts would occur. Temporary impacts could become permanent loss of habitat if these areas were not restored, and the permanent loss of this amount of suitable habitat for Tipton kangaroo rats would be significant. MM Biology-2 requires that certain performance standards and timeframes are met during restoration that would ensure the restoration of temporary impact areas is comparable to pre-Project conditions and would not result in a permanent loss of habitat. Permanent impacts from the new subtransmission poles/structures would also be offset by the removal of the existing subtransmission poles/structures. The impact on Tipton kangaroo rats from habitat loss would be less than significant with mitigation.

Special status bats: Trees within and adjacent the Proposed Project work areas and access routes provide potentially suitable roosting habitat for special status bats, including pallid bats that have been observed within the Proposed Project BSA. Structures and outbuildings adjacent work areas may also provide suitable roosting habitat for bats. The Proposed Project would involve vegetation clearing and tree removal that could destroy or disturb bat roosts and result in injury to or mortality of a special status bat, which would be a significant impact. Mitigation Measure Biology-15 requires a qualified bat biologist to conduct surveys before the start of construction to identify active bat roosting or maternity colonies within or adjacent Proposed Project impact areas for features with roosting potential, including trees, rock outcrops, caves, and mines. If an active roost or bats are present, measures would be implemented to get bats to vacate the tree. Tree removal would also be avoided between April 15 and August 15 (the maternity period) to avoid impacts to active maternity roosts. Implementation of Mitigation Measure Biology-15 would avoid direct impacts on special status bats, and the impact would be less than significant.

Construction of the Proposed Project would require vegetation clearance zones and tree removal, which would result in direct permanent and temporary loss of potentially suitable roosting and foraging habitat for special status bats. Temporary and permanent impacts on suitable habitat would not substantially impact special status bats because the impacts would be limited and dispersed along the Proposed Project alignment. Unaffected suitable foraging and roosting habitat surrounds the Proposed Project area, and bats would be able to avoid disturbance areas and travel to more suitable surrounding habitat. The impact on special status bats from habitat loss because of the Proposed Project would therefore be less than significant.

Indirect Construction Impacts

Construction disturbance could indirectly impact special status plants and wildlife through increased erosion and sedimentation, fugitive dust, release of toxic substances, and the introduction and/or spread of invasive plant species, resulting in a significant impact. Increased erosion can adversely affect plant growth and success by removing valuable topsoil and exposing roots, and increased sedimentation can bury small plants or seedlings. Construction activities such as grading and driving heavy equipment on unpaved roadways can result in increased levels of fugitive dust that may settle on surrounding plants, which can adversely affect photosynthesis. Spills from hazardous materials may harm or kill affected plants. The State of California NPDES program would require SCE to obtain coverage under the SWRCB Construction General Permit and prepare a SWPPP prior to construction because the Project would disturb more than 1 acre of land. The SWPPP developed for the Proposed Project would address risk factors and BMPs to reduce the potential for erosion and sedimentation. SCE would also implement APM HAZ-1, which includes a Hazardous Materials Management Plan (HMMP)/Hazardous Materials Business Plan (HMBP), during Project construction that would outline proper hazardous materials handling, use, storage and disposal requirements as well as hazardous waste management procedures. Impacts from erosion and sedimentation and the release of toxic substances would be less than significant after implementation of the SWPPP and APMs.

Invasive, non-native plants can spread when seeds are brought in on the soles of shoes or on the tires and undercarriages of vehicles or equipment. They can also be brought in if soil containing the seeds is imported. Furthermore, ground disturbance from construction activities generally favors the establishment of non-native species because they are more adapted to disturbance than native species. Once established, invasive species are often able to out-compete native plants and sometimes displace them, especially if there is further disturbance. Loss of suitable habitat for special-status plant and animal species from introduction of invasive plants is a potentially significant indirect construction impact. SCE proposes APM BIO-RES-2, which would require development and implementation of an Invasive Species Management Plan, which would address pre-construction inventories and treatment, prevention methods to implement during construction, monitoring, and post-construction control and eradication to avoid loss of suitable habitat. Indirect impacts to habitat for special status plants and animals would be less than significant with implementation of APM BIO-RES-2.

Wildfires caused by construction are rare but may occur, such as if a construction vehicle were to spark and ignite nearby vegetation or as a result of worker smoking. If a wildfire were to occur, the associated land disturbance would result in a significant impact to special status species in the area. SCE proposes APM HAZ-3 as part of the Proposed Project, which requires implementation of a Fire Prevention and Emergency Response Plan to include specific precautions to minimize the risk of wildfire ignition and procedures for containing any ignitions caused by construction such as carrying fire suppression equipment during construction to suppress any fires that are started by construction activity. Through implementation of the proposed fire risk minimization measures, the potential impacts of wildfire on habitat for special status plants and animals resulting from Project construction would be less than significant.

Operation and Maintenance

Special Status Plants

Special status plant species could also be impacted through crushing by vehicles, vegetation removal, and herbicide use during facility operation and maintenance. Inspections with the use of vehicles may crush plants. Vegetation management including herbicide application could cause plant mortality, and equipment maintenance could result in crushed plants or the release of toxic substances that could harm plants or cause mortality. Inspections would occur at the same frequency as inspections for the existing power lines in the utility corridor. There would be additional vegetation management activities around the structure operation work pads and spur roads, including the use of herbicides or trimming to manage vegetation.

Operation and maintenance activities for the Proposed Project would be approximately the same as the operation and maintenance activities for the existing lines and substation. SCE would continue to regularly inspect, maintain, and repair conductor, power line structures, and substation facilities, as well as maintain vegetation clearances from all facilities in the Proposed Project alignment, in approximately the same manner. SCE would use the same types of herbicides that are currently used for maintenance of clearance zones around the existing poles. Thus, the risk to special status plants from the application of herbicides and inspection activities would not change from existing conditions. Operation and maintenance would not create any new impacts on special status plants. The impact would be less than significant.

Special Status Wildlife

Special status wildlife species could be impacted by operation and maintenance activities including inspections, substation lighting, vegetation management, herbicide application, equipment maintenance, and accidental spills of hazardous materials and from trash generated during operation and maintenance activities. These activities could also result in loss of or damage to suitable breeding or foraging habitat or destruction of nests or burrows and could cause mortality or injury to species located in the Proposed Project work areas or access routes. Inspections would occur at the same frequency as inspections for the existing power lines in the utility corridor. There would be vegetation management activities around the new structure operation work pads and spur roads, including the use of herbicides to manage vegetation.

Annual inspections would be performed for the transmission and power lines and other related infrastructure in accordance with regulatory requirements. Maintenance would occur on an as-needed basis and could directly or indirectly impact wildlife species located near the work areas through equipment noise and human presence, exhaust or dust, vegetation removal, and herbicide use. Because the Proposed Project would replace an existing adjacent line and inspection and maintenance activities would be the same as existing activities, the risk to special status species from the application of herbicides and inspection activities would not change from existing conditions. Inspection and maintenance activities would not create any new impacts on special status species. The impact would be less than significant.

All power lines and associated structures pose a risk to special-status birds. Birds can be injured or killed through electrocution while perching on transmission line structures or by striking suspended lines during flight. Birds with large wing spans, such California condors, are particularly susceptible to collisions and electrocution. The Proposed Project could result in a significant impact on special status birds from electrocution or collision if the design of the new power line increased the potential for electrocution or collision compared to the existing line. SCE would construct the Proposed Project following the recommendations published by the Avian Power Line Interaction Committee (APLIC) in *Reducing Avian Collisions with Power Lines: The State of the Art in 2012* (APLIC 2012). In addition, SCE's Avian Protection Program (Appendix D) contains specific measures for the protection of California condors. With implementation of APLIC guidelines, the new structures would not pose a greater risk to birds than the existing power line and structures and may pose less risk than the existing power line because the new structures and lines would be designed according to modern standards and practices for avoiding avian interactions. The impact would, therefore, be less than significant.

Required APMs and MMs: APM BIO RES-2, APM BIO HERP-5, APM HAZ-1, APM HAZ-3, APM BIO-MAM 6, Mitigation Measure Biology-1, Mitigation Measure Biology 2, Mitigation Measure Biology 3, Mitigation Measure Biology-4, Mitigation Measure Biology-5, Mitigation Measure Biology-6, Mitigation Measure Biology-7, Mitigation Measure Biology-8, Mitigation Measure Biology-9, Mitigation Measure Biology-10, Mitigation Measure Biology-11, Mitigation Measure Biology-12, Mitigation Measure Biology-13, Mitigation Measure Biology-14, and Mitigation Measure Biology-15

Mitigation Measures

Mitigation Measure Biology-1: Avoidance and Minimization of Impacts on Special-Status Plants
SCE shall avoid, minimize or mitigate impacts on any State or federally listed or California Rare Plant Rank (CRPR) 1 or 2 plants that may be located on the project disturbance areas or surrounding buffer areas. This shall include known occurrences of Bakersfield cactus, Kern mallow, calico monkeyflower and Piute mountains navarretia, as well as new species or populations discovered during pre-construction surveys.
Pre-construction surveys: SCE shall obtain CPUC approval of a qualified botanist to perform pre-construction surveys for state or federally listed plant species and those with a California Rare Plant Rank (CRPR) of 1A, 1B, 2A, or 2B that have the potential to occur in the area. These surveys shall be performed utilizing CNPS or other accepted botanical survey protocol. Special-status plant surveys shall be conducted during the appropriate blooming period for each species and prior to construction activities for all work areas occurring off existing

Mitigation Measure Biology-1: Avoidance and Minimization of Impacts on Special-Status Plants

access roads in natural areas, including overland travel routes, and areas of existing roads that require modifications. The surveys shall include a floristic inventory and focused search for special-status plants with potential to occur in Project areas where suitable habitat is present. Special-status plant survey(s) shall be conducted within 1 year of construction mobilization.

The survey results shall be summarized in a report and provided to the CPUC no less than 30 days prior to commencement of construction. The survey report shall identify the botanists' names and qualifications, and a description of the survey dates, methods, and a description of the survey efforts, including a list of the species that were searched for, results of the plant inventory evaluation, and suitable habitat that was encountered. The report shall include maps (1: 3,000 scale) that identify final Project work areas and access routes and the extent of focused plant surveys that cover Project areas located in occupied habitat. Maps in the report shall identify point locations for individual plants and boundaries for plant populations. The report shall include specific recommendations for avoiding the plants.

Avoidance measures: SCE shall mark all populations of special-status plants within the BSA as environmentally sensitive areas on maps that are provided to construction contractors working near environmentally sensitive areas (ESAs). All populations within 25 feet of a project work area and 20 feet of an access road shall be staked and flagged or fenced for avoidance by a qualified biologist or botanist prior to construction and shall be monitored by a qualified biologist or botanist during construction to ensure proper avoidance of the species. The project work areas shall be adjusted as needed to avoid any populations of special status plants that occur within the work area to the extent feasible. All stakes and flagging shall be removed no later than 30 days after construction is complete in the area. Information about special-status plants and avoidance requirements shall be included in the Workers Environmental Awareness Training Program (MM Biology-3). In the event of a discovery of previously undocumented species, the boundary of the occurrence will be flagged, avoided, and monitored as discussed above and the CPUC, CDFW, and/or USFWS will be notified if the species is state or federally listed.

If the special-status plant species cannot be avoided, SCE shall notify CPUC in writing, and SCE shall submit a Salvage and Replanting Plan to CPUC and CDFW for approval as described below. No state or federally listed plant species shall be salvaged or relocated without obtaining permit authorization from CDFW and/or USFWS, as required. SCE shall provide the CPUC with any permits and authorizations obtained from USFWS and CDFW. SCE shall relocate the species to areas within the easement that are outside of the long-term maintenance areas. If the species occurs in an area that is subject to temporary impacts, the species shall be included in the restoration of the site (see MM Biology-2).

Salvage and replanting plan: For impacts on state or federally listed or CRPR 1 or 2 plants that cannot be avoided, the qualified botanist shall prepare and implement a Salvage and Replanting Plan. The Salvage and Replanting plan would specify, at a minimum, the following:

- Location of the mitigation site(s) (extent of the plants within and adjacent to project areas).
- Procedures for procuring plants, such as transplanting or collecting seed from plants to be impacted, including storage locations and methods to preserve the plants.
- Procedures for propagating collected seed, including storage methods.
- Quantity and species of plants to be planted or transplanted.
- Planting procedures, including the use of soil preparation and irrigation.
- Schedule and action plan to maintain and monitor the mitigation site for a minimum 3-year period.
- Reporting procedures, including the contents of annual progress reports.
- List of criteria (e.g., growth, plant cover, survivorship) by which to measure success of the plantings.
- Contingency measures to implement if the plantings are not successful (i.e., weed removal, supplemental plantings, etc.).

SCE shall submit the plan to the CPUC for review and approval no less than 30 days prior to impacting or collecting special-status plants. At a minimum, the transplanted/created population(s) shall have approximately the same characteristics as the impacted population (within 10-percent density, total population number, and non-

Mitigation Measure Biology-1: Avoidance and Minimization of Impacts on Special-Status Plants

native/invasive). Seasonal population changes may be taken into account by identifying and documenting the characteristics of an appropriate representative reference site prior to impacting a population. Reference sites that will be used must be identified and described in the Salvage and Replanting Plan.

If CPUC or CDFW determines that the Salvage and Replanting Plan is not likely to be successful (due to the species' life form, habitat requirements, or other factors), then SCE shall provide compensation lands consisting of habitat occupied by the impacted CRPR 1 or 2 ranked plant occurrences at a 1:1 ratio of acreage for any occupied habitat affected by the project. Occupied habitat will be calculated on the project site and on the compensation lands as including each special-status plant occurrence. If compensation is required as a means of mitigating special-status plant impacts, it may be accomplished by purchasing credit in an established mitigation bank, acquiring conservation easements, or direct purchase and preservation of compensation lands. Compensation for these impacts may be "nested" or "layered" with compensation for habitat loss.

Annual reporting: Annual salvage and replanting monitoring reports shall be submitted to CPUC for a period of 3 years after transplanting to ensure success of the transplanted populations. Where transplantation has not been successful under the criteria set forth in the performance standards below, compensation shall be provided to offset the loss of transplanted special-status plants. Annual reports shall include, details of plants or propagules salvaged, stored, and transplanted (salvage and transplanting locations, species, number, size, condition, etc.); adaptive management efforts implemented (date, location, type of treatment, results, etc.); and evaluation of success of transplantation. Salvage status and success will be described in the annual report.

Applicable locations: All special-status plant populations within 50 feet of a work area and 20 feet of an access road, and anywhere activities will occur off existing access roads in natural areas for other special-status plants.

Performance Standards and Timing:

Before construction: (1) Special-status plant surveys are conducted during the appropriate blooming period for each species, (2) A survey report is submitted to the CPUC no less than 30 days before construction, including maps, (3) if an impact to a special-status plant cannot be avoided, a Salvage and Replanting Plan that would be part of the Habitat Restoration Plan is submitted to the CPUC for approval and appropriate permit authorization from CDFW and/or USWFS is obtained, (4) Plant salvage and/or seed collection procedures are implemented, and (5) Special-status plant populations are flagged for avoidance. Compensation is documented for any special-status species where habitat compensation is the appropriate form of mitigation.

During construction: (1) Special-status plants are avoided and monitored appropriately, and (2) Salvaged plants and seed are stored and monitored appropriately.

After construction: The transplanted/created population(s) shall have approximately the same characteristics as the impacted population (within 10-percent density, total population number, and non-native/invasive). Replanting procedures and monitoring are implemented for 3 years or until the success criteria are met, or a financial contribution is made to an organization that restores/protects special-status populations in the project region. All stakes and flagging are removed no later than 30 days after construction is complete. Habitat compensation is provided for any transplanted populations that do not meet success criteria.

Mitigation Measure Biology-2: Habitat Restoration

SCE shall prepare and implement a Revegetation, Restoration, and Monitoring Plan that addresses procedures for quantifying habitat impacts from construction activities and revegetation and/or restoration requirements for applicable vegetation and soils resources. The plan shall also address the requirements for restoration in the following measures:

- Special-status plant populations (MM Biology-1).
- Blunt-nosed leopard lizard habitat (MM Biology-6)

Mitigation Measure Biology-2: Habitat Restoration

- Burrowing owl (MM Biology-7)
- Sensitive natural plant communities including riparian woodland and shrubland habitat, blue oak and valley oak woodlands, California buckeye groves, wetlands (MM Biology 11)

The plan shall be developed upon completion of final design and submitted to the CPUC for review and approval no less than 60 days before commencement of construction.

All temporarily disturbed areas shall be restored to near pre-construction conditions to ensure permanent impacts do not occur in areas of temporary impacts as a result of the project. Pre-construction conditions, including vegetation cover estimates and percentage of Cal-IPC list invasive weeds (plants rated as "High" and "Moderate"), shall be documented for each project work area as described below in the Pre-Construction Report. The goal of the restoration shall be that habitat functions and values and species composition of the restored vegetation are comparable to those of nearby comparable vegetation within 3 years.

The plan shall identify corrective actions to implement (e.g., removal of invasive weeds, supplemental planting, etc.) if the performance standards defined in this measure are not achieved. Work sites that have been proven to meet the performance standard defined in this measure shall not require further monitoring and reporting.

Monitoring procedures: A qualified biologist or botanist shall monitor vegetation resources that are impacted annually until performance standards have been met. Monitoring shall be conducted once a year during the blooming period to verify species composition and cover within all areas of temporary disturbance.

Pre-construction report(s): Prior to construction, a qualified biologist or botanist shall survey all final work areas and overland access routes to identify the vegetation resources that may be impacted, including their location, composition, condition, and extent of planned project disturbance. Survey efforts may be conducted in conjunction with focused surveys required for special-status species, as described in applicable APMs and mitigation measures. Anticipated impacts on vegetation resources shall be quantified and documented in the report, such as special-status plant individuals or the characteristics of populations (i.e., estimated size and cover estimates), the types and numbers of tree and shrub individuals, and restoration acreages for sensitive natural communities and riparian areas. The baseline conditions for adjacent and comparable vegetation resources shall also be documented in the report. Such areas may be used as a control for post-construction monitoring to determine relative restoration performance and account for seasonal fluctuations in invasive species composition, general growth rates, and overall coverage.

The report shall include maps (1: 3,000 scale) that identify the types and locations of the vegetation resources that may be impacted, the limits of the planned work areas, and project access routes. An initial report shall be submitted to the CPUC no less than 30 days before construction. Separate reports may be submitted for each project segment, if necessary. If new impacts or restoration procedures are identified, the plan shall be updated and submitted in track changes to the CPUC.

Post-construction reports: SCE shall prepare and submit Post-Construction Reports to the CPUC on an annual basis until construction is complete. Post-Construction Reports shall include table summaries of actual project impacts, and maps of the areas that identify the limits of actual impacts. The summary table shall include the location name/ID for each impact area, anticipated impact acreage from the Pre-Construction Report, and actual impact acreage during construction. The report shall include a brief statement about revegetation, restoration, and monitoring procedures that would be implemented where impacts occurred, as defined in the approved plan.

Annual monitoring reports: Once revegetation and restoration begins, SCE shall conduct surveys during the growing season and submit Annual Monitoring Reports to the CPUC. The reports shall summarize revegetation and restoration efforts for each applicable impact area, provide data on how the restoration is performing relative to the performance standards, and detail any corrective actions necessary to meet performance standards. Once the performance standards have been achieved for each location, monitoring and reporting would no longer be required for the location.

SCE shall provide written updates to CPUC upon request regarding seasonally dependent restoration and corrective actions prior to submission of the annual monitoring reports.

Mitigation Measure Biology-2: Habitat Restoration

Applicable locations: Areas of temporary impact.

Performance standard: No greater than 1% of noxious, invasive weeds. Habitat restoration needs to based on the vegetation type being impacted and the success criteria need to be based on surrounding vegetation. Areas dominated my non-native plants should require reseeding only. Greater than 70% of pre-project total vegetation cover within 5 years

Timing: Restoration of temporary impact areas shall occur within one year following completion of temporary disturbance. Monitoring to occur during blooming periods and reporting to occur annually and submitted to CPUC within 30 days of monitoring.

Mitigation Measure Biology-3: Worker Environmental Awareness Program

All workers on the project site shall be required to attend a Worker's Environmental Awareness Training Program (WEAP). Training shall inform all construction personnel of the resource protection and avoidance measures as well as procedures to be followed upon the discovery of environmental resources. WEAP training materials will include avoidance and minimization measures being implemented to protect biological resources, cultural resources, and paleontological resources, and the management of hazardous materials. WEAP training will also discuss terms and conditions of any permits or agreements, information on federal and state environmental laws, and consequences and penalties for violation or noncompliance with these laws, regulations, and project permits. Workers will be informed about the presence, identification, life history, and habitat requirements of the special-status species that have a potential to occur in the project area. The WEAP training program will be provided to the CPUC at least 30 days prior to construction for CPUC verification that all mitigation measures and topics are addressed. SCE will be responsible for maintaining WEAP training logs. At a minimum, the logs will contain the name, company, and date of training. These logs will be made available to the CPUC within a month after training is completed. The WEAP training will include, at a minimum, the following topics so crews will understand their obligations:

- ESA and other delineated boundaries (e.g., work areas) and how to recognize/avoid exclusion areas and sensitive habitat and specific avoidance or minimization measures for sensitive species and habitats
- Housekeeping (e.g., trash management and equipment cleaning)
- Safety, hazardous materials, and fire management, including hazardous substance spill prevention and containment measures
- Work stoppage
- Communication protocol
- Consequences of non-compliance
- Stormwater Pollution Prevention Plan (SWPPP) procedures
- How to identify cultural resources; avoidance requirements and procedures to be followed if unanticipated cultural resources are discovered during construction; disciplinary actions that may occur when historic preservation laws and project proponent policies are violated
- How to identify paleontological resources, including types of fossils that could occur in the project area and types of lithologies in which the fossils could be preserved; avoidance requirements and procedures to be followed if a fossil is discovered during construction; penalties for disturbing paleontological resources
- Review of mitigation and avoidance measures

Applicable Locations: All work areas

Mitigation Measure Biology-3: Worker Environmental Awareness Program

Performance Standard:

- All workers receive environmental awareness training prior to performing work on the site

Timing:

- WEAP training program developed prior to construction and provided to CPUC for review and approval at least 30 days prior to construction.
- Workers are trained prior to conducting work on the project site.

Mitigation Measure Biology-4: Crotch's Bumble Bee Avoidance Procedure

Focused survey: Focused surveys shall be conducted in accordance with CDFW's Survey Considerations for CESA Candidate Bumble Bee Species (CDFW 2023) the season immediately prior to ground disturbing activities are scheduled to occur. A minimum of three Crotch bumble bee focused surveys shall be conducted at 2-to-4-week intervals during the colony active period (April through August) when Crotch's bumble bees are most likely to be detected. Non-lethal, photo voucher surveys shall be completed by a biologist who holds a Memorandum of Understanding to capture and handle Crotch's bumble bee (if nesting and chilling protocol is to be utilized) or by a CDFW approved biologist experienced in identifying native bumble bee species (if surveys are restricted to visual surveys that will provide high-resolution photo documentation for species verification). The surveyor shall walk through all areas of suitable habitat focusing on areas with floral resources. Surveys shall be completed at a minimum of one person-hour of searching per three acres of suitable habitat during suitable weather conditions (sustained winds less than 8 mph, mostly sunny to full sun, temperatures between 65 and 90 degrees Fahrenheit) at an appropriate time of day for detection (at least an hour after sunrise and at least two hours before sunset, though ideally between 9:00 AM and 1:00 PM).

Pre-construction survey: Nesting surveys shall be conducted with focus on detecting active nesting colonies within one week and 24-hours immediately prior to ground disturbing activities. If an active Crotch bumble bee nest is detected, an appropriate no disturbance buffer zone (including foraging resources and flight corridors essential for supporting the colony) shall be established by a qualified biologist in consultation with CDFW around the nest to reduce the risk of disturbance or accidental take. Nest avoidance buffers may be removed at the completion of the flight season and/or once the qualified biologist deems the nesting colony is no longer active and CDFW has provided concurrence of that determination. If no nests are found but the species is present, a full-time qualified biological monitor shall be present during vegetation removal or ground disturbing activities that are scheduled to occur during the queen flight period (February through March), colony active period (March through September), and/or gyne flight period (September through October). Because bumble bees move nest sites each year, three preconstruction nesting surveys shall be required during each subsequent year of construction, regardless of the previous year's findings, whenever vegetation removal and ground disturbing activities are scheduled to occur during the flight season (February through October). SCE may relocate Crotch's bumble bees out of the work area only if a CESA incidental take permit has been obtained and any relocation follows the terms of the incidental take permit.

Compensatory mitigation: Compensatory mitigation for permanent direct impacts to suitable Crotch's bumble bee habitat shall be offset through compensatory mitigation, which may include, but is not necessarily limited to, on-site or off-site habitat preservation, enhancement, restoration, and/or creation at a ratio of no less than 1:1.

Applicable locations: Suitable habitat for Crotch's bumble bee

Mitigation Measure Biology-4: Crotch's Bumble Bee Avoidance Procedure

Performance standard:

- Complete focused surveys for Crotch's bumble bee a season prior to construction.
- Complete two nesting surveys one week prior and 24 hours prior to ground disturbing activities
- Nest avoidance buffers are implemented and monitoring is conducted per the measure if any active bee colonies occur.
- Habitat mitigation at a 1:1 ratio.

Timing:

- Focused surveys season prior to ground disturbing activities
- Pre-construction survey one week and two days prior to activities
- Monitoring during construction, where needed.
- Mitigation prior to ground disturbing activities

Mitigation Measure Biology-5: Pre-Construction Surveys for Special-Status Wildlife and Construction Monitoring and Avoidance Procedures

Biologist approval and qualifications: A qualified biologist(s) will be pre-approved by the CPUC prior to conducting biological surveys and monitoring for the project. Qualified biologists are defined as individuals with a bachelor's degree or above in a biological science field and demonstrated field experience. Approved and qualified biologists shall conduct required surveys and monitoring for special-status species and active nests. Qualified avian biologists are defined as individuals with demonstrated field expertise in ornithology, in particular, nesting behavior and nest detection. Monitoring biologists conducting avian nest checks shall have demonstrated experience surveying or monitoring nesting birds. Qualified botanists are defined as individuals with demonstrated field expertise in botany. Qualified herpetologists are defined as individuals with demonstrated experience with California reptile and amphibian species. Biologists qualified for construction monitoring shall hold at minimum 1 to 2 years of construction-related biological monitoring experience. Biologists qualified as a lead biological monitor shall have 5 or more years of related experience.

Pre-construction surveys: A CPUC-approved qualified biologist (i.e., a biologist with the requisite education and experience to address special-status species and biological resources with potential to occur in the project area) shall conduct a pre-construction survey for special-status wildlife species known to occur or with the potential to occur in all work areas located within suitable habitat for special-status species. In those situations where the qualified biologist cannot make a definitive species identification, the qualified biologist shall make a determination based on the available evidence and professional expertise. The pre-construction survey shall be conducted no earlier than 7 days prior to surface disturbance in each work area. The results of the pre-construction survey will be documented by the qualified biologist in a pre-construction survey report(s). The pre-construction survey report(s) shall be submitted to the CPUC for review and approval and the results shall be submitted to CDFW and USFWS as required by any other regulatory permits or approvals. The pre-construction survey report(s) will include the following:

- Special status species encountered, including potential breeding sites such as dens, burrows, nests, or aquatic habitat
- Type, location, and size of Project impact areas
- Date, time, and weather conditions during survey, and surrounding land uses
- Evaluation of type and quality of habitat
- Map or GIS of survey area and of work area

Monitoring: Where pre-construction surveys indicate the presence of sensitive species within 200 feet of a work area or sensitive habitats within 50 feet of a work area, a CPUC approved biologist(s) shall conduct biological

Mitigation Measure Biology-5: Pre-Construction Surveys for Special-Status Wildlife and Construction

monitoring during construction activities in proximity to the sensitive species or habitats. Extended monitoring buffers for sensitive species may be applied per the conditions of other APMs or mitigation measures. Where special-status species (e.g., amphibians, reptiles, birds, mammals, and bat roosts), sensitive natural communities, riparian areas, or wetlands may occur, unless otherwise determined absent through pre-construction surveys, a qualified biological monitor shall monitor construction activities to ensure that any unplanned or unpermitted impacts to special-status species, sensitive natural communities, riparian habitat, and wetlands are avoided.

Resource avoidance: Prior to construction or access in any area containing or potentially containing special-status species habitats, sensitive natural communities, riparian areas, or wetlands, the biological monitor shall mark or otherwise delineate the limits of special-status species habitat, sensitive natural communities, riparian areas, and wetlands for avoidance, and where necessary, post signs at access route entrances to inform workers of special access considerations (i.e., seasonal restrictions, biological monitor escort, etc.). Resource markings and signs shall be maintained and repaired as needed and as directed by the biological monitor. All stakes and flagging are removed no later than 30 days after construction is complete.

The biological monitor shall have full authority to halt construction, once safe to do so, if a sensitive resource/species has or may be impacted. The biological monitor may relocate wildlife out of harm's way, if appropriate to protect the species (additional protections or permits would be required prior to relocation of any state or federally listed threatened or endangered species). The biological monitor shall revisit each active work site at least once a week to inspect the work area for the presence of biological resources and verify that all avoidance measures (e.g., flagging or fencing) are in place.

Applicable locations: All work areas and access roads within 200 feet of suitable habitat for special-status species

Performance standards and timing:

- **Before construction:** (1) SCE submits qualifications for qualified biologists to the CPUC for review and approval, (2) A qualified biologist performs pre-construction surveys for special-status wildlife no earlier than 30 days prior to activity in all work areas within suitable habitat, (3) survey reports are submitted to CPUC for review and the results are submitted to CDFW and USFWS as required by any other regulatory permits or approvals.
- **During construction:** (1) Biological monitoring is conducted when working in proximity to sensitive habitats and at least once a week, (2) Signs and marking and flagging material are maintained and repaired (3) the biological monitor halts construction if it will impact a sensitive resource/species, (4) species are relocated out of harm's way, if appropriate.
- **After Construction:** All stakes and flagging for sensitive resources are removed no later than 30 days after construction is complete.

Mitigation Measure Biology-6: Blunt-nosed leopard lizard Compensatory Mitigation

SCE shall submit a report to USFWS, CDFW, and CPUC documenting (i) the total area of temporary and permanent impacts in blunt-nosed leopard lizard suitable habitat, (ii) the total area of habitat restoration that would offset the temporary and permanent impact, and (iii) the total area of temporary and permanent impact that is not offset by habitat restoration, which would require compensatory mitigation. The report shall be submitted to USFWS, CDFW, and CPUC at least 60 days prior to construction in suitable habitat.

Where impacts cannot be fully offset by habitat restoration, compensatory mitigation shall be provided to offset the permanent and temporary loss of suitable habitat for blunt-nosed leopard lizard. Mitigation for permanent impacts will be provided at a minimum ratio of 1:1 and temporary impacts at a ratio of 0.5:1, unless a higher ratio is required by authorizations issued under FESA for blunt-nosed leopard lizard. Compensatory mitigation shall include either:

- Purchase of mitigation credits from an agency-approved mitigation bank.
- Protection of habitat through acquisition of fee-title or conservation easement and funding for long-term management of the habitat. Title to lands acquired in fee will be transferred to CDFW and conservation easements will be held by an entity approved in writing by the applicable regulatory agency. In circumstances where SCE protects habitat through a conservation easement, the terms of the conservation easement will be subject to approval of the applicable regulatory agencies, and the conservation easement will identify applicable regulatory agencies as third-party beneficiaries with a right of access to the easement areas.

Compensatory mitigation shall be acquired and approved by USFWS and appropriate agency (as needed) prior to activities within blunt-nosed leopard lizard suitable habitat.

Applicable locations: Permanent impacts in suitable blunt-nosed leopard lizard habitat**.**

Performance standards and timing:

- **Before construction:** (1) SCE submits a report to USFWS, CDFW, and CPUC documenting habitat that would require compensatory mitigation at least 60 days prior to construction and (2) Compensatory mitigation is acquired and approved by USFWS (as needed) prior to activities within blunt-nosed leopard lizard suitable habitat. A compensatory mitigation plan using the minimum compensatory ratios and mitigation pathways described in this measure shall be drafted and approved by appropriate agency prior to activities within TSS and KCSS suitable habitat. If mitigation cannot be acquired prior to activities in habitat, SCE will provide a letter of credit to USFWS and CDFW will a mutually approved entity/lender.
- **During construction:** N/A
- **After construction:** N/A

Mitigation Measure Biology-7: Tehachapi Slender Salamander and Kern Canyon Slender Salamander Compensatory Mitigation

SCE shall submit a report to USFWS, CDFW, and CPUC documenting (i) the total area of temporary and permanent impacts in Tehachapi slender salamander and Kern Canyon slender salamander habitat, (ii) the total area of habitat restoration that would offset the temporary and permanent impact, and (iii) the total area of temporary and permanent impact that is not offset by habitat restoration, which would require compensatory mitigation. The report shall be submitted to USFWS, CDFW, and CPUC at least 60 days prior to construction in Tehachapi slender salamander and Kern Canyon slender salamander habitat.

Where impacts cannot be fully offset by habitat restoration, compensatory mitigation shall be provided to offset the permanent loss of habitat. Mitigation for permanent impacts will be provided at a minimum ratio of 1:1. Compensatory mitigation shall involve protection of habitat through acquisition of fee-title or conservation easement and funding for long-term management of the habitat. Conservation easements will be held by an entity approved by CDFW.

Mitigation Measure Biology-7: Tehachapi Slender Salamander and Kern Canyon Slender Salamander Compensatory Mitigation

Applicable locations: Permanent impacts in suitable Tehachapi slender salamander and Kern Canyon slender salamander habitat**.**

Performance standards and timing:

Before construction: (1) SCE submits a report to USFWS, CDFW, and CPUC documenting habitat that would require compensatory mitigation at least 60 days prior to construction within suitable habitat and (2) Compensatory mitigation is acquired and approved by CDFW prior to activities within suitable habitat**:** A compensatory mitigation plan using the minimum compensatory ratios and mitigation pathways described in this measure shall be drafted and approved by appropriate agency prior to activities within TSS and KCSS suitable habitat. If mitigation cannot be acquired prior to activities in habitat, SCE will provide a letter of credit to USFWS and CDFW will a mutually approved entity/lender.

- **During construction:** N/A
- **After construction:** N/A

Mitigation Measure Biology -8: Nesting Bird Management

Nesting Bird Management Plan. SCE shall prepare a Nesting Bird Management Plan (NBMP) in coordination with CPUC. The NBMP shall describe methods to minimize potential project effects to nesting birds and avoid any potential for unauthorized take. Project-related disturbance including construction and pre-construction activities shall not proceed within 300 feet of active nests of common bird species or 500 feet of active nests of raptors and 500 feet of active nests of tricolored blackbirds until approval of the NBMP by CPUC in consultation with CDFW and USFWS.

NBMP Content. The NBMP shall include: (1) definitions of default nest avoidance buffers for each species or group of species, depending on characteristics and conservation status for each species; (2) a notification procedure for buffer distance reductions should they become necessary; (3) a rigorous monitoring protocol, including qualifications of monitors, monitoring schedule, and field methods, to ensure that any project-related effects to nesting birds will be minimized; and (4) a protocol for documenting and reporting any inadvertent contact or effects to birds or nests.

The paragraphs below describe the NBMP requirements in further detail.

Background. The NBMP shall include the following:

- A summary of applicable state and federal laws and regulations, including definition of what constitutes a nest or active nest under federal law.
- A procedure for amendment of the NBMP, should there be changes in applicable state or federal regulations, and requirement for CDFW review of any NBMP amendment.
- A list of bird species potentially nesting on or near the ROW or other work areas, indicating approximate nesting seasons, nesting habitat, typical nest locations (e.g., ground, vegetation, structures, etc.), tolerance to disturbance (if known) and any conservation status for each species.
- A list of the types of project activities (construction, operations, and maintenance) that may occur during nesting season, with a short description of the noise and physical disturbance resulting from each activity.

Clearing of any vegetation, site preparation in open or barren areas, or other project related activities that may adversely affect breeding birds shall be scheduled outside the nesting season, as feasible.

Pre-construction nest surveys. Pre-construction nest surveys will be conducted prior to any construction activities scheduled during the breeding period. For this project, the breeding period will be defined as January 1 through September 15. The NBMP shall describe the proposed field methods, survey timing, and qualifications of field biologists. The avian biologists conducting the surveys shall be experienced bird surveyors and familiar with

Mitigation Measure Biology -8: Nesting Bird Management

standard nest-locating techniques such as those described in Martin and Guepel (1993). Nest surveys will focus on visual searches for nest locations and observations of bird activities and movement to detect nesting activity (e.g., carrying nest materials or food, territorial displays, courtship behavior). Surveys shall be conducted in accordance with the following guidelines:

Surveys shall cover all potential nesting habitat within the ROW or other work areas within 500 feet of these areas for raptors and 300 feet for non-raptors.

Pre-construction surveys shall be conducted for each work area, no longer than 10 days prior to the start of construction activity. On the first day of construction at any given site, a qualified Avian Biologist will perform a pre-construction "sweep" to identify any bird nests or other resources that may have appeared since the 10-day survey.

SCE shall provide the CPUC a report describing the findings of the pre-construction nest surveys, including the time, date, and duration of the survey; identity of the surveyor(s); a list of species observed; and electronic data identifying nest locations and the boundaries of buffer zones. The electronic data set will be updated following each preconstruction nest survey throughout the nesting season. The format and contents of this report will be described in the draft NBMP and will be subject to review and approval by CPUC.

Nest Buffers and Acceptable Activities

Nest buffers shall be delineated on the work site, to consist of clearly visible marking and signage. Buffer locations shall be communicated to the construction contractor and shall remain in effect until formally discontinued (when each nest is no longer active). Measures to ensure nesting buffers are observed shall include direct communication and decision protocol to stop work within buffer areas. In some cases, active nests may be found while work is underway. Therefore, a protocol shall be implemented for stopping ongoing work within the buffer area, securing the work site, and removing personnel and equipment from the buffer.

Buffer distances from active nests shall be implemented to avoid take or adverse effects to nests. Buffers shall be based on the specific nature of the bird species and conservation status, and other pertinent factors. Buffer distances shall be defined specific to each species relative level of tolerance of human activity. If no information is available to specify a buffer distance for a species, then a 300 foot buffer shall apply as a standard buffer distance for migratory birds, and 500 feet of active nests of raptors and 1,000 feet of active nests of tricolored blackbirds. All applicable avoidance measures, including buffer distances, must be continued until nest monitoring (below) confirms that the nestlings have fledged and dispersed, or the nest is no longer active. For each special-status species potentially nesting within or near project work areas, the NBMP shall specify applicable buffers and any additional nest protection measures, specialty monitoring, or restrictions on work activities, if needed.

The NBMP shall identify acceptable work activities within nest buffers (e.g., pedestrian access for inspection or BMP repair) including conditions and restrictions, and any monitoring required. The NBMP shall include pictorial representation showing buffer distances for ground buffers, vertical helicopter buffers, and horizontal helicopter buffers for nests near the ground and nests in towers.

Nest Buffer Modification or Reduction

At times, SCE or its contractor may propose buffer distances different from those approved in the NBMP. Buffer adjustments shall be reviewed and recommended by a qualified avian biologist, who has been approved by CPUC in consultation with the CDFW and USFWS. The NBMP shall provide a procedure and timing requirements for notifying CPUC, CDFW, and USFWS of any planned adjustments to nest buffers. Separate and distinct procedures will be provided for special-status birds. The NBMP will list the information to be included in buffer reduction notifications in a standardized format.

Nest deterrents

The NBMP shall describe any proposed measures or deterrents to prevent or reduce bird nesting activity on project equipment or facilities, such as buoys, visual or auditory hazing devices, bird repellents, securing of materials, vehicles, and equipment. It shall also include timing for installation of nest deterrents and field

Mitigation Measure Biology -8: Nesting Bird Management

confirmation to prevent effects to any active nest; guidance for the contractor to install, maintain, and remove nest deterrents according to product specifications; and periodic monitoring of nest deterrents to ensure proper installation and functioning and prevent injury or entrapment of birds or other animals. In the event that an active nest is located on project facilities, materials or equipment, SCE will avoid disturbance or use of the facilities, materials, or equipment (e.g., by red-tag) until the nest is no longer active.

Communication

The NBMP shall specify the responsibilities of construction monitors in regard to nests and nest issues and specify a direct communication protocol to ensure that nest information and potential adverse impacts to nesting birds can be promptly communicated from nest monitors to construction monitors, so that any needed actions can be taken immediately.

The NBMP shall specify a procedure to be implemented following accidental disturbance of nests, including wildlife rehabilitation options. It also shall describe any proposed measures, and applicable circumstances, to prevent take of precocial young of ground-nesting birds such as killdeer or quail. Finally, the NBMP will specify a procedure for removal of inactive nests, including verification that the nest is inactive and a notification/approval and approval process prior to removal.

Monitoring

SCE shall be responsible for monitoring the implementation, conformance, and efficacy of the avoidance measures (above). The NBMP shall include specific monitoring measures to track any active bird nest within or adjacent to project work areas, bird nesting activity, project-related disturbance, and outcome of each nest. For nests with reduced buffers, SCE shall monitor each nest until nestlings have fledged and dispersed or until the nest becomes inactive. Nests with default buffers do not require further monitoring once construction work is completed in the area. New nests discovered after work completion in an area will not require monitoring. In addition, monitoring shall include pre-construction surveys, daily sweeps of work areas and equipment, and any special monitoring requirements for particular activities (tree trimming, vegetation removal, etc.) or particular species (noise monitoring, etc.). Nest monitoring shall continue throughout the breeding season during each year of the project's construction activities.

Reporting

- Throughout the construction phase of the project, nest locations, project activities in the vicinity of nests (including helicopter routes), and any adjustments to buffer areas shall be updated and available to CPUC monitors on a daily basis in the Field Reporting Environmental Database (FRED). All buffer reduction notifications and prompt notifications of nest-related non-compliance and corrective actions will be made via email to CPUC monitors. In addition, the NBMP shall specify the format and content of nest data to be provided in regular monitoring and compliance reports. At the end of each year's nest season, SCE will submit an annual NBMP report to the CPUC, CDFW, and USFWS.

Applicable locations: All work areas.

Performance standards and timing:

- **Before construction:** Prepare NBMP for CDFW and CPUC review and approval.
- **During construction:** (1) Implement pre-construction surveys per the NBMP. 2) Avoid active nests and implement nest buffers, deterrents, and communication per the measure and NBMP, 3) update FRED throughout construction, 4) submit annual reports to CPUC, CDFW, and USFWS.

Mitigation Measure Biology 9: Burrowing Owl

Surveys and avoidance for burrowing owl. Burrowing owl surveys shall be conducted by a qualified biologist in accordance with the most current CDFW guidelines (CDFG 2012; or updated guidelines should they become available). SCE shall implement buffers for active burrowing owl burrow within or adjacent to a work area. The buffer for active burrowing owl nesting sites shall be in accordance with CDFW guidelines (CDFG 2012) and shall be as follows:

- From April 1-August 15, buffers shall be 300 feet for low levels of disturbance (i.e., vehicles, worker presence), and 500 feet for moderate to high levels of disturbance (i.e., demolition, grading, tree felling, helicopter use)
- From August 16-October 15, buffers shall be 600 feet for low and moderate levels of disturbance (i.e., vehicles, worker presence, tree felling, grading), and 1,500 feet for high levels of disturbance (i.e., helicopter use)
- From October 16-March 31, buffers shall be 150 feet for low levels of disturbance (i.e., vehicles, worker presence), 300 feet for moderate levels of disturbance (i.e., grading, tree felling), and 1,500 feet for high levels of disturbance (i.e., helicopter use)

Binocular surveys may be substituted for protocol field surveys on private lands adjacent to the project site only when SCE has made reasonable attempts to obtain permission to enter the property for survey work but was unable to obtain such permission.

If active burrowing owl burrows are located within project work areas, they shall be avoided to the greatest extent possible through work exclusion buffers as described above. Monitoring of active burrowing owl nests shall occur in all buffer areas as defined above, and other methods to reduce disturbance (such as visual or sound barriers) shall be employed depending on the type and level of work being conducted to prevent the need for relocation. Other measures shall include eliminating actions that reduce burrowing surrogates (e.g., ground squirrels), and the WEAP (MM Biology-3) shall include measures to reduce the potential for the introduction or attraction of predator species, such as litter control.

In any cases where active burrows could not be adequately avoided, as determined by a qualified biologist, through exclusion buffers and project activities could result in substantial indirect disturbance, direct physical disturbance, or destruction of burrows that are located within certain project work areas (i.e., facility footprints, areas that require grading, etc.), SCE may passively relocate the owls, as described below and per the conditions of any required CESA incidental take permit. Passive relocation shall only be considered if work cannot take place due to active nest, such as grading over burrows. No passive relocation of burrowing owls shall be permitted during breeding season, unless a qualified biologist verifies through noninvasive methods that an occupied burrow is not occupied by a mated pair, and only upon authorization by CDFW. Any passive burrowing owl relocation shall address:

- **Replacement burrows:** For each burrowing owl that will be passively relocated, if fewer than two suitable unoccupied burrows are available within 600 feet of the affected project work site, then SCE shall construct at least two replacement burrows within 600 feet of the affected project work site, or in suitable locations within 0.25 mile when suitable locations within 600 feet are not available. Burrow replacement sites shall be in areas of suitable habitat for burrowing owl nesting, and subject to minimal human disturbance and access. The Burrowing Owl Exclusion Plan shall be prepared that would describe measures to ensure that burrow installation or improvements will not affect sensitive species habitat or any burrowing owls already present in the relocation area. The Burrowing Owl Exclusion Plan shall provide guidelines for creation or enhancement of at least two natural or artificial burrows for each active burrow within the project disturbance area, including a discussion of timing of burrow improvements, specific location of burrow installation, and burrow design. Design of the artificial burrows shall be consistent with CDFW guidelines (CDFG, 2012; or more current guidance as it becomes available) and the Burrowing Owl Exclusion Plan shall be approved by the CPUC and CDFW.
- **Methods:** An occupied burrow may not be disturbed during the nesting season (generally, but not limited to, February 1 to August 31), unless a qualified biologist determines, by non-invasive methods, that it is not occupied by a mated pair. Passive relocation will include installation of one-way doors on burrow entrances that will let owls out of the burrow but will not let them back in. Once owls have been passively relocated,

Mitigation Measure Biology 9: Burrowing Owl

burrows will be carefully excavated by hand and collapsed by, or under the direct supervision, of a qualified biologist.

- **Monitoring and reporting**: SCE shall monitor the replacement burrow site(s) and provide monitoring reports consistent with CDFW guidance (CDFG 2012). The objective shall be to manage the relocation area for the benefit of burrowing owls, with the specific goal of maintaining the functionality of the burrows for a minimum of two years. Monitoring will be conducted after the burrowing owl passive relocation process is complete, up until the onset of ground disturbance due to construction to ensure that owls do not re-establish themselves. The artificial burrows or enhanced replacement burrows will be monitored for a period that will be defined in the site-specific relocation plan to determine if they are being used by owls. Monitoring reports shall be available to the CPUC.

Applicable locations: Where active burrowing owl nesting sites are present within 1,500 feet of work areas**.**

Performance standards and timing:

- **Before construction:** Burrowing owl surveys shall be conducted by a qualified biologist in accordance with the most current CDFW guidelines.
- **During construction:** (1) Appropriate buffers are employed as defined by current CDFW guidelines and in this measure based on timing and activity disturbance level, (2) Active burrows are avoided to the highest extent possible, (3) Passive relocation is considered only if all possible avoidance measures are not feasible and will be implemented in accordance with the procedures in the measure and CDFW requirements, and (4) Replacement burrows are constructed as defined in the measure and any CDFW incidental take permit, if applicable.
- **After construction:** Monitoring and reporting for replacement burrows and relocation sites is provided to CPUC.

Mitigation Measure Biology 10: Golden Eagle Avoidance and Minimization

Avoid and minimize impacts. All project activities located within areas identified as habitat (as described in the TLRR Habitat and Sensitive Species Report for the GKR Project) shall implement the following avoidance and minimization measures.

- Golden eagle nest surveys will be performed when construction activities are scheduled to occur in or near golden eagle nesting habitat from January 1-August 31 to determine if any eagle nests are active within a 1-mile radius. Ground-based or helicopter-based survey methods will be developed in coordination with USFWS and will be consistent with current USFWS survey guidelines, or as recommended by USFWS.
- For construction activity, should an active golden eagle nests be present, the nest shall receive a 1-mile buffer if in line of sight, 0.5-mile buffer if no line of sight—with USFWS concurrence.
- Buffers and buffer modifications for golden eagles will be addressed in the Project Nesting Bird Management Plan (Mitigation Measure Biology-8).

Applicable locations: Activities within 1 mile of a golden eagle nest.

Performance standards and timing:

- **Before construction:** N/A.
- **During construction:** SCE conducts a nesting survey for all activities within 1 mile of suitable habitat in the period January 1 to August 31. Nest buffers shall be implemented per the measure and USFWS requirements.
- **After construction:** N/A.

Mitigation Measure Biology-11: Swainson's Hawk

Swainson's hawk nest surveys shall be performed by a CPUC-approved qualified biologist in areas of suitable habitat prior to construction activities scheduled to occur during the Swainson's hawk nesting season (from March 1-July 31). Surveys shall be conducted within 0.5 miles of suitable nesting habitat for Swainson's hawk to determine if any Swainson's hawk nests are active within a 0.5-mile radius of the construction area. Suitable habitat for Swainson's hawk is defined as the following:

- Nesting habitat includes trees within mature riparian forest or corridors, lone oak trees and oak groves, and mature trees near fields.

If any active nests are located, the following shall apply:

- An active nest shall receive a 0.5-mile buffer between March 1 and July 31. Buffer zones may be adjusted in consultation with CDFW and approved by CPUC, and must be protective of the species nesting behavior with continued monitoring of the nest by a qualified biologist.
- Do not remove Swainson's hawk nest trees unless tree avoidance is infeasible. Removal of any trees that are used by Swainson's hawk for nesting shall only occur only outside of the Swainson's hawk nesting season during the timeframe of August 1 (after a qualified biologist has confirmed the nest to be inactive) and the last day in February.

For hawks found injured during project-related activities on the project site, SCE shall consult with CPUC and CDFW for immediate relocation to an agency-approved raptor recovery center.

Applicable locations: Suitable habitat for Swainson's hawk

Performance standards and timing:

- **Before construction:** Pre-construction surveys are performed by a qualified biologist for active Swainson's hawk nests prior to construction that would take place between March 1 and July 31.
- **During construction:** Appropriate buffers for construction activities are applied for active Swainson's hawk nests (0.5-mile radius between March 1 and July 31). No trees containing Swainson's hawk nests are removed during the nesting season.
- **After construction:** N/A

Mitigation Measure Biology-12: American Badger

A qualified biologist shall conduct a pre-construction survey for active American badger dens within 7 days prior to grading or vegetation clearing in work areas, or use of overland access routes. The pre-construction survey area shall be required for potentially suitable habitat for American badger (e.g., grasslands and woodlands) located within 250 feet of work areas where grading or land vegetation clearing may occur and within or immediately adjacent to overland access routes. SCE shall submit the survey results to CPUC prior to construction.

SCE may use cameras to determine if dens are active. If active dens are identified at any time during construction, the dens shall be flagged and avoided to the greatest extent possible through work exclusion buffers. A 250-foot work restriction buffer shall be established around active maternal dens. For non-maternal dens, a 50-foot work restriction buffer shall be established around active dens. Smaller buffers may be established through consultation with CDFW. If any cases where an active den cannot be adequately avoided (i.e., the den is located within the facility footprints or active work area), SCE will implement passive exclusion techniques by sealing the den after animals have vacated (e.g., one way doors). SCE shall obtain any required permits prior to implementing any den exclusions.

A qualified biologist shall inspect construction activities near active American badger dens on a weekly basis to ensure the work restriction buffers are implemented appropriately and active dens are avoided.

Mitigation Measure Biology-12: American Badger

Applicable locations: Suitable habitat for American badger (e.g., grasslands and woodlands) within 250 feet of work areas where grading or land vegetation clearing may occur and within or immediately adjacent to overland access routes.

Performance standards and timing:

- **Before construction:** Pre-construction surveys are conducted for American badger dens and survey results are submitted to the CPUC.
- **During construction:** (1) Work restriction buffers are implemented, and (2) Construction activities near active dens are monitored.
- **After construction:** N/A

Mitigation Measure Biology-13: San Joaquin Kit Fox Habitat

Prior to construction within San Joaquin kit fox habitat, compensatory habitat mitigation shall be provided to offset the loss of suitable habitat for San Joaquin kit fox. Mitigation for permanent impacts will be provided at a minimum ratio of 1:1. Compensatory mitigation shall include either:

- Purchase of mitigation credits from an agency-approved mitigation bank.
- Protection of habitat through acquisition of fee-title or conservation easement and funding for long-term management of the habitat. Title to lands acquired in fee will be transferred to CDFW and conservation easements will be held by an entity approved in writing by the applicable regulatory agency. In circumstances where SCE protects habitat through a conservation easement, the terms of the conservation easement will be subject to approval of the applicable regulatory agencies, and the conservation easement will identify applicable regulatory agencies as third-party beneficiaries with a right of access to the easement areas.
- Compensatory mitigation shall be acquired and approved by USFWS (as needed) prior to activities within San Joaquin kit fox suitable habitat.

Applicable locations: Suitable habitat for San Joaquin kit fox.

Performance standards and timing:

- **Before construction:** Determine permanent impacts within San Joaquin kit fox habitat and submit proof of mitigation credits for habitat acquisition in compliance with the measure. A compensatory mitigation plan using the minimum compensatory ratios and mitigation pathways described in this measure shall be drafted and approved by appropriate regulatory agency prior to activities within SJKF suitable habitat. If mitigation cannot be acquired prior to activities in habitat, SCE will provide a letter of credit to USFWS and CDFW will a mutually approved entity/lender
- **During construction:** N/A
- **After construction:** N/A

Mitigation Measure Biology-14: Tipton Kangaroo Rat Avoidance and Minimization

Pre-construction Survey/Construction Monitoring. Prior to initial ground-disturbing activities, a qualified (permitted Tipton kangaroo rat) biologist will conduct habitat assessment surveys within areas identified as potentially suitable habitat for Tipton kangaroo rat to determine suitability Prior to project activities SCE will provide a map of potentially suitable habitat for Tipton kangaroo rat along the project alignment.

Mitigation Measure Biology-14: Tipton Kangaroo Rat Avoidance and Minimization

Conduct surveys and avoidance for Tipton kangaroo rat. Prior to the start of construction, within potentially suitable habitat for Tipton kangaroo rat (TKR), SCE shall conduct focused surveys to determine if there are any active burrows with possible TKR sign (burrows, scat, etc.) within 100 feet of proposed ground disturbing activities. All surveys shall be conducted by a qualified biologist who holds the appropriate USFWS and CDFW permits to conduct trapping surveys for TKR. Trapping Plans shall approved by CDFW and USFWS prior to any trapping activities. If TKR sign is present, and SCE cannot avoid potentially suitable burrows then SCE shall conduct focused protocol trapping surveys according to accepted protocols to determine presence or absence of TKR.

If TKR are present, then SCE shall take additional measures to prevent or minimize take, such as flagging for avoidance and establishment of 30' avoidance buffers. Under the direction of a qualified biologist, cover boards to prevent burrow collapse may also be used to allow for work area access. Other avoidance measures may be required, subject to authorization by USFWS and CDFW. If TKR are absent, no measures shall be required.

Construction activities shall avoid suitable TKR habitat to the extent feasible. All requirements will be followed for any take authorizations granted by USFWS and/or CDFW. A qualified biologist will monitor construction activities within occupied habitat.

Avoid and Minimize Impacts. All project activities located within areas identified as occupied TKR habitat shall implement the following avoidance and minimization measures:

- **Limited Operating Period.** SCE shall restrict work to daylight hours, except during an emergency or critical construction activity, in order to avoid nighttime activities when TKR may be present on access roads. No night lighting will be used within TKR habitat except during an emergency or critical construction activities.
- **Trash disposal.** Trash and food items will be contained in closed containers and removed daily to reduce attracting predators.
- **Pets Prohibited.** Employees will not bring pets or other animals to the GKR Project area, unless the animal is ADA compliant.
- **Vehicle Travel.** During construction-related activities, motor vehicles will be limited to maintained roads, designated routes, and areas identified as being permanently or temporarily affected by construction within the Project footprint. Motor vehicle speeds along Project routes and access roads within habitat for TKR will not exceed 15 miles per hour.

Trapped Animal Prevention. All auger holes, trenches, pits, or other steep-sided excavations that may pose a hazard to TKR will be either constructed with escape ramps (earthen or wooden) or securely covered when unattended to prevent entrapping animals. At the start and end of each workday, and just before backfilling, all excavations will be inspected for trapped animals. Any TKR found will be allowed to escape unimpeded. If a TKR is trapped and does not leave on its own, a qualified biologist will move the animal according to agency authorizations, if there is no agency authorization, the TKR shall not be moved (unless in imminent danger) until the relevant agency has been contacted and further guidance has been received.

Cover and Inspect Construction Materials. All construction pipes, culverts, or similar structures with a diameter of approximately 1 inch or greater that are stored for one or more overnight periods will be thoroughly inspected for TKR before the pipe is subsequently buried, capped, otherwise used or moved in any way. If a TKR is discovered inside construction material and does not leave on its own, the materials shall not be moved until the relevant agency has been contacted and further guidance has been received. Any kangaroo rat found will be allowed to escape unimpeded.

Applicable locations: Suitable habitat for Tipton kangaroo rat

Performance standards and timing:

- **Before construction:** Pre-construction surveys are conducted for Tipton kangaroo rat and results submitted to CPUC and CDFW

Mitigation Measure Biology-14: Tipton Kangaroo Rat Avoidance and Minimization

- **During construction:** (1) Work restriction buffers are implemented, (2) Construction activities near active dens are monitored, and (3) construction materials are covered and inspected.
- **After construction:** N/A

Mitigation Measure Biology-15: Bat Avoidance and Minimization

Pre-construction Surveys. A qualified bat biologist will conduct surveys before the start of construction to identify active bat roosting or maternity colonies within or adjacent to project impact areas in trees, rock outcrops, caves, and mines with bat roost potential. A one-night visual emergence survey during acceptable weather conditions (e.g., no rain or high winds, night temperatures >45F) may be employed to determine presence. Alternatively, the roost can be physically examined if conditions permit (e.g., remote cameras or lift equipment).

High-value habitat features (large tree cavities, crevices, bark fissures, basal hollows, loose or peeling bark, larger snags, palm trees with intact thatch, mines, rock outcrops, buildings, etc.) will be identified and the area around these features searched for bats and bat sign (guano, culled insect parts, staining, etc.). Riparian woodland, orchards, and stands of mature broadleaf trees shall be considered potential habitat for solitary foliage roosting bat species, such as the solitary western red bat and western yellow bat.

If no roosts (maternity, wintering, or otherwise) are present, tree trimming/removal may continue as planned. If an active roost has been identified or lasiurine bats are present, removal of trees around the roost would be conducted between September 15 - October 30, and February 15 - April 15, which corresponds to time periods when bats are active, not in torpor, and not caring for non-mobile young.

Removal of trees requires the following two-step process prior to trimming/removal:

- On Day 1 under the supervision of a qualified bat biologist, Step 1 would include branches and limbs with no cavities removed by hand (e.g., using chainsaws). This would create a disturbance (noise and vibration) and physically alter the tree. Bats roosting in the tree would either abandon the roost immediately (rarely) or, after emergence, would avoid returning to the roost.
- On Day 2, Step 2 of the tree removal may occur, which would be removal of the remainder of the tree. Trees that are only to be trimmed and not removed would be processed in the same manner; if a branch with a potential roost must be removed, all surrounding branches would be trimmed on Day 1 under supervision of a qualified bat biologist and then the limb with the potential roost would be removed on Day 2.

Construction Monitoring. If a colonial or solitary maternity roost was located, tree/structure removal will be avoided between April 15 and August 15 (the maternity period) to avoid impacts to active maternity roosts (reproductively active females and dependent young). If bats are present, but no dependent young bats are present within the structure for removal, an eviction plan shall be prepared by a qualified biologist and submitted to CPUC and CDFW for review. A qualified biologist will determine the appropriate no disturbance buffer area around active nest(s) and provisions for buffer exclusion areas. Unless restricted by the qualified biologist, construction vehicles will be allowed to move through a buffer area with no stopping or idling. The qualified biologist will determine, evaluate, and modify buffers as appropriate based on species tolerance and behavior, the potential disruptiveness of construction activities, and existing conditions. Furthermore, the roost will be monitored to determine activity. Roost monitoring will be conducted by qualified biological monitors with knowledge of bat behavior under the direction of a CDFW qualified bat biologist. The qualified biological monitor will observe and document implementation of appropriate buffer areas around active roosts(s) during project activities.

Applicable locations: Suitable habitat for bats

Performance standards and timing:

- **Before construction:** Pre-construction surveys are conducted by a qualified biologist within suitable bat habitat

Mitigation Measure Biology-15: Bat Avoidance and Minimization
• **During construction:** (1) Tree removal is timed per the measure or bat eviction is implemented per the measure prior to tree removal, and (2) no disturbance buffers for maternity bat roosts are defined and monitored by a qualified biologist. • **After construction:** N/A

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service? (Less than significant with mitigation)

Construction

Direct Impacts

Construction for the Proposed Project would temporarily and permanently disturb sensitive vegetation communities and riparian habitat. Temporary impacts on riparian habitat and other sensitive natural communities would occur from construction access, site preparation (including surface grading, leveling, and/or compacting), removal of existing structures and conductor, installation of new structures, stringing, temporary guard structures, and temporary vehicle and equipment parking. No sensitive vegetation communities or riparian areas are located within staging yards or helicopter landing zones. Permanent impacts on sensitive vegetation communities and riparian habitat would occur from new structure foundations. The areas of temporary and permanent impacts within riparian areas and sensitive natural communities are listed in Table 3.4-7.

The temporary loss of riparian and sensitive vegetation communities during construction would be a significant impact if these areas were not adequately restored to pre-Project conditions to avoid permanent loss of the habitat and if vegetation characteristic of these communities that were removed or substantially impacted were not replaced. MM Biology-2 requires SCE to prepare and implement a Revegetation, Restoration, and Monitoring Plan, including specific procedures and performance standards to ensure temporarily impacted sensitive natural communities and riparian areas are adequately restored following construction.

Permanent impacts on sensitive natural communities and riparian habitat would occur over the life of the Proposed Project due to the presence of new structures and permanent foundations. The permanent loss of sensitive vegetation communities and riparian habitat would have a potentially significant impact. MM Biology-16 requires that permanent construction impacts to sensitive natural communities and riparian areas be compensated for. Because MM Biology-2 requires temporarily disturbed areas to be restored to conditions comparable to pre-construction conditions, which would avoid the loss of sensitive natural communities and riparian areas, and MM Biology-16 requires avoidance where feasible and compensation for permanent impacts, the impact on sensitive natural communities and riparian areas would be less than significant with mitigation.

Table 3.4-7 Temporary and Permanent Construction Impacts on Sensitive Natural Communities and Riparian Areas

Vegetation community	Community type	Temporary impact area (acres)	Permanent impact area (acres)
Woodland and forests			
Blue oak woodland and forest	Sensitive natural community	38.74	13.6
California buckeye groves	Sensitive natural community	2.16	0.34
California sycamore – coast live oak riparian woodland	Sensitive natural community/riparian habitat	1.22	0.005
California live oak chapparal	Sensitive natural community	0.0	0.19
California live oak forest	Sensitive natural community	1.85	0.06
Fremont cottonwood forest and woodland	Sensitive natural community/riparian habitat	2.42	0.07
Goodding's willow – red willow riparian woodland and forest	Sensitive natural community/riparian habitat	1.87	0.18
Shining willow groves	Sensitive natural community/riparian habitat	2.25	0.04
Valley oak riparian forest and woodland	Sensitive natural community/riparian habitat	0.16	0.21
Valley oak woodland and forest	Sensitive natural community	8.48	2.19
Shrubland			
Acton's and Virgin River brittle brush – net-veined goldeneye scrub	Sensitive natural community	7.01	0.32
Arroyo willow thickets	Sensitive natural community/riparian habitat	1.05	0.003
California joint-fir – longleaf joint-fir scrub	Sensitive natural community	2.52	0.57
Mulefat thickets	Riparian/wetland	0.40	0.06
Narrowleaf goldenbush – bladderpod scrub	Sensitive natural community	10.91	5.11
Scalebroom scrub	Sensitive natural community/riparian habitat	14.32	1.91

Vegetation community	Community type	Temporary impact area (acres)	Permanent impact area (acres)
Herbaceous			
Ashy ryegrass – creeping ryegrass turfs	Sensitive natural community/wetlands	1.02	0.09
Baltic and Mexican rush marshes	Riparian/wetland	8.53	1.02
Common monkey flower seeps	Sensitive natural community/wetlands	0.01	nil
Needle grass – melic grass grassland	Riparian/wetland	0.16	nil
Salt grass flats	Riparian/wetland	0.90	0.13
Yerba mansa – Nuttall's sunflower – Nevada goldenrod alkaline wet meadows	Sensitive natural community/wetlands	0.05	0.01
TOTAL		**59.64**	**11.84**

Indirect Impacts

Proposed Project construction could result in the introduction and proliferation of invasive weeds if invasive weeds were carried into the Project work areas via construction equipment or vehicles. Uncontrolled invasive weeds could degrade the quality of sensitive vegetation communities, especially riparian areas, as seeds are often transported in water and the spread along waterways can be rapid. The degradation of sensitive vegetation communities and riparian habitat would be a significant impact. APM BIO-RES-2 would require development and implementation of an Invasive Species Management Plan, which would address pre-construction inventories and treatment as well as prevention methods to avoid introduction of invasive weeds to sensitive vegetation communities. The impact on sensitive natural vegetation communities from invasive weeds would be less than significant.

Grading and earthwork at Project work areas could result in loosened soils, erosion, and sedimentation off site. Erosion and sedimentation in off-site areas could result in loss or degradation of downstream riparian habitats and other sensitive vegetation communities. SCE would be required to prepare a SWPPP and comply with the requirements of the State of California Construction General Permit. Because implementation of the SWPPP and compliance with the Construction General Permit would avoid substantial sedimentation, the impact on sensitive vegetation communities and riparian habitat from dust, erosion and sedimentation would be less than significant.

Construction of the Proposed Project could result in an increased risk of wildfire, which could result in the loss or degradation of riparian habitat and sensitive vegetation communities. SCE would adhere to the measures contained in the Project-specific Fire Prevention and Emergency

Response Plan during construction activities, which would effectively reduce the risk of wildfire and associated impacts on habitat loss. Impacts from potentially increased wildfire risk would thus be less than significant.

Operation and Maintenance

Operation and maintenance activities for the Proposed Project would be approximately the same as those for the operation and maintenance activities for the existing subtransmission lines and substations. SCE would continue to regularly inspect, maintain, and repair conductor, poles, and substation facilities as well as maintain vegetation clearances at approximately the same frequency and duration as the existing facilities. No sensitive vegetation would be removed during operation and maintenance because maintenance work would be conducted at structure locations within previously disturbed areas and within the existing subtransmission line alignment. SCE would continue to implement vegetation clearance zones in accordance with its wildfire mitigation plan. The vegetation clearance zones would be maintained within areas that are identified as permanent impact areas. Because the vegetation clearance zones would be within areas that are impacted during construction, the operational impact would be less than significant.

Required APMs and MMs: APM BIO-RES-2, MM Biology-2, and MM Biology-16

Mitigation Measure Biology-16: Compensatory Mitigation for Sensitive Natural Communities, Riparian, and Wetlands

The project shall avoid and/or minimize impacts on waters, wetlands, sensitive habitats, and riparian habitats including ephemeral waters that occur within the Project area to the maximum extent feasible. All grading, fill, staging of equipment, infrastructure construction or removal, and all other construction activities shall be designed, sited, and conducted outside of state and federally jurisdictional waters, wetlands, and riparian habitat to the maximum extent feasible.

The implementation of appropriate Best Management Practices (BMPs) (e.g., silt fencing, straw wattles, secondary containment, avoiding fueling in close proximity to waters, etc.) shall be utilized to ensure that indirect impacts to waters, wetlands and riparian areas are avoided or minimized to the maximum extent feasible. BMPs are also necessary to reduce the risk of an unintended release of sediments or other materials into jurisdictional waters. New and upgraded roadways will use at-grade type stream crossings where possible. Stockpiled and bermed sediment will be redistributed or removed from the site so as not to cause water impoundment or induce hydromodification. New poles will be sited outside stream channels to the extent possible.

Permanent impacts on sensitive natural communities, riparian habitat, and wetlands shall be compensated through on-site or off-site enhancement or establishment of equivalent or higher value sensitive natural community, riparian areas, or wetlands. Permanent impacts on sensitive natural communities, riparian areas, or wetlands habitat shall be compensated through enhancement of comparable vegetation communities, riparian habitat, or wetlands at a minimum 2:1 ratio (enhancement: impact) or creation of comparable habitat at a minimum 1:1 ratio. Mitigation credits may be purchased from a USACE, CDFW, and/or RWQCB-approved mitigation bank if on-site mitigation is not feasible.

If SCE conducts mitigation through habitat enhancement or creation, a sensitive natural community, riparian and wetland mitigation plan shall be prepared at least 30 days prior to permanent impacts that address the following parameters:

- Baseline conditions within the mitigation site
- Proposed mitigation site conditions

Mitigation Measure Biology-16: Compensatory Mitigation for Sensitive Natural Communities, Riparian, and Wetlands

- Mitigation methods (e.g., habitat creation or enhancement)
- Planting plan
- Methods for invasive weed control
- Methods to establish the desired mitigation site conditions
- Maintenance, including trash removal, invasive weed removal, and repair of any damage to the mitigation site
- Adaptive management procedures
- Monitoring methods

The enhanced or created sensitive natural community, riparian, and wetland habitats shall meet the following performance criteria:

- Minimum of 70 percent vegetated cover with the target vegetation community that is being mitigated for (sensitive natural community, riparian, or wetlands)
- Less than 3 percent invasive weed cover
- Wetland hydrology and soil conditions in the compensatory wetland mitigation areas

Annual monitoring shall be conducted for the mitigation of habitats and shall include surveys for native vegetation cover, photo documentation at defined photo-monitoring locations, and monitoring for invasive species and any other habitat stressors. Monitoring will be conducted for the first 5 years or until performance criteria are met. If performance criteria are not met after 5 years, additional mitigation shall be provided so that all permanent impacts are fully mitigated.

An annual report shall be submitted by January 31st following the reporting year. The annual report shall provide the results of annual habitat monitoring, recommendations for any corrective actions needed to meet success criteria, and a description of any corrective actions taken in the previous reporting year. The annual monitoring report shall be submitted to CPUC and CDFW, RWQCB, and USACE as appropriate.

Applicable locations: Areas of permanent impacts to sensitive natural communities, riparian areas, and wetlands

Performance standards and timing:

- **Before construction**: (1) SCE prepares mitigation plan for unavoidable impacts to sensitive natural communities, riparian areas, and wetlands including proposed methods of mitigation and location of mitigation in addition to the specifics identified in the measure.
- **During construction:** Habitat enhancement or creation mitigation is implemented.
- **After construction**: (1) Mitigation habitats replace the functions and values of the impacted habitats as evidenced by annual monitoring reports submitted to the CPUC and appropriate regulatory agencies.

c) 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? (*Less than significant with mitigation*)

Construction

Multiple wetlands were identified in the Proposed Project BSA, as shown in Appendix D, "Jurisdictional Waters Mapbook". Construction of work pads and grading of access roads would result in discharge of material to wetlands located within the Proposed Project disturbance footprint. The area of wetlands located within temporary construction areas is summarized, including structure work pads, guard sites, pull sites, access roads, and overland travel routes are summarized in Appendix D, "Jurisdictional Waters Mapbook".

Vegetation clearing and grading within wetlands could result in filling, hydrological interruption, and/or direct removal of the wetland by converting it to uplands and result in the permanent loss of wetland habitats, which would be a significant impact. MM Biology-16 defines procedures to avoid impacts where feasible and requirements for compensatory mitigation of wetlands to ensure the enhanced or created wetlands offset the permanent impacts on wetlands. Thus, construction impacts to state or federally protected wetlands would be less than significant with mitigation incorporated.

The Proposed Project would involve grading and excavation that would expose soil and could result in increased erosion and sedimentation to adjacent wetland areas. The discharge of sediment to wetlands could impact the quality of the wetland or result in loss of wetland habitat. Because the Proposed Project would disturb more than 1 acre, SCE would be required to prepare a SWPPP and comply with requirements of the State of California Construction General Permit. Implementation of all sediment and erosion control measures contained in the Project-specific SWPPP would reduce the potential for significant erosion and sedimentation, and construction impacts on wetlands from sediment and erosion would be less than significant.

Operation and Maintenance

Operation and maintenance activities for the Proposed Project would be similar to operation and maintenance activities for the existing subtransmission line. The new conductor and subtransmission structures would not result in any new impacts or risk of impacts on jurisdictional wetlands or other waters. SCE would continue to conduct access road maintenance consistent with the maintenance procedures for SCE's existing access roads. Because the maintenance activities would not extend into undisturbed areas and would be comparable to the existing maintenance activities, the impact on wetlands from operation and maintenance activities would be less than significant.

Required APMs and MMs: MM Biology-16

d) 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? (*Less than significant with mitigation*)

Construction

Movement of Native Resident or Migratory Fish and Wildlife Species

Construction of the Proposed Project would not substantially impact the movement of any native or migratory fish or wildlife species. The proposed structure locations would be separated by several hundred feet, and terrestrial and semi-aquatic species could move freely between them during construction. No work areas or structures would be located within creeks or streams, and the Proposed Project construction would not interfere with movement of aquatic species. Construction vehicles would not cross through creeks when water is flowing;

therefore, construction activities would not block fish passage. Impacts on resident and migratory wildlife species movement would be less than significant.

Migratory Corridors

Significant impacts on migratory corridors would occur should a wildlife movement corridor be interrupted by a feature that physically blocks wildlife movement (e.g., a roadway) or if substantial amounts of contiguous habitat to support wildlife movement and migration is directly removed during construction. Portions of the Project area located within a Significant Ecological Area in Los Angeles County, cross Kern River at the northern end of Segment 1, and traverse Crane Canyon to the Tehachapi Mountains at the southern end of Segment 2, each of which are used as migration corridors for wildlife. Construction would occur within an existing transmission corridor adjacent to the existing subtransmission line and would not create physical barriers to movement through any migration corridors. Construction activities would produce dust and noise and result in increased human presence. However, these impacts would be temporary and isolated to the work areas and would not persist following construction. The construction work areas would also be interspersed by several hundred feet, and vegetation disturbance or removal would not be contiguous such that it would affect wildlife migration. Because the project would not create a barrier to migration and would not have contiguous habitat impacts, the impact on migratory corridors during construction would be less than significant.

Native Wildlife Nursery Sites

No designated wildlife nursery sites occur in the Proposed Project area. The aquatic habitat and forest habitat within the Proposed Project alignment provide breeding opportunities for aquatic and upland wildlife species, and other habitats such as grasslands and shrublands provide breeding areas for burrowing wildlife. The Proposed Project would not involve the construction of any structures within aquatic habitat and would not impede the use of an aquatic wildlife nursery site because all work within aquatic habitats (e.g., stream crossings, culvert replacements) would be conducted when the streams are dry and, therefore, wildlife that breeds in aquatic habitats would not be using the area. The impact to aquatic nursery sites would be less than significant.

Some upland and riparian breeding habitat would be disturbed during construction—in particular, trees that would be removed and disturbance would occur in areas that could contain underground burrows or dens. If ground disturbance were to disturb areas with existing burrows and cause them to collapse, it could disturb a breeding den or burrow, and tree removal could impact a nest of native wildlife, which would result in a potentially significant impact. Mitigation Measures Biology-4, Biology-5, Biology-8, Biology-10, Biology-11, Biology-12, Biology-14, and Biology-15 define protocols for monitoring and avoidance of active burrows, nests, or dens of native wildlife. Because the mitigation measures define protocols to avoid native wildlife nursery sites, the impacts would be less than significant with mitigation.

Operation and Maintenance

Replacing poles and conductor would not create a new barrier to species movement because the new facilities would be located adjacent and parallel to the existing subtransmission line, which would be removed. The new subtransmission facilities would not have a greater effect on species movement than existing facilities. The subtransmission lines would span all waterways where aquatic species could be present and would not block movement. The Proposed Project would also be constructed in accordance with avian-safe guidance provided by the Avian Powerline Interaction Committee (APLIC) in *Reducing Avian Collisions with Power Lines: The State of the Art in 2012* (APLIC 2012) to reduce impacts on migratory birds. Because the Proposed Project would replace the existing facility and would not create a new barrier to species migration and would not create any permanent disturbance of native wildlife nursery sites, the impact would be less than significant.

Required APMs and MMs: Mitigation Measures Biology-4, Mitigation Measure Biology-5, Mitigation Measure Biology-8, Mitigation Measure Biology-10, Mitigation Measure Biology-11, Mitigation Measure Biology-12, Mitigation Measure Biology-14, and Mitigation Measure Biology-15

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? (*Less than significant with mitigation*).

Construction

Construction of the Proposed Project would require temporary and permanent disturbance of sensitive ecological resources within the San Andreas SEA. The City of Los Angeles has adopted a policy that protects trees within the San Andreas SEA. The Proposed Project would require removal of 48 trees that meet the criteria of protected trees under the SEA ordinance. The Proposed Project would also require removal of 716 oak trees that exceed 8 inches dbh (20 inches circumference) and could conflict with the Los Angeles County oak tree permit requirements or Kern County General Plan oak tree conservation policies that require protection of oak trees because the Proposed Project does not include replacement of impacted protected trees or oak trees. MM Biology-17 requires planting of trees to replace the removed protected trees as defined under the SEA and oak trees greater than 8 inches dbh. Because MM Biology-17 would replace the impacted protected trees, the impact from conflict with the SEA, Kern County General Plan oak tree conservation policies, and Los Angeles County oak tree permit requirements would be less than significant with mitigation.

Operation and Maintenance

The Proposed Project would be located entirely within existing transmission corridors. Maintenance activities for the reconductored power lines would be the same as for the existing power lines and could include tree pruning or removal for safety and fire prevention in the transmission corridors. Maintenance or emergency repairs of the reconductored subtransmission lines would not conflict with Los Angeles County ordinances for the San Andreas SEA and oak tree preservation because they do not apply to emergency or routine

maintenance by a public utility necessary to protect or maintain an electric power or communication line or other property of a public utility. The impact would be less than significant.

Required APMs and MMs: MM Biology-17

Mitigation Measure Biology-17: Protected Tree Removal Mitigation
Removal of oak trees and protected trees within the San Andreas SEA will be minimized to what is required to implement the Project. For removal of any protected trees within the San Andreas SEA, oak trees greater than 6 inches dbh, or oak trees with multiple trunks with a cumulative dbh greater than 12 inches, SCE will provide replacement plantings for the protected trees or oak trees at a 3:1 ratio with three trees planted for each tree removed. Prior to tree planting, a restoration consultant shall evaluate the planting area(s) to ensure the location has adequate soil and hydrologic conditions to support successful planting of the tree species. Monitoring of replacement trees including tree health and height shall be conducted annually for a period of three years after mitigation planting with annual monitoring reports submitted to the CPUC by January 31 of each year. Maintenance shall be conducted at the tree planting sites for three years to ensure effectiveness of the tree replacement efforts. If replacement trees are not successful, additional trees shall be planted to replace the trees that have died or are not growing. Alternatively, SCE may mitigate through off-site compensation of oak woodland habitats and off-site compensation of SEA protected trees, as applicable or nest mitigation with other species mitigation. Off-site compensation may include the permanent protection of an off-site population of oak trees or protected trees with preservation of four oak trees or otherwise protected trees for every oak tree or protected tree removed.
Applicable locations: All Project areas where qualifying oak tree or protected tree removal occurs.
Performance standards and timing: • **Before construction**: SCE identifies all qualifying oak trees and protected trees that may be impacted with work areas and access routes. • **During construction**: (1) SCE documents all qualifying oak trees and protected trees that are removed, (2) SCE defines locations for replacement of trees or purchases mitigation credits as applicable and (3) Protected trees are replaced at a 3:1 ratio for replanting or 4:1 ratio for preservation. • **After construction**: Conduct annual monitoring and maintenance and submit annual monitoring reports.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? (*Less than significant with mitigation*)

A portion of Segments 2 and 3 are within areas covered by the TUMSHCP. The Proposed Project is not a covered activity under the TUMSHCP. Because the Proposed Project is located in an area covered by the TUMSHCP, conflicts with the HCP could occur should the Proposed Project involve development in areas that are defined for conservation/open space and/or mitigation lands under the TUMSHCP. The Proposed Project is located within the existing SCE transmission line easement through the TUMSHCP-covered lands and would not result in an increase of structures within these areas or reduce open space lands since existing structures would be removed and replaced. Because construction and operation of the Proposed Project would occur within the existing SCE easement, it would not require an additional easement through mitigation lands. Therefore, the Proposed Project would not conflict with the

TUMSHCP management of open space or mitigation lands, and the impact would be less than significant.

Required APMs and MMs: None required.

3.4.7 References

Arcadis U.S., Inc. 2021a. "Gorman–Kern River 66 Kilovolt Project Tree Assessment Summary Report." Kern County and Los Angeles County, CA.

———. 2021b. "Southern California Edison Sensitive Species and Habitat Report, TLRR Gorman - Kern River 66 kV Project."

———. 2021c. "Wetlands and Other Waters Jurisdictional Delineation Report. Gorman-Kern River 66 kV Subtransmission Line Project. Kern County and Los Angeles County, CA. Prepared for Southern California Edison Company."

Avian Power Line Interaction Committee (APLIC). 2012. *Reducing Avian Collisions with Power Lines: The State of the Art in 2012*. Washington, DC: Edison Electric Institute, Avian Power Line Interaction Committee, and the California Energy Commission.

Calflora. 2023. "Observation Search." https://www.calflora.org/entry/observ.html.

California Burrowing Owl Consortium. 1997. "Burrowing Owl Survey Protocol and Mitigation Guidelines." *Journal of Raptor Research*, no. 9, 171–77.

California Department of Fish and Wildlife (CDFW). 2019. "Approved Survey Methodology for the Blunt-Nosed Leopard Lizard." (Revised).

———. 2023. "California Natural Community List." Available: https://wildlife.ca.gov/Data/VegCAMP/Natural-Communities#natural%20communities.

———. n.d. "RareFind 5." Database query tool. California Natural Diversity Database (CNDD). Accessed February 1, 2023. https://wildlife.ca.gov/Data/CNDDB/Maps-and-Data.

California Native Plant Society (CNPS). 2001. *Inventory of Rare and Endangered Plants of California*. 6th ed. https://www.cnps.org/rare-plants/cnps-inventory-of-rare-plants.

———. 2022. "Combined Vegetation Rapid Assessment and Relevé Form." Available: https://www.cnps.org/plant-science/field-protocols-guidelines.

———. n.d. "CNPS Inventory of Rare Plants." Database. Version V-9.5. Accessed June 19, 2024. https://www.cnps.org/rare-plants/cnps-inventory-of-rare-plants.

City of Arvin. 2012. "Conservation and Open Space Element." In *City of Arvin General Plan*. Resolution No. 2012-34.

City of Bakersfield. 2002. "Conservation Element." In *Metropolitan Bakersfield General Plan*. Available: https://www.bakersfieldcity.us/271/Adopted-Planning-Documents.

eBird. n.d. "Explore Species." Webmap. Accessed February through August, 2023. https://ebird.org/explore.

Faber-Langendoen, D., T. Keeler-Wolf, D. Meidinger, C. Josse, A. Weakley, D. Tart, G. Navarro, et al. 2016. "Classification and Description of World Formation Types." RMRS-GTR-346. Ft. Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station. https://doi.org/10.2737/RMRS-GTR-346.

GreenInfo Network. 2022a. "California Conservation Easement Database (CCED)." Database. https://www.calands.org/cced/.

———. 2022b. "California Protected Areas Database (CPAD)." Shapefile. Geospatial data. Last updated Month day, year. www.calands.or.

ICF. 2024. "Blunt-Nosed Leopard Lizard Minimization and Avoidance Strategy."

Kern County Planning Department. 2009. "Land Use, Open Space, and Conservation Element." In *Kern County General Plan*. Bakersfield, CA. Available.

Lichvar, Robert W., and Shawn M. McColley. 2008. *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States: A Delineation Manual:* Fort Belvoir, VA: Defense Technical Information Center. https://www.spk.usace.army.mil/Portals/12/documents/regulatory/pdf/Ordinary_High_Watermark_Manual_Aug_2008.pdf.

Los Angeles County Department of Regional Planning. 2019. "Significant Ecological Area (SEA)." Feature Service. ArcGIS Online. https://arcgis.gis.lacounty.gov/arcgis/rest/services/DRP/Open_Data/MapServer/12.

———. 2022. "Chapter 9. Conservation and Natural Resources Element." In *Los Angeles County 2035 General Plan*. Available: https://planning.lacounty.gov/long-range-planning/general-plan/.

McCormick Biological, Inc. 2022. "Biological Technical Memorandum (Revision 1.0) – SCE Gorman-Kern River Project Tipton Kangaroo Rat (*Dipodomys nitratoides nitratoides*) Reconnaissance Evaluation, Kern County, California."

MESA Biological LLC. 2023. "Protocol-Level Blunt-Nosed Leopard Lizard Survey Report."

Nafis, Gary. 2020. "California Herps - A Guide to the Amphibians and Reptiles of California." May 6, 2020. https://www.californiaherps.com/info/rangemaps.html.

Natural Resources Conservation Service (NRCS) Staff. n.d. "Soil Survey Geographic Database (SSURGO)." Using Web Soil Survey (WSS). Accessed March 21, 2023. https://websoilsurvey.nrcs.usda.gov/app/.

North American Bird Conservation Initiative U.S. Committee. 2014. *The State of the Birds 2014*. https://archive.stateofthebirds.org/state-of-the-birds-2014-report/.

Prior-Magee, Julie S, and Alexa McKerrow. 2018. "Blunt-Nosed Leopard Lizard (*Gambelia sila*) rBNLLx_CONUS_2001v1 Habitat Map." U.S. Geological Survey. https://www.usgs.gov/index.php/data/blunt-nosed-leopard-lizard-gambelia-sila-rbnllxconus2001v1-habitat-map.

Rosenberg, KV, JA Kennedy, R Dettmers, RP Ford, D Reynolds, JD Alexander, CJ Beardmore, et al. 2016. *Partners in Flight Landbird Conservation Plan: 2016 Revision for Canada and Continental United States*. Vol. 119. Partners in Flight (PIF) Watch List.

Sawyer, J.O., T. Keeler-Wolf, and J. Evens. 2009. *A Manual of California Vegetation*. 2nd ed. Sacramento, CA: California Native Plant Society Press. https://books.google.com/books?id=y40lAQAAMAAJ.

U.S. Army Corps of Engineers (USACE). 1987. *Corps of Engineers Wetland Delineation Manual*. Wetlands Research Program Technical Report Y-87-1. Vicksburg, MS: U.S. Army Corps of Engineers Waterways Experiment Station.

———. 2008. "Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)." Vicksburg, MS: US Army Corps of Engineers Engineer Research and Development Center.

U.S. Fish and Wildlife Service (USFWS). 1998. "Recovery Plan for Upland Species of the San Joaquin Valley, California." Region 1: Portland, OR: Region 1. https://www.fws.gov/node/68609.

———. 2010a. "Blunt-Nosed Leopard Lizard (*Gambelia sila*) 5-Year Review: Summary and Evaluation." Sacramento, CA: Sacramento Fish and Wildlife Office.

———. 2010b. "Tipton Kangaroo Rat (*Dipodomys nitratoides nitratoides*) 5-Year Review: Summary and Evaluation." Sacramento, CA: Sacramento Fish and Wildlife Office.

———. 2011. "Bakersfield Cactus (*Opuntia treleasei* = *Opuntia basilaris* ssp. *treleasei*) 5-Year Review: Summary and Evaluation." Sacramento, CA: Sacramento Fish and Wildlife Office.

———. 2013. "*Eremalche kernensis* (Kern Mallow) 5-Year Review: Summary and Evaluation." Sacramento, CA: Sacramento Fish and Wildlife Office.

———. 2015. "Final Critical Habitat." Shapefile. Vector digital data. "Figure/Map Title" created by Panorama Environmental, Inc.: Using Arc GIS (Month day, year). Downloaded May 23, 2022. https://ecos.fws.gov/ecp/report/table/critical-habitat.html.

———. 2020a. "5-Year Review Bakersfield Cactus (*Opuntia treleasei* = *Opuntia basilaris* ssp. *treleasei*)." Sacramento, CA: Sacramento Fish and Wildlife Office.

———. 2020b. "5-Year Review Blunt-Nosed Leopard Lizard (*Gambelia sila*)." Sacramento, CA: Sacramento Fish and Wildlife Office.

———. 2020c. "5-Year Review Kern Mallow (*Eremalche kernensis* = *Eremalche parryi* ssp. *kernensis*)." Sacramento, CA: Sacramento Fish and Wildlife Office.

———. 2020d. "5-Year Review Tipton Kangaroo Rat (*Dipodomys nitratoides nitratoides*)." Sacramento, CA: Sacramento Fish and Wildlife Office.

———. 2020e. "List of Bird Species To Which the Migratory Bird Treaty Act Does Not Apply." *Federal Register* 85 (74): 21262–64. https://www.federalregister.gov/documents/2020/04/16/2020-06782/list-of-bird-species-to-which-the-migratory-bird-treaty-act-does-not-apply.

———. 2020f. "Species Status Assessment Report San Joaquin It Fox (*Vulpes macrotis mutica*) Version 1.0." Sacramento, CA: Sacramento Fish and Wildlife Office.

———. 2021. *Birds of Conservation Concern 2021*. Birds of Conservation Concern 2021. https://www.fws.gov/sites/default/files/documents/birds-of-conservation-concern-2021.pdf.

———. 2023. "IPaC Resource List." PDF. Retrieved using: IPaC https://ipac.ecosphere.fws.gov/.

———. 2024. "USFWS National Wetlands Inventory." Geodatabase. Vector digital data. https://catalog.data.gov/dataset/usfws-national-wetlands-inventory.

U.S. House of Representatives. 1940. *16 U.S.C. Ii – Protection of Bald and Golden Eagles*.

USDA Forest Service. 2005. "Chapter 2670 Threatened, Endangered, and Sensitive Plants and Animals." In *Forest Service Manual*. FSM 2600 Wildlife, Fish, and Sensitive Plant Habitat Management. Washington D.C.: National Headquarters (WO). https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd940040.pdf.

———. 2013a. "2013 Region 5 Regional Forester's Sensitive Plant Species List." XLS. Tabular data. Botany and Rare Plant Program. Available: https://www.fs.usda.gov/main/r5/plants-animals/plants.

———. 2013b. "Region 5 Regional Forester's 2013 Sensitive Animal Species List." XLS. Tabular data. https://www.fs.usda.gov/main/r5/plants-animals/wildlife.

Western Bat Working Group (WBWG). n.d. "Western Bat Species." Accessed June 1, 2023. https://coveredactions.deltacouncil.ca.gov/services/download.ashx?u=aaea0411-3d94-4a3d-9bef-84324cc35293.

3.5 Cultural Resources

This section presents the environmental setting and analysis of impacts on cultural resources resulting from the Proposed Project. This section includes existing cultural resources information for the Proposed Project, applicable regulations, environmental impacts, and mitigation measures to reduce or avoid significant effects.

3.5.1 Definitions

Cultural resources is defined as prehistoric and historic sites, structures, landscapes, districts, and any other physical evidence associated with human activity considered important to a culture, a subculture, or a community for scientific, traditional, religious or any other reason. For analysis purposes, cultural resources may be categorized into two groups: historical resources and archaeological resources.

Cultural Resources

Cultural resources in the State of California are recognized as non-renewable resources that require management to assure their benefit to present and future Californians. Cultural resources are generally defined as prehistoric and historic sites, structures, landscapes, districts, and any other physical evidence associated with human activity considered important to a culture or subculture or any community for scientific, traditional, religious, or other reasons. Cultural resources in CEQA are commonly categorized as either *historical resources* or *archaeological resources* because CEQA requires an analysis of a project's effect on historical and archaeological resources.

Historical Resources

CEQA's provisions governing analysis of historical resources are set forth in PRC section 21084.1 and CEQA Guidelines Section sections 15064.5(a)–(b). CEQA includes objects of historical significance in its definition of *environment* (PRC § 21060.5). Per CEQA Guidelines section 15064.5, the term *historical resources* is defined as follows:

1. A resource listed in, or determined to be eligible by the State Historical Resources Commission for listing in, the California Register of Historical Resources (CRHR). This resource can be of either historic or prehistoric age.
2. A resource included in a local register of historical resources or identified as significant in a historical resources survey shall 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, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, provided a lead agency's determination is supported by substantial

evidence in light of the whole record. Generally, a cultural resource shall be considered by a lead agency to be "historically significant" if the resource meets the criteria for listing on the CRHR, including the following:

a. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage
b. Is associated with the lives of persons important in our past
c. 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
d. Has yielded, or may be likely to yield, information important in prehistory or history

Archaeological Resources

CEQA includes detailed standards governing the analysis of impacts on archaeological resources (PRC § 21083.2; CEQA Guidelines section 15064.5(c)–(f)). If a lead agency determines that a project may have a significant effect on unique archaeological resources, the impact analysis must address those archaeological resources (PRC § 21083.2(a)). An environmental document need not address effects on archaeological resources that are not unique (PRC § 21083.2(a), (h)). The term "unique archaeological resource" under PRC section 21083.2(g) refers to 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
    i. Is directly associated with a scientifically recognized important prehistoric or historic event or person

California Historical Resources Inventory

The California Historical Resources Inventory (HRI) is maintained by the California Office of Historic Preservation (OHP). The HRI is a database of cultural resources information, including sites listed or eligible for listing on the CRHR. The HRI includes only information on historical resources that have been identified and evaluated through one of the programs that OHP administers under the National Historic Preservation Act (NHPA) or the Public Resource Code (PRC). The HRI includes data on the following:

- Resources evaluated in local government historical resource surveys partially funded through Certified Local Government grants or in surveys that local governments have submitted for inclusion in the statewide inventory
- Resources evaluated and determinations of eligibility made in compliance with Section 106 of the NHPA
- Resources evaluated for federal tax credit certifications

- Resources considered for listing in the National Register of Historic Places (NRHP), CRHR, or as California State Landmarks or Points of Historical Interest

Area of Potential Effects/Area of Potential Impacts

Under the NHPA, the *area of potential effects* (APE) is defined as "the geographic area, regardless of land ownership, within which a federal agency undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist" (36 CFR § 800.16(d) and 800.16(y)). For the purposes of CEQA analysis and assessment of archaeological resources and historic resources and the potential for impacts to those resources, the *area of potential impacts* (API), also referred to as the *survey area,* is the same as the APE as defined under the NHPA.

Archeological Resources

The Proposed Project's APE/API for archeological resources consists of a corridor 300 feet (91.4 meters) wide plus a buffer of 150 feet (45.7 m) on either side along the existing 66 kV subtransmission lines. For ancillary areas located outside of the 300-foot subtransmission line corridor needed during construction for staging, equipment laydown, materials storage, vehicle parking, etc., the direct APE/API consists of those areas plus a 50-foot (15-m) buffer. A corridor of 100 feet (30.48 m) wide, centered on the access road alignments as provided by SCE, was defined as the APE/API for all access roads that will be used for Proposed Project construction. In addition to the direct APE/API as defined above, an indirect/visual APE/API has been defined as an 0.5-mile buffer on either side of the subtransmission lines corridor. The survey area for archeological resources, comprising the direct and indirect APIs defined above, totals approximately 810.9 acres.

Historical Resources

The Proposed Project's direct API for historical resources generally encompasses the Proposed Project corridor, measuring approximately 280 feet in width over 65.3 miles. The indirect API (for potential visual effects/impacts to historical resources) has been defined as an 0.5-mile buffer on each side of the direct API. The survey area for historical resources, comprising the direct and indirect APIs for historical resources (2,384.68 acres direct API and 42,383.80 acres indirect/visual API), totals approximately 44,768.48 acres (Urbana Preservation and Planning 2022).

3.5.2 Environmental Setting

Regional Setting

Prehistory

Previously recorded archaeological sites within the region span thousands of years in age, ranging from 12,000 years old to modern historical. As of date, research conducted within the Southern San Joaquin Valley (SSJV) has defined a number of temporal components, periods,

and phases of prehistoric human lifeways and land use patterns ranging from the Pleistocene epoch to the Modern era.

Archeological study in the SSJV is generally divided into five chronological periods, each with regional nuances in terms of date and artifact assemblage: Paleo-Indian; Lower, Middle and Upper Archaic; and Emergent (Moratto 1984; Price and Johnston 2002; Rosenthal, White, and Sutton 2007).

Paleo-Indian Period (circa 11,550 to 8,550 years before present [BP])
There is limited evidence of human habitation within the SSJV that dates to this chronological period; however, this paucity of resources is not necessarily based on lack of presence but is, rather, partly due to geoarchaeological episodes of erosion and deposition that have destroyed or buried ancient Holocene deposits (Sutton et al. 2016). Most of the archaeological evidence for early occupation in the region is based on isolated surface finds of basally thinned and fluted projectile points, which are primarily located in the southern portion of the basin (Rosenthal, White, and Sutton 2007). Fluted points are commonly assigned to the Big Game Hunting Tradition of the Paleo-Indian period, which is associated with a subsistence focus on large game animals (megafauna) that were still present in the area during this early time period. Approximately 500 fluted points have been found at more than 40 locations in California, mostly concentrated along the shoreline of Tulare Lake and at Borax Lake (Moratto 1984; Price and Johnston 2002). Currently, three localities in SSJV have produced early fluted points: Tracy Lake, the Woolfsen mound (CA-MER-215), and the Witt site (CA-KIN-32) along the shore of Tulare Lake basin (Rosenthal, White, and Sutton 2007; Sutton et al. 2016).

Lower Archaic Period (8,550 to 5,550 years BP)
Climatic changes at the end of the Pleistocene created a significantly different environment during the Lower Archaic, facilitating the natural development of alluvial fans and flood plains, which buried many archaeological deposits dating to former periods. Artifacts from this period include stemmed series points such as Lake Mojave and Silver Lake forms. Flaked stone crescents and distinctive, formalized, flaked stone tools comprise the key elements found in archaeological assemblages from this period. Examples of such remains are represented in the deeply buried sites found along the ancient shoreline of Tulare Lake (Moratto 1984; Sutton et al. 2016). The best-known site of this chronological period within SSJV is found on the southwestern shoreline of Buena Vista Lake (CA-KER-116). This site has a deeply buried component that contains such artifacts as crescents, a carved stone atlatl spur, a stemmed projectile point fragment, and a few small flaked stone implements with radiocarbon dates ranging between 9175 and 8450 BP (Fredrickson and Grossman 1977; Hartzell 1992; Rosenthal, White, and Sutton 2007; Sutton et al. 2016). No plant processing related artifacts were identified at CA-KER-116 or any other sites found within the valley floor, making the role of plant usage during the Lower Archaic abstruse.

Middle Archaic Period (5,550 to 550 years BP)
The beginning of the Middle Archaic saw another shift in climate with increasingly warmer and drier conditions leading to the evaporation of the lakes within the region. Archaeological

deposits associated with the early Middle Archaic are rare in the Central Valley and SSJV, with the stratigraphically deepest occupational evidence found at CA-SJO-68, dating to at least 5050 BP (Rosenthal, White, and Sutton 2007). Paleobotanical studies from sites of this time period demonstrate the early use of acorn and pine nut crops. Faunal assemblages, including the appearance of elk, deer, pronghorn, rabbit, hare, waterfowl, a variety of fish and small rodent species, reflect intense use of marshes, grasslands, and riverine forests. Baked clay impressions of basketry and cordage, bone awls, stone plummets, bone tubes, Olivella biplicate, and abalone (*Haliotis* spp.) shell beads and ornaments, charmstones, gorge hooks, bone hooks and heavy-stemmed dart points have all been identified in the archaeological assemblages dating to this time period (Rosenthal, White, and Sutton 2007; Sutton et al. 2016). Trading is also evident, with obsidian artifacts and toolstone sourced from the eastern Sierra from Coso and Casa Diablo, with obsidian from Coso dominating the obsidian assemblages (Moratto 1984; Rosenthal, White, and Sutton 2007; Sutton and Des Lauriers 2002). An extended burial posture tradition has been identified throughout the San Joaquin Valley as far south as Buena Vista Lake that dates from the Middle through Upper Archaic Periods (Fredrickson and Grossman 1977; Moratto 1984; Rosenthal, White, and Sutton 2007).

Upper Archaic Period (550 BP to 1100 years AD)

The Upper Archaic corresponds with the onset of another shift in environmental conditions towards a cooler climate in the Late Holocene. Little is known concerning the cultures of the SSJV during this period; however, year-round villages at Buena Vista Lake have been identified. Similar to those of the Middle Archaic, these sites exhibit a diverse array of artifacts as well as the presence of architectural features, including house floors and significant refuse deposits from both land and water subsistence activities (Sutton et al. 2016). Cultural materials include temporally diagnostic forms of beads and ornaments manufactured from Haliotis and Olivella shell. Spindle-shaped charmstones, cobble mortars, chisel-ended pestles and heavy dart points have also been identified (Rosenthal, White, and Sutton 2007; Sutton et al. 2016; Bennyhoff and Fredrickson 1994). Additionally, an extensive inventory of bone tools, including awls, fish spears, saws and flakers are diagnostic to this period. Burial positions shift during this time to supine semiflexed, and mortuary artifacts are present, including bifacial obsidian blanks sourced at Coso or Casa Diablo (Moratto 1984; Rosenthal, White, and Sutton 2007; Bennyhoff and Fredrickson 1994).

Emergent Period (cal A.D. 1100 to contact)

The archaeological record for the Emergent period is the most well documented. Intensification of plant resources and a decrease in hunting marks this cultural period. During this period, the bow and arrow was introduced and replaced the *atlatl* and dart. Numerous arrow point styles were developed, with one of the more unique styles developed in the northern part of the Central Valley: the Stockton serrated point. By around 500 years ago, Panoche side-notched point (a variant of the Desert side-notched) was used in the western side of the San Joaquin Valley and Cottonwood-style arrow points utilized in the Tulare and Buena Vista basins (Rosenthal, White, and Sutton 2007). Ethnographically documented cultural traditions are readily identifiable in the archaeological record. Stone beads and cylinders, clamshell disks,

tubular smoking pipes, arrow-shaft straighteners, flat-bottomed mortars, cylindrical pestles and small side-notched arrow points mark the cultural inventory of typical archaeological sites from this era. Burial posture is tightly flexed on the side or supine with a moderate amount of associated mortuary-related offerings. After 900 BP and at the time of European contact, most archaic traditions and technologies disappear from the region (Rosenthal, White, and Sutton 2007; Sutton et al. 2016). Protohistoric and historic-era sites contain Euroamerican trade items, such as glass beads, brass buttons, and other introduced artifacts (Moratto 1984; Bennyhoff and Fredrickson 1994; Sutton et al. 2016).

Local Setting

Historic and Archaeological Resources

Records Search

In 2017, SCE conducted an initial cultural resources records search at the California Historic Resources Information Center (CHRIS), South Central Coastal Information (SCCIC), and Southern San Joaquin Valley Information Center (SSJVIC) for the Proposed Project. The records search included a 0.5-mile buffer on either side of the Proposed Project corridor. The results of this record search included DPR forms for all previously recorded cultural resources and bibliographic information on previously conducted studies as well as GIS datasets of resources and studies boundaries. In 2022, SCE conducted an additional record search to update the 2017 record search data. The records search identified a total of nine previously recorded sites within the APE/API.

General Land Office (GLO) plats and patents, historical United States Geological Survey (USGS) topographic maps, and historical aerial imagery were also reviewed prior to field surveys.

Pedestrian Surveys and Testing

Ten pedestrian surveys for cultural resources were conducted in the record search area (project corridor plus 0.5-mile buffer on either side) in 2017, 2022, 2023 and 2024. Pedestrian surveys were conducted by crews of one or two archaeologists, spaced at no greater than 15 m transect intervals. The surveys occurred on either side of the existing access roads unless the corridor was too steep or otherwise unsafe for such a level of survey. Intervals were reduced to 3 to 5 m intervals or less within an identified archaeological site. A total of nine previously recorded and five new archaeological sites as well as 13 isolates were recorded and analyzed during pedestrian surveys in 2022 and 2023. An additional six resources originally addressed in the Belcourt et al. report (Belcourt, Sifuentes, and Carvajal 2021) were reviewed and evaluated or recommended for additional testing to determine eligibility. Eligibilities for all 20 archaeological sites are listed in Table 3.5-1, below.

Archaeological testing was conducted in February and March 2024 and included excavation of shovel test units at six sites to determine CRHR/NRHP eligibility. Unit locations were confined to the portions of those sites that are within the APE/ADI. The portions of the six sites that were evaluated for eligibility for listing in the NRHP/CRHR are recommended not eligible for listing in the NRHP/CRHR under any of the four NRHP or CRHR eligibility criteria, and there is no

potential for effect/impact to historic properties/historical resources associated with the implementation of ground disturbing activities within the Proposed Project ADE/ADI.

Table 3.5-1 Archaeological Resource Descriptions

Primary or temporary number	Description	NRHP/CRHR status	Segment
P-15-000670	Bedrock Milling Site	Not relocated	1
P-15-005095	Habitation Site	Eligible for the NRHP, listed in the CRHR	1
P-15-006549	Bedrock Milling Site	Unevaluated	1
P-15-015994	Refuse dump	Recommended not eligible	1
P-15-020126	Lithic scatter	Recommended not eligible	1
Site 05*	Aggregate plant	Recommended not eligible	1
Site 06*	Bedrock Milling Site	Recommended not eligible	1
Site 09*	Bedrock Milling Site	Unevaluated	1
P-15-002848	Fort Tejon; Native American habitation village site	Listed in the NRHP, CRHR	2
P-15-008780 / 15-010078	Bedrock Milling Site	Unevaluated	2
Site 03*	Bedrock Milling Site	Unevaluated	2
Site 10*	Refuse scatter	Recommended not eligible	2
P-15-001540	Lithic and Ground Stone Scatter	Unevaluated	4
P-15-001548	Bedrock milling site, lithic scatter	Recommended not eligible	4
P-15-001643	Bedrock milling site	Recommended not eligible	4
P-15-020129	Bedrock milling feature	Recommended not eligible	4
P-15-020127	Bedrock milling feature	Recommended not eligible	4
P-15-020125	Bedrock milling feature	Recommended not eligible	4

Source: (Southern California Edison Company, 2023)

Historic-Era Built Resources

The Historic-Era Built Environment Survey Report (HBER) documents the results of a historic-era built environment survey of the Proposed Project (Urbana Preservation and Planning 2022).

Desk and Field Survey

In advance of the field survey effort, Urbana prepared a desk survey to identify all historic-era built environment resources in the vicinity of the Proposed Project site. The desk survey included use of current aerial imagery, obtained from GoogleEarth Professional, and review of historic aerial imagery, circa 1974 to 1975, obtained from the United States Geological Survey (USGS) Earth Explorer database, and Kern and Los Angeles County Assessor data. The year-built data was initially obtained for all observed resources using these cited sources. The locations of historic-era resources were overlaid against the proposed Project area to identify what resources directly intersect with the Proposed Project APE/API.

Field survey activities were completed in August, September, and December 2019. All buildings, structures, site features, and view corridors within and surrounding the API were photographed for further study in the HBER U (Urbana Preservation and Planning, 2022). Notes were compiled on the existing conditions, architectural features, and observed modifications for use in DPR 523 series forms. Supplemental observation of buildings and structures were completed as part of post-processing.

As part of desk and field survey activities, 162 historic-era (at least 45 years of age) built environment resources were observed within the API. Of those 162 historic-era resources observed, 90 directly intersect with the Proposed Project site, within the direct API, and 72 are within the visual (indirect) API.

Direct API Findings Summary

Of the 90 historic-era resources documented within the Direct API, 13 are previously recorded and 77 are previously unrecorded. A total of 10 significant resources were identified within the boundaries of the Direct API (see Table 3.5-2, below). Of these 10 resources:

- Five are listed on or formally determined eligible for listing on the CRHR (CRHR Status Codes 1-2) and meet the definition of an historic property pursuant to NHPA Section 106 and that of an historical resource pursuant to CEQA; and
- Five are surveyed eligible for listing on the CRHR (CRHR Status Code 3S/3CS) and meet the definition of an historic property pursuant to NHPA Section 106 and that of an historical resource pursuant to CEQA.

Table 3.5-2 Direct API - NRHP / CRHR Listed, Determined and Recommended Eligible Resources (CRHR Status Codes 1-3)

Project segment	SCE TLRR GKR survey No.	Previous recordation/registration	Resource name	CRHR status code[1]
Segment 1	1	P-15-020562 05-13-54-838H	SCE Kern River No. 1 Powerhouse Complex	2S2
Segment 1	4	P-15-020317	CA-178 / Kern Canyon Road	3S
Segment 1	21	P-15-020536	Breckenridge Road	3S
Segment 1	37	P-15-002050 CA-KER-002050H	Southern Pacific Railroad	3S
Segment 1	96	P-15-020584	Sunset Boulevard	3S
Segment 2	200	P-10-006923 P-15-0019115 P-54-004832 CA-TUL-003011H HAER No. CA-167-N	SCE Big Creek East & West 220kV TL	1D
Segment 2	207	P-10-006207 P-15-015820 P-36-021351 P-16-000266 CA-FRE-003645H CA-KER-8698H CA-KIN-000108H	California Aqueduct	2S2
Segment 2	227	P-15-002848 CA-KER-2848H	Fort Tejon State Historic Park	1S
Segment 2	145	P-15-003544 CA-KER-3544H	Comanche Point Road	3S
Segment 4	297	P-15-017243 P-54-005027 P-19-196876 P-10-006255 P-54-005027 HAER No. CA-167-O	SCE Big Creek Hydroelectric System, Vincent 220kV Transmission Line	1D/2S2

Source: (Urbana Preservation and Planning 2022)

[1] CRHR Status Code Legend
1S: Individually listed in the NR by the Keeper; listed in the CR.
2S2: Individually determined eligible for NR by consensus through Section 106 process; listed in the CR
3S: Appears eligible for NR individually through survey evaluation

Visual API Findings Summary
The Visual API includes a total of 72 properties dating to the historic era. Of the 72 visual API historic-era resources, one is previously recorded (the Jedediah Smith Trail Plaque) and 71 are previously unrecorded. No other significant resources were identified within the boundaries of the visual API. There are no CRHR-listed or eligible sites within the visual API.

3.5.3 Applicable Regulations, Policies and Standards

Federal Regulations, Plans, and Standards

Section 106 and the National Historic Preservation Act (NHPA)
The NHPA of 1966, as amended (16 USC § 470f), and its implementing regulation—Protection of Historic Properties (36 CFR part 800)—the Archaeological and Historic Preservation Act of 1974, and the Archaeological Resources Protection Act of 1979 legislate the protection of archaeological resources. Prior to implementing an "undertaking" (e.g., issuing a federal permit), Section 106 of the NHPA requires federal agencies to consider the effects of the undertaking on historic properties and to afford the Advisory Council on Historic Preservation and the State Historic Preservation Officer a reasonable opportunity to comment on any undertaking that would adversely affect properties eligible for listing in the NRHP. As indicated in Section 101(d)(6)(A) of the NHPA, properties of traditional religious and cultural importance to a tribe are eligible for inclusion in the NRHP. Under the NHPA, a resource is considered significant if it meets the NRHP listing criteria in 36 Code of Federal Regulations [CFR] section 60.4.

State Regulations, Policies and Standards

California Register of Historical Resources
In California, the definition of the term *historical resource* includes "any object, building, structure, site, area, place, record, or manuscript which is historically or archaeologically significant, or is significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California" (California Public Resources Code section 5020.1(j)). In 1992, the California legislature established the CRHR "to be used by state and local agencies, private groups, and citizens to identify the state's historical resources and to indicate what properties are to be protected, to the extent prudent and feasible, from substantial adverse change" (California Public Resources Code section 5024.1(a)). The criteria for listing resources in the CRHR were expressly developed to be in accordance with previously established criteria developed for listing in the NRHP. According to California Public Resources Code section 5024.1(c)(1–4), a resource is considered historically significant if it (i) retains "substantial integrity" and (ii) meets at least one of the following criteria:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
2. Is associated with the lives of persons important in our past

3. 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. Has yielded, or may be likely to yield, information important in prehistory or history

California Environmental Quality Act

CEQA is the principal statute governing environmental review of projects occurring in the State and is codified at PRC sections 21000 et seq. CEQA requires lead agencies to determine if a Proposed Project would have a significant effect on the environment, including significant effects on historical or archaeological resources.

Under CEQA 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. The CEQA Guidelines (Title 14 CCR section 15064.5) recognize that an historical resource includes: (1) a resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register; (2) a resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC section 5024.1(g); and (3) any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California by the lead agency, provided the lead agency's determination is supported by substantial evidence in light of the whole record. The fact that a resource does not meet the three criteria outlined above does not preclude the lead agency from determining that the resource may be an historical resource as defined in PRC sections 5020.1(j) or 5024.1.

If a lead agency determines that an archaeological site is a historical resource, the provisions of CEQA section 21084.1 and CEQA section 15064.5 apply. If a project may cause a *substantial adverse change*—defined as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired—in the significance of an historical resource, a lead agency must identify potentially feasible measures to mitigate these effects (CEQA §§ 15064.5(b)(1) and 15064.5(b)(4)).

If an archaeological site does not meet the historical resource criteria contained in the CEQA Guidelines, then the site may be treated as a "unique" archaeological resource in accordance with the provisions of CEQA section 21083. As defined in CEQA Section 21083.2, a "unique" archaeological resource is an archaeological artifact, object, or site for 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:

- Contains information needed to answer important scientific research questions and there is a demonstrable public interest in that information

- Has a special and particular quality such as being the oldest of its type or the best available example of its type
- Is directly associated with a scientifically recognized important prehistoric or historic event or person

If an archaeological site meets the criteria for a unique archaeological resource as defined in section 21083.2, then the site is to be treated in accordance with the provisions of section 21083.2, which states that if a lead agency determines that a project would have a significant effect on unique archaeological resources, the lead agency may require reasonable efforts be made to permit any or all of these resources to be preserved in place (CEQA § 21083.2(b)). If preservation in place is not feasible, mitigation measures shall be required.

The CEQA Guidelines note that if an archaeological resource is neither a unique archaeological nor a historical resource, the effects of the project on those resources shall not be considered a significant effect on the environment (CEQA Guidelines § 15064.5(c)(4)).

Native American Heritage Commission
PRC section 5097.91 established the Native American Heritage Commission (NAHC), the duties of which include inventorying places of religious or social significance to Native Americans and identifying known graves and cemeteries of Native Americans on private lands. PRC section 5097.98 specifies a protocol to be followed when the NAHC receives notification of a discovery of Native American human remains from a county coroner.

California Public Records Act
California Public Records Act sections 6254(r) and 6254.10 were enacted to protect archaeological sites from unauthorized excavation, looting, or vandalism. Section 6254(r) explicitly authorizes public agencies to withhold information from the public related to "Native American graves, cemeteries, and sacred places maintained by the Native American Heritage Commission." Section 6254.10 specifically exempts from disclosure requests for "records that relate to archaeological site information and reports maintained by, or in the possession of, the Department of Parks and Recreation, the State Historical Resources Commission, the State Lands Commission, the NAHC, another state agency, or a local agency, including the records that the agency obtains through a consultation process between a California Native American tribe and a state or local agency."

California Health and Safety Code Sections 7050 and 7052
Health and Safety Code section 7050.5 declares that, in the event of the discovery of human remains outside of a dedicated cemetery, all ground disturbance must cease and the county coroner must be notified. Section 7052 establishes a felony penalty for mutilating, disinterring, or otherwise disturbing human remains, except by relatives.

California Penal Code Section 622.5
California Penal Code Section 622.5 provides misdemeanor penalties for injuring or destroying objects of historic or archaeological interest located on public or private lands but specifically excludes the landowner.

Public Resources Code Section 5097.5
PRC section 5097.5 defines as a misdemeanor the unauthorized disturbance or removal of archaeological, historic, or paleontological resources located on public lands.

Local Regulations, Policies and Standards

Kern County General Plan
The policies, goals, and implementation measures in the Kern County General Plan for cultural resources applicable to the project are provided below. The Kern County General Plan contains additional policies, goals, and implementation measures that are more general in nature and are not specific to development such as the project. Therefore, they are not listed below, but all policies, goals, and implementation measures in the Kern County General Plan are incorporated by reference.

Chapter 1. Land Use, Open Space and Conservation Element
1.10.3 Archaeological, Paleontological, Cultural, and Historical Preservation

Policy

- 25: The County will promote the preservation of cultural and historic resources which provide ties with the past and constitute a heritage value to residents and visitors.

Implementation Measure

- K. Coordinate with the California State University, Bakersfield's Archaeology Inventory Center.
- L. The County shall address archaeological and historical resources for discretionary projects in accordance with the California Environmental Quality Act (CEQA).
- M. In areas of known paleontological resources, the County should address the preservation of these resources where feasible.
- N. The County shall develop a list of Native American organizations and individuals who desire to be notified of proposed discretionary projects. This notification will be accomplished through the established procedures for discretionary projects and CEQA documents.
- O. On a project specific basis, the County Planning Department shall evaluate the necessity for the involvement of a qualified Native American monitor for grading or other construction activities on discretionary projects that are subject to a CEQA document (Kern County Planning Department, 2009).

3.5.4 Applicant Proposed Measures

SCE has proposed measures (i.e., APMs) to reduce environmental impacts. The significance of a given impact is considered, and a significance determination made, prior to application of any APMs. The implementation of the APMs is then considered as part of the design of a Proposed Project when determining whether impacts would be significant and thus require mitigation. APMs would be incorporated as part of any CPUC project approval, and SCE would be

required to adhere to the APMs as well as any additional imposed mitigation measures. The APMs are included in the MMRP for the Proposed Project (refer to Chapter 4 of this MND), and the implementation of the measures would be monitored and documented in the same manner as mitigation measures. The APMs that are applicable to cultural resources are provided below in Table 3.5-3.

Table 3.5-3 Applicant Proposed Measures

APM Number	Requirements
CUL-2	**Avoid Environmentally Sensitive Areas (ESA).** SCE will perform cultural resource surveys for any portion of the proposed project APE/API not yet surveyed (e.g. new or modified staging areas, pull sites, or other work areas). Cultural resources discovered during surveys will be subject to MM CUL-1 (Develop and Implement CRMP). Where operationally feasible, all NRHP- and CRHR-eligible resources will be protected from direct project impacts by project redesign (i.e., relocation of the line, ancillary facilities, or temporary facilities or work areas). In addition, all historic properties/historical resources will be avoided by all project construction, operation and maintenance, and restoration activities, where feasible. Avoidance measures will include, but not be limited to, fencing off ESAs for the duration of the proposed project or as outlined in the CRMP.
CUL-3	**Conduct Construction Monitoring.** Archaeological monitoring will occur as outlined in the CRMP. Archaeological monitoring will be conducted by a qualified archaeologist familiar with the types of historic and prehistoric resources that could occur within the project areas. The qualifications of the principal archaeologist and monitors will be approved by the CPUC. Monitoring reports will be submitted to the CPUC on a monthly basis. A Tribal Participant may be required at culturally sensitive locations in consultation with the CPUC and/or as outlined in the CRMP.
CUL-4	**Properly Treat Human Remains.** SCE will follow all federal and state laws, statutes, and regulations that govern the treatment of human remains. All work in the vicinity of a find will cease within a 200-foot radius of the remains, the area will be protected to ensure that no additional disturbance occurs. Should inadvertent discovery of human remains be made on federal lands, the federal agency and county coroner (California Health and Safety Code 7050.5(b)) will be notified immediately. If the remains are determined to be Native American or if Native American cultural items pursuant to the Native American Graves Protection and Repatriation Act (NAGPRA) are uncovered, the remains will be treated in accordance with the provisions of NAGPRA (43 CFR 10), *AB-275, Native American Cultural Preservation*, and the Archaeological Resources Protection Act (43 CFR 7). SCE will assist and support the federal agency, as appropriate, in all required NAGPRA, AB-275 and Section 106 actions, government to-government and consultations with Native Americans, agencies, and consulting parties as requested by the federal agency. If the remains are not on federal land, the county coroner and CPUC will be notified immediately and the remains will be treated in accordance with Health and Safety Code Section 7050.5, CEQA Section 15064.5(e), and Public Resources Code Section 5097.98. If the county coroner identifies the remains are Native American, they will notify the California Native American Heritage Commission (NAHC) within 24 hours. If the remains are not believed to be Native American, the appropriate local law enforcement agency will be notified. The NAHC will immediately notify the person or tribe it believes to be the most likely descendant (MLD) of the remains, and the MLD has 48 hours to make recommendations to the landowner or representative for the respectful treatment or disposition of the human remains and any

APM Number	Requirements
	associated grave goods. If the MLD does not make recommendations within 48 hours, the remains will be reinterred in the location they were discovered, and the area of the property will be secured from further disturbance. If there are disputes between the landowner and the MLD, the NAHC will mediate the dispute and attempt to find a solution. If the mediation fails to provide measures acceptable to the landowner, the landowner or their representative will reinter the remains and associated grave goods and funerary objects in an area of the property secure from further disturbance. The location of any reburial of Native American human remains will not be disclosed to the public and will not be governed by public disclosure requirements of the California Public Records Act, Cal. Govt. Code § 6250 et seq., unless otherwise required by law. SCE will assist and support the CPUC and NAHC, as appropriate.
CUL-5	**Cultural Resources Awareness Worker Training.** Prior to initiating construction, all construction personnel will be trained by a qualified archaeologist regarding the recognition of possible buried cultural resources (i.e., prehistoric and/or historical artifacts, objects, or features) and paleontological resources (i.e., fossils), and protection of these resources during construction. Training will also inform all construction personnel of the procedures to be followed upon the discovery of cultural materials. All personnel will be instructed that unauthorized removal or collection of artifacts is a violation of federal and state laws. Any excavation contract (or contracts for other activities that may have subsurface soil impacts) will include clauses that require construction personnel to attend a Workers Environmental Awareness Training Program (WEAP). The WEAP will include the project's potential for the post-discovery review of archaeological deposits, how to operate adjacent to and avoid all ESAs, and procedures to treat post-discovery reviews.

CPUC Environmental Measures

The CPUC has developed additional standard measures to reduce potential impacts on tribal cultural resources. The CPUC standard measures will be included in the MMRP for the Proposed Project and implemented during Proposed Project construction. The CPUC measure applicable to tribal cultural resources is listed below in Table 3.5-4.

Table 3.5-4 CPUC Environmental Measures

CPUC Draft Environmental Measure	Requirement
Human Remains (Construction and Maintenance)	Avoidance and protection of inadvertent discoveries that contain human remains shall be the preferred protection strategy with complete avoidance of such resources ensured by redesigning the project. If human remains are discovered during construction or maintenance activities, all work shall be diverted from the area of the discovery, and the CPUC shall be informed immediately. The Applicant shall contact the County Coroner to determine whether or not the remains are Native American. If the remains are determined to be Native American, the Coroner will contact the Native American Heritage Commission (NAHC). The NAHC will then identify the person or persons it believes to be the most likely descendant of the deceased Native American, who in turn would make recommendations for the appropriate means of treating the human remains and any associated funerary objects. If the remains are on federal land, the remains shall be treated in accordance with the Native American Graves Protection and Repatriation Act (NAGPRA). If the remains are not

CPUC Draft Environmental Measure	Requirement
	on federal land, the remains shall be treated in accordance with Health and Safety Code Section 7050.5, CEQA Section 15064.5(e), ***AB-275*** and Public Resources Code Section 5097.98.

3.5.5 Environmental Analysis

Summary of Impacts

Table 3.5-5, below, presents a summary of the CEQA significance criteria and impacts on cultural resources that would occur during construction, operation, and maintenance of the Proposed Project.

Table 3.5-5 Summary of Proposed Project Impacts to Cultural Resources

Would the Proposed Project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?	☐	☒	☐	☐
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	☐	☒	☐	☐
c) Disturb any human remains, including those interred outside of dedicated cemeteries?	☐	☐	☒	☐

Impact Discussion

a) Would the project cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?

Construction

A total of 10 resources within the Proposed Project API/APE defined in Section 3.5.2 are listed in the CRHR or were determined eligible for listing in the CRHR and are considered historical resources pursuant to PRC section 15064.5. The Proposed Project would not impact any of the 10 historical resources. Therefore, the Proposed Project would have a less-than-significant impact on any known historical resource. If a previously undocumented historical resource were discovered during construction, the Proposed Project could impact that resource, which would be a significant impact. Mitigation Measure Cultural – 1 would require SCE to halt or divert ground-disturbing activities if historical resources are discovered and provide data analysis and reporting of any discoveries of historical resources. APM CUL-3 further requires archaeological monitoring within any areas sensitive for cultural resources to ensure proper avoidance of resources, and APM CUL-5 requires worker training to educate workers on cultural resource protections. Implementation of Mitigation Measures Cultural – 1, as well as

implementation of APM CUL-3 and APM CUL-5, as part of the Proposed Project would include procedures for archaeological monitoring in sensitive areas, worker training, and halting construction in the event of an unanticipated discovery of a historical resource and proper recordation and documentation of the resource if avoidance isn't feasible and, therefore, the impact on historical resources from unanticipated discoveries would be less than significant with mitigation.

Operation and Maintenance

The Proposed Project would have no visual or indirect impacts on any historical resources because the nature of the project is to replace towers and other project elements with similar, but updated, elements. The change to the visual environment would not cause a substantial adverse change in the significance of any historical resource pursuant to PRC section 15064.5. The Proposed Project site is located in proximity to Fort Tejon, which is listed on the NRHP/CRHR. The subtransmission line corridor passes through the Fort Tejon parking lot. The Proposed Project involves removal/elimination of towers in the vicinity of Fort Tejon State Historic Park. Eliminating towers in the vicinity of the state park is regarded as a positive visual improvement in the park's setting. Operation and maintenance activities associated with the Proposed Project would be conducted in areas that would be disturbed during project construction. Operation and maintenance activities, such as the routine inspection and repair of subtransmission components and access associated with these activities, would not differ from those currently conducted for the existing subtransmission system and would not require additional ground disturbance. Maintenance vehicles would use access roads and would not disturb undeveloped lands. Because the Proposed Project would avoid visual impacts on any historical resource, pursuant to PRC section 15064.5, and the operation and maintenance activities would not involve new land disturbance that could affect historical resources, the impacts on historical resources during operation and maintenance would be less than significant.

Required APMs and MMs: Mitigation Measure Cultural – 1, APM CUL-2, APM CUL-3

b) Would the project cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?

Construction

A total of seven archaeological resources are within the area of potential construction disturbance. Six of the seven resources within the proposed active work locations were determined ineligible for listing in the CRHR through Phase II Testing/Evaluation and do not meet the criteria for unique archaeological resources. The one significant resource within the project site vicinity is Fort Tejon. The Proposed Project involves removal/elimination of towers in the vicinity of Fort Tejon State Historic Park. Eliminating towers in the vicinity of the state park is regarded as a positive visual improvement in the park's setting. If this were to change, it is recommended that the project proponent implement, as appropriate, an "aesthetic" treatment at TSP, TSP H-frames, LWS Poles, and LWS H-frames installed at visually sensitive locations. Aesthetic treatment entails finishing the TSPs, TSP H-frames, LWS Poles, or LWS H-frames in a surface color that is generally compatible with the surrounding environment to further reduce

visual effects. If the project were to encounter a unique archaeological resource during construction, the impact on that resource would be potentially significant. Mitigation Measure Cultural – 1 requires SCE to halt or divert ground-disturbing activities if archaeological resources are discovered.

Per APM CUL-3, construction monitoring would occur as outlined in the CRMP. AMP CUL-5 requires that construction personnel be trained to identify cultural resources, including prehistoric resources. SCE shall submit a report that summarizes monitoring efforts and conclusions of the monitoring program per Mitigation Measure Cultural - 1. Mitigation Measure Cultural – 1 also outlines the protocols to follow if archaeological resources are observed. Impacts would be reduced to less than significant with implementation of Mitigation Measure Cultural – 1, APM CUL-3, and APM CUL-5.

Operation and Maintenance

One CRHR/NRHP eligible resource has been recorded within the Proposed Project area (i.e.: Fort Tejon). The Proposed Project involves removal/elimination of towers in the vicinity of Fort Tejon State Historic Park. Eliminating towers in the vicinity of the state park is regarded as a positive visual improvement in the park's setting. It is assumed that the operation and maintenance activities associated with the Proposed Project would be conducted in areas that were previously disturbed during project construction. Operation and maintenance activities, such as the routine inspection and repair of subtransmission components and access associated with these activities, would not differ from those currently conducted for the existing subtransmission system and would not require additional ground disturbance. Maintenance vehicles would use access roads and would not disturb undeveloped lands. There would be no impacts to archaeological resources from operation and maintenance.

Required APMs and MMs: Mitigation Measure Cultural - 1, APM CUL-3, APM CUL-5

Mitigation Measure Cultural - 1: Development and Implementation of a Cultural Resources Management Plan

SCE will prepare and submit for approval a Cultural Resource Management Plan (CRMP) to guide all cultural resource management activities during project construction. Management of cultural resources will follow all applicable federal and state standards and guidelines for the management of historic properties/historical resources, including as identified or determined through the Section 106 review process. The CRMP will be submitted to the CPUC for review and approval at least 90 days prior to the start of construction. The CRMP will be prepared by a qualified archaeologist who meets the Secretary of Interior's standards for archaeology and include, but not be limited to, the following sections:

- • Cultural Resources Management Plan: The CRMP will define and map all known NRHP- and CRHR-eligible properties in or within 100 feet (30.5 meters) of the proposed project APE/API. A cultural resources protection plan will be included that details how NRHP- and CRHR-eligible properties will be avoided and protected during construction. Avoidance and preservation of the resources in place, including, but not limited to, planning and construction to avoid the resources and protect the cultural and natural context is the preferred method of mitigation and shall be implemented wherever feasible. Measures will include, at a minimum, designation and marking of Environmentally Sensitive Areas (ESAs), archaeological monitoring, personnel training, and reporting. The plan will also detail which avoidance measures will be used, where and when they will be implemented, and how avoidance measures and enforcement of ESAs will be coordinated with construction personnel.

Mitigation Measure Cultural - 1: Development and Implementation of a Cultural Resources Management Plan

- • Cultural Resource Monitoring and Field Reporting: The CRMP will detail procedures for archaeological monitoring and Tribal participation, define the reporting matrix, and establish criteria for when the monitoring effort should increase or decrease if monitoring results indicate that a change is warranted. The CRMP will also include guidelines for monitoring in areas of high sensitivity for the discovery of buried NRHP- and/or CRHR eligible cultural resources, burials, cremations, tribal cultural resources, or sacred sites.
- • Unanticipated Discovery Protocol: The CRMP will detail procedures for temporarily halting construction, defining work stoppage zones, notifying stakeholders (e.g. agencies, Native Americans, utilities), and assessing NRHP and/or CRHR eligibility in the event unanticipated discoveries are encountered during construction. It will include methods, timelines for assessing NRHP and/or CRHR eligibility, formulating mitigation plans, and implementing treatment. Mitigation and treatment plans for unanticipated discoveries will be reviewed by tribal stakeholders and approved by the CPUC, prior to implementation.
- • Data Analysis and Reporting: The CRMP will detail methods for data analysis in a regional context, reporting of results within one year of completion of field studies, curation of artifacts and data (maps, field notes, archival materials, recordings, reports, photographs, and analysts' data) at a facility that is approved by CPUC, and dissemination of reports to appropriate repositories.

SCE shall implement the CPUC approved CRMP during construction.

Applicable locations: Environmentally sensitive areas

Performance Standards and Timing:

- **Before construction:** Submittal of CRMP to CPUC 90 days prior to construction; personnel training and designation and marking of Environmentally Sensitive Areas (ESAs)
- **During construction:** Implementation of the CRMP including avoidance of cultural resources wherever feasible
- **After construction:** N/A

c) Would the project disturb any human remains, including those interred outside of dedicated cemeteries?

Construction

No recorded Native American or other human remains have been identified within or adjacent the Proposed Project site; however, it is possible that unrecorded human remains could be disturbed during construction. While the potential for the unanticipated discovery of human remains during subsurface construction activities is considered low due to the absence of any recorded burials in the Proposed Project site vicinity, the discovery of remains during ground disturbing activities could result in damage to the remains, which would be a significant impact. SCE would implement APM CUL-4 as part of the Proposed Project as well as CPUC Environmental Measure for human remains, which requires SCE to halt or divert ground-disturbing activities if human remains are discovered and would require SCE to implement the appropriate notification processes as required by law (California Health and Safety Code § 7050.5; Public Resource Code §§ 5097.98–99; Health and Safety Code § 8013(a); NAGPRA and AB-275) for the discovery of human remains. Implementation of APM CUL-4 would reduce impacts on human remains to less than significant.

Operation and Maintenance

No recorded Native American or other human remains have been identified within or adjacent the Proposed Project site. Operation and maintenance activities associated with the proposed

project would be conducted in areas that would be disturbed during project construction. Operation and maintenance activities, such as the routine inspection and repair of subtransmission components and access associated with these activities, would not differ from those currently conducted for the existing subtransmission system and would not require additional ground disturbance. Maintenance vehicles would use access roads and would not disturb undeveloped lands. There would be no impacts on human remains from operation and maintenance due to the absence of new ground disturbance associated with operation and maintenance activities.

Required APMs and MMs: APM CUL-4, CPUC Environmental Measure Human Remains

3.5 References

Belcourt, Tria, Sonia Sifuentes, and Julia Carvajal. 2021. "Cultural Resources Inventory: Southern California Edison Company Transmission Line Rating and Remediation Project Gorman-Kern River 66 kV Project Los Angeles and Kern Counties, Calif."

Bennyhoff, James A, and David A Fredrickson. 1994. "Toward a New Taxonomic Framework for Central California Archaeology." *Berkeley: Contributions of the University of California Archaeological Research Facility*.

Fredrickson, David A, and Joel W Grossman. 1977. "A San Dieguito Component at Buena Vista Lake, California." *The Journal of California Anthropology* 4 (2): 173–90.

Hartzell, Leslie Louise. 1992. *Hunter-Gatherer Adaptive Strategies and Lacustrine Environments in the Buena Vista Lake Basin, Kern County, California*. University of California, Davis.

Moratto, Michael J. 1984. *California Archaeology*. Academic Press.

Price, Barry, and SE Johnston. 2002. "A Clovis Point from the Sierra National Forest." *Society for California Archaeology Newsletter* 36 (1): 15–16.

Rosenthal, Jeffrey S, Gregory G White, and Mark Q Sutton. 2007. "The Central Valley: A View from the Catbird's Seat." *California Prehistory: Colonization, Culture, and Complexity* 50:147–64.

Sutton, Mark Q, and Matthew Des Lauriers. 2002. "Emerging Patterns in Obsidian Usage in the Southern San Joaquin Valley, California." *Pacific Coast Archeological Society Quarterly* 2 & 3.

Sutton, Mark Q, Jill K Gardner, Kenneth W Gobalet, and Nancy Valente. 2016. "Archaeological Investigations at the Manifold Site (CA-KER-4220), Buena Vista Lake, Southern San Joaquin Valley, California." *Pacific Coast Archaeological Society Quarterly* 52 (4): 15–74.

Urbana Preservation and Planning. 2022. "Historic-Era Built Environment Survey Report."

3.6 Energy

This section presents the environmental setting and impact analysis for energy use resulting from the Proposed Project and provides information regarding the Proposed Project's energy use, applicable regulations, environmental impacts, and mitigation measures to reduce or avoid significant effects.

3.6.1 Environmental Setting

The environmental setting pertaining to energy for the Proposed Project includes electricity, natural gas, and petroleum (gasoline and diesel) resources, including associated service providers, supply sources, and the estimated consumption for the state. Energy use for the State of California is estimated as follows:

- Approximately 272,576 gigawatt hours (GWh) electricity (CEC, 2022)
  - Approximately 190,913 GWh total in-state generation
  - Approximately 41,193 GWh northwest imports
  - Approximately 40,471 GWh southwest imports
- Approximately 2,074,302 cubic feet of natural gas (EIA, 2020)
- Approximately 524,183 barrels of petroleum (EIA, 2022)
  - Approximately 12.73 billion gallons of gasoline (Alternative Fuels Data Center, 2021)
  - Approximately 3.74 billion gallons of diesel (Alternative Fuels Data Center, 2020b)

Electricity

Electricity usage in California varies substantially among buildings according the types of use in a given building, construction materials, and the efficiency of electricity-consuming devices. Due to the state's energy efficiency building standards and efficiency and conservation programs, California's per capita electricity use has remained stable for more than 30 years while the national average has steadily increased (CEC, 2022).

Pacific Gas and Electric

The cities of Arvin and Bakersfield receive electricity from Pacific Gas and Electric Company (PG&E). Regulated by the CPUC, PG&E was incorporated in California in 1905 and is one of the largest combination natural gas and electric utilities in the United States (U.S.). It currently provides service to approximately 16 million people throughout a 70,000-square-mile service area in northern and central California 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. The service area includes 106,681 circuit miles of electric distribution lines, 18,466 circuit miles of interconnected transmission lines, 42,141 miles of natural gas distribution pipelines, and 6,438 miles of transportation pipelines (PG&E, 2023).

Southern California Edison

The Proposed Project would replace and modify existing electric transmission infrastructure owned and operated by Southern California Edison (SCE). As discussed in Section 2.1.3, the SCE system provides power to a portion of unincorporated Kern County, the City of Tehachapi, and surrounding communities. SCE provides electrical service to approximately 15 million people in a 50,000 square-mile area of central, coastal and southern California. The SCE system includes 118,000 circuit miles of electric distribution and bulk transmission lines and more than 700 substations within SCE's service area (Southern California Edison, 2021). SCE receives electric power from a variety of sources. According to CPUC's most recent Renewable Portfolio Standard (RPS) Annual Report to the Legislature, 34 percent of SCE's power in 2020 came from eligible renewable energy sources, including biomass/waste, geothermal, small hydroelectric, solar, and wind sources (California Public Utilities Commission, 2022).

Natural Gas

The CPUC regulates California natural gas rates and natural gas services, including in-state transportation of natural gas over the utilities' extensive transmission and distribution pipeline networks and storage, procurement, metering, and billing systems. California's natural gas utilities provide service to over 11 million gas meters within the state (CEC, 2022). In 2020, California used approximately 2.07 million cubic feet of natural gas (EIA, 2020). Residential and small commercial customers account for approximately 35 percent of the natural gas delivered by California utilities. Large consumers such as electric generators and industrial non-core customers account for approximately 65 percent of usage of the natural gas provided by California utilities (CPUC, 2022). Most of the natural gas used in California is imported from out-of-state natural gas basins. For example, in 2017, California utility customers received 38 percent of their natural gas supply from basins located in the U.S. Southwest, 27 percent from Canada, 27 percent from the U.S. Rocky Mountain region, and 8 percent from production located in California (CPUC, 2022). The Proposed Project is located within the service territory of SoCalGas, which provides service to about 5.9 million customers (CPUC, 2022).

Petroleum (Gasoline and Diesel)

Petroleum usage in California includes petroleum products such as motor gasoline, distillate fuel, liquefied petroleum gases, and jet fuel. In 2020, California used approximately 524,183 barrels of petroleum (EIA, 2022). Petroleum fuels refined from crude oil are the dominant source of energy for transportation sources. For petroleum that was converted into gasoline and diesel, the Alternative Fuels Data Center estimated California used approximately 12.73 billion gallons of gasoline in 2021 and approximately 3.74 billion gallons of diesel in 2020 (Alternative Fuels Data Center 2021; Alternative Fuels Data Center 2020b). California has implemented policies to improve vehicle efficiency and to support use of alternative transportation such as the California Public Utilities Code (PUC) section 399.24, which states the CPUC shall adopt policies and programs that promote the in-state production and distribution of biomethane (biogas) for transportation use. Accordingly, the California Energy Commission (CEC) anticipates an overall decrease in petroleum demand in the state over the next decade.

3.6.2 Applicable Regulations, Policies, and Standards

Federal Regulations, Policies and Standards

Federal Energy Policy and Conservation Act

In 1975, Congress enacted the Federal Energy Policy and Conservation Act, which established the first fuel economy standards for on-road motor vehicles in the United States. Pursuant to the Act, the National Highway Traffic Safety Administration is responsible for establishing additional vehicle standards. Fuel economy is determined based on each manufacturer's average fuel economy for the fleet of vehicles available for sale in the United States. In 2012, new fuel economy standards for passenger cars and light trucks were approved for model years 2017 through 2021 (77 FR §§ 62624–63200).

Intermodal Surface Transportation Efficiency Act of 1991

The Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991 promotes the development of intermodal transportation systems to maximize mobility and address national and local interests in air quality and energy. ISTEA includes factors for metropolitan planning organizations to address in developing transportation plans and programs, including some energy-related factors. To meet the new ISTEA requirements, metropolitan planning organizations have adopted policies defining the social, economic, energy, and environmental values guiding transportation decisions.

Transportation Equity Act for the 21st Century

The Transportation Equity Act for the 21st Century was signed into law in 1998 and builds on the initiatives established in the ISTEA legislation, as discussed above. The act authorizes highway, highway safety, transit, and other efficient surface transportation programs. The act continues the program structure established for highways and transit under ISTEA, such as flexibility in the use of funds, emphasis on measures to improve the environment, and focus on a strong planning process as the foundation of transportation decisions. The act also provides for investment in research and its application to maximize the performance of the transportation system through, for example, deployment of intelligent transportation systems to help improve operations and management of transportation systems and vehicle safety.

Energy Independence and Security Act of 2007

On December 19, 2007, the Energy Independence and Security Act (EISA) of 2007 was signed into law. In addition to setting increased Corporate Average Fuel Economy standards for motor vehicles, the EISA includes the following other provisions related to energy efficiency:

- Renewable Fuel Standard (section 202)
- Appliance and Lighting Efficiency Standards (sections 301–325)
- Building Energy Efficiency (sections 411–441)

The Renewable Fuel Standard program was created under the Energy Policy Act of 2005 and established the first renewable fuel volume mandate in the U.S. Developed in collaboration with refiners, renewable fuel producers, and many other stakeholders, the regulations of this program require ever-increasing levels of renewable fuels to replace petroleum (EPA 2013,

2015). The U.S. Environmental Protection Agency (EPA) is responsible for developing and implementing regulations to ensure that transportation fuel sold in the United States contains a minimum volume of renewable fuel. As required under the act, the original Renewable Fuel Standard program required 7.5 billion gallons of renewable fuel to be blended into gasoline by 2012. Under the EISA, the Renewable Fuel Standard program was expanded in several key ways that lay the foundation for achieving significant reductions in GHG emissions from the use of renewable fuels, reducing imported petroleum, and encouraging the development and expansion of the renewable fuels sector in the United States. The updated program includes the following:

- Expands the Renewable Fuel Standard program to include diesel, in addition to gasoline
- Increases the volume of renewable fuel required to be blended into transportation fuel from 9 billion gallons in 2008 to 36 billion gallons by 2022
- Establishes new categories of renewable fuel, and sets separate volume requirements for each one
- Requires the EPA to apply lifecycle GHG performance threshold standards to ensure that each category of renewable fuel emits fewer GHGs than the petroleum fuel it replaces

Additional provisions of the EISA address energy savings in government and public institutions, research for alternative energy, additional research in carbon capture, international energy programs, and the creation of "green" jobs.

State Regulations, Policies, and Standards

Warren–Alquist Act

The California Legislature passed the Warren–Alquist Act in 1974. The Warren–Alquist Act was created by the CEC. The legislation also incorporated the following three key provisions designed to address the demand side of the energy equation:

- It directed the CEC to formulate and adopt the nation's first energy conservation standards for both buildings constructed and appliances sold in California.
- The act removed the responsibility of electricity demand forecasting from the utilities, which had a financial interest in high demand projections, and transferred it to a more impartial CEC.
- The CEC was directed to embark on an ambitious research and development program, with a particular focus on fostering what were characterized as non-conventional energy sources.

State of California Energy Action Plan

The CEC and CPUC approved the first State of California Energy Action Plan in 2003. The plan establishes shared goals and specific actions to ensure that adequate, reliable, and reasonably priced electrical power and natural gas supplies are provided. The plan also identified policies, strategies, and actions that are cost effective and environmentally sound for California's

consumers and taxpayers. In 2005, a second Energy Action Plan was adopted by the CEC and CPUC to reflect various policy changes and actions of the preceding 2 years. At the beginning of 2008, the CEC and CPUC determined that it was not necessary or productive to prepare a new energy action plan. This determination was based, in part, on a finding that the state's energy policies have been significantly influenced by the passage of Assembly Bill (AB) 32, also known as the California Global Warming Solutions Act of 2006 (discussed below). Rather than produce a new energy action plan, the CEC and CPUC prepared an "update" that examines the state's ongoing actions in the context of global climate change.

Senate Bill 1078 (2002)

Senate Bill (SB) 1078 (2002) established the California RPS Program and requires that a retail seller of electricity purchase a specified minimum percentage of electricity generated by eligible renewable energy resources as defined in any given year, culminating in a 20 percent standard by December 31, 2017. These retail sellers include electrical corporations, community choice aggregators, and electric service providers. The bill also requires the CEC to certify eligible renewable energy resources, design and implement an accounting system to verify compliance with the RPS by retail sellers, and allocate and award supplemental energy payments to cover above-market costs of renewable energy.

Senate Bills 107 (2006), X1-2 (2011), 350 (2015), and 100 (2018)

SB 107 (2006) accelerated the RPS established by SB 1078 by requiring that 20 percent of electricity retail sales be served by renewable energy resources by 2010, rather than 2017. Additionally, SB X1-2 (2011) requires all California utilities to generate 33 percent of their electricity from eligible renewable energy resources by 2020. Specifically, SB X1-2 sets a three-stage compliance period: by December 31, 2013, 20 percent had to come from renewables; by December 31, 2016, 25percent had to come from renewables; and by December 31, 2020, 33 percent will come from renewables.

SB 350 (2015) requires retail seller and publicly owned utilities to procure 50 percent of their electricity from eligible renewable energy resources by 2030, with interim goals of 40 percent by 2024 and 45 percent by 2027.

SB 100 (2018) increased the standards set forth in SB 350, establishing that 44 percent of the total electricity sold to retail customers in California per year by December 31, 2024, 52 percent by December 31, 2027, and 60 percent by December 31, 2030, be secured from qualifying renewable energy sources. SB 100 states that it is the policy of the state that eligible renewable energy resources and zero-carbon resources supply 100 percent of the retail sales of electricity to California. This bill requires that the achievement of 100-percent zero-carbon electricity resources does not increase the carbon emissions elsewhere in the western grid and that the achievement not be achieved through resource shuffling. Consequently, utility energy generation from non-renewable resources is expected to be reduced based on implementation of the 60-percent RPS in 2030.

Assembly Bill 1007 (2005)
AB 1007 (2005) required the CEC to prepare a statewide plan to increase the use of alternative fuels in California (State Alternative Fuels Plan). The CEC prepared the plan in partnership with the California Air Resources Board (CARB) and in consultation with the other state, federal, and local agencies. The plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuels use, reduce GHG emissions, and increase in-state production of biofuels without causing a significant degradation of public health and environmental quality.

Assembly Bill 32 (2006) and Senate Bill 32 (2016)
In 2006, the Legislature enacted AB 32, the California Global Warming Solutions Act of 2006. AB 32 requires California to reduce its GHG emissions to 1990 levels by 2020. In 2016, the Legislature enacted SB 32, which extended the horizon year of the state's codified GHG reduction planning targets from 2020 to 2030, requiring California to reduce its GHG emissions to 40 percent below 1990 levels by 2030. In accordance with AB 32 and SB 32, CARB prepares scoping plans to guide the development of statewide policies and regulations for the reduction of GHG emissions. Many of the policy and regulatory concepts identified in the scoping plans focus on increasing energy efficiencies and the use of renewable resources and reducing the consumption of petroleum-based fuels (e.g., gasoline and diesel). Accordingly, the state's GHG emissions reduction planning framework creates co-benefits for energy-related resources.

California Building Standards
Part 6 of Title 24 of the California Code of Regulations was established in 1978 and serves to enhance and regulate California's building standards. Part 6 establishes energy efficiency standards for residential and non-residential buildings constructed in California to reduce energy demand and consumption. Part 6 is updated every 3 years to incorporate and consider new energy efficiency technologies and methodologies. The 2016 Title 24 building energy efficiency standards, which became effective on January 1, 2017, further reduce energy used in the state. In general, single-family homes built to the 2016 standards were anticipated to use approximately 28 percent less energy for lighting, heating, cooling, ventilation, and water heating than those built to the 2013 standards, and non-residential buildings built to the 2016 standards were to use an estimated 5 percent less energy than those built to the 2013 standards.

The California Energy Commission (CEC) updates the Energy Code every three years. On August 11, 2021, the CEC adopted the 2022 Energy Code. In December, it was approved by the California Building Standards Commission for inclusion into the California Building Standards Code. The 2022 Energy Code encourages efficient electric heat pumps, establishes electric-ready requirements for new homes, expands solar photovoltaic and battery energy storage standards, strengthens ventilation standards, and more. Buildings whose permit applications are applied for on or after January 1, 2023, must comply with the 2022 Energy Code. The CPUC, CEC, and CARB previously established a goal of achieving zero net energy for new construction in California. The key policy timelines include the following: (1) All new residential construction in California will be zero net energy by 2020 and (2) all new commercial construction in California will be zero net energy by 2030. As most recently defined by the CEC in its 2015

Integrated Energy Policy Report, a zero net energy code building is "one where the value of the energy produced by on-site renewable energy resources is equal to the value of the energy consumed annually by the building" using the CEC's Time Dependent Valuation metric.

California Green Building Standards Code

CALGreen establishes mandatory green building standards for buildings in California. CALGreen was developed to reduce GHG emissions from buildings, promote environmentally responsible and healthier places to live and work, reduce energy and water consumption, and respond to state environmental directives. CALGreen covers five categories: planning and design, energy efficiency, water efficiency and conservation, material and resource efficiency, and indoor environmental quality.

Sustainable Communities Strategy

The Sustainable Communities and Climate Protection Act of 2008, or SB 375, coordinates land use planning, regional transportation plans, and funding priorities to help California meet its GHG emissions reduction mandates. As codified in California Government Code, Section 65080, SB 375 requires metropolitan planning organizations to include a sustainable communities strategy in its regional transportation plan. The main focus of the sustainable communities strategy is to plan for growth in a fashion that will ultimately reduce GHG emissions, but the strategy is also a part of a bigger effort to address other development issues within the general vicinity, including transit and vehicle miles traveled, which influence the consumption of petroleum-based fuels.

Local Regulations, Policies, and Standards

The CPUC has sole and exclusive State jurisdiction over the siting and design of the Proposed Project because it authorizes the construction, operation, and maintenance of investor-owned public utility facilities. Pursuant to GO 131-D section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters." Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the counties' and cities' regulations are not applicable as the counties and cities do not have jurisdiction over the Proposed Project. Accordingly, the following discussion of local land use laws, regulations, and policies is provided for informational purposes only.

Kern County General Plan

The Kern County General Plan's Energy Element contains goals, policies, and implementation measures that address renewable energy development in the County (Kern County, 2009). The following are relevant to the Proposed Project**.**

General Goal:

- To assert Kern County's position as California's leading energy producer, to encourage safe and orderly energy development within the County, including

research and demonstration projects, and to become actively involved in the decisions and actions of other agencies as they affect energy development in Kern County.

Policies:

- Kern County should assert and promote its role as the State's leading energy County.
- The County should actively monitor the actions of local, State, and federal agencies relating to energy development in Kern County, and lobby and present its position on such matters as needed to protect the County interests and avoid unnecessary impediments to energy development.
- The County shall continue to streamline energy permitting regulations.
- The County should actively seek State and federal energy grants and projects to assist in energy planning and development.
- The County shall work with other agencies to define regulatory responsibility concerning energy-related issues, and shall seek to eliminate, insofar as possible, duplicative regulations.
- The County should encourage discussion and mutual cooperation of various energy industries within the County to establish mutual understanding of common needs and issues.

Los Angeles County General Plan

The Los Angeles County General Plan contains goals, policies, and implementation measures that encourage energy efficiency in the County. The following are relevant to the Proposed Project.

Goal:

- **C/NR 12**: Sustainable management of renewable and non-renewable energy resources

Policies:

- **Policy C/NR 12.1**: Encourage the production and use of renewable energy resources
- **Policy C/NR 12.2**: Encourage the effective management of energy resources, such as ensuring adequate reserves to meet peak demands
- **Policy C/NR12.3**: Encourage distributed systems that use existing infrastructure and reduce environmental impacts

Los Angeles Community Climate Action Plan

The Draft 2045 Community Climate Action Plan (CCAP) is a component of the Air Quality Element of the Los Angeles County General Plan and is discussed in more detail in the Greenhouse Gas Emissions section (Section 3.8). Many of the actions listed in the Draft 2045 CCAP to reduce GHG emissions would also increase energy efficiency or reduce energy consumption or increase renewable energy production. The local programs in the plan include seven green building and energy actions, twelve land use and transportation measures, two

water conservation and wastewater actions, a water diversion action, and four land conservation and tree planting actions.

City of Arvin General Plan
In the City of Arvin's General Plan Update, the Conservation and Open Space Element contains the following energy-related goal that may apply to the Proposed Project:

Goal:

- **Goal 9** Improve energy efficiency of all new construction in the Arvin area

Policy:

- **CO-9.2** Enforce the State Energy Conservation Standards for both residential and commercial uses

City of Bakersfield General Plan
Chapter V "Conservation/Air Quality Element" of the Metropolitan Bakersfield General Plan contains the following energy-related policy that may apply to the Proposed Project:

- **Policy 6**. Participate in alternative fuel programs

3.6.3 Applicant Proposed Measures

SCE has proposed measures to reduce environmental impacts. The significance of the impact is first considered prior to application of *applicant proposed measures* (APMs) and a significance determination is made. The implementation of the APMs is then considered as part of the Proposed Project when determining whether impacts would be significant and thus would require mitigation. These APMs would be incorporated as part of any CPUC project approval, and SCE would be required to adhere to the APMs as well as any identified mitigation measures. The APMs are included in the MMRP for the Proposed Project, and the implementation of the measures would be monitored and documented in the same manner as mitigation measures. The APMs that are applicable to the energy analysis are provided in Table 3.6-1.

Table 3.6-1 Applicant Proposed Measures Relevant to Energy Impact Analysis

APM Number	Requirements
AIR-1	**Tier 4 Construction Equipment.** All construction equipment with rating between 100 and 750 horsepower (hp) will be required to use engines compliant with U.S. EPA Tier 4 non-road engine standards. In the event a Tier 4 engine is not available for any off-road construction equipment with rating at or higher than 100 hp, that documentation of the unavailability will be provided.

APM Number	Requirements
NOI-1	**Noise Disturbance Minimization Procedures.** SCE will employ the following noise-control techniques, at a minimum, to reduce construction noise exposure at noise-sensitive receptors during construction: • Construction activities will be confined to daytime, weekday, and weekend hours established by the applicable local jurisdiction. In the event construction is required beyond those hours, SCE will notify the appropriate local agency or agencies regarding the description of the work, location, and anticipated construction hours. • Construction equipment will use noise reduction features (e.g., mufflers and engine shrouds) that are no less effective than those originally installed by the manufacturer. • Construction traffic and helicopter flight will be routed away from residences and schools, where feasible. Unnecessary construction vehicle use, and idling time will be minimized. If a vehicle is not required for use immediately or continuously for construction activities, its engine will be shut off.

3.6.4 Environmental Analysis

Summary of Impacts

Table 3.6-2 presents a summary of the CEQA significance criteria and impacts on energy use that would occur during construction, operation, and maintenance of the Proposed Project.

Table 3.6-2 Summary of Proposed Impacts to Energy

Would the Proposed Project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	☐	☐	☒	☐
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	☐	☐	☐	☒

Impact Discussion

a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

Construction

Energy utilized during the Proposed Project's construction would require the consumption of fossil fuel resources such as gasoline and diesel that would be used to power construction vehicles, equipment, and helicopters as well as the consumption of electricity for alternatively powered equipment. As mentioned in Table 2-7, it is estimated that approximately 386,486 gallons of diesel fuel, approximately 48,579 gallons of gasoline, and approximately 104,432 gallons of Jet A fuel (for helicopter operations) would be used or consumed during construction. Referencing the data from the CEC, California's refineries regularly produce approximately 952,000 barrels per week of diesel and approximately 7,382,000 barrels per week of gasoline (CEC, 2022). This means the total diesel fuel volume used during the entirety of the Proposed Project's construction (0.386 million gallons) would represent less than 3 percent of California's daily diesel production volume (15 million gallons). Additionally, implementation of APM NOI-1 (see Section 3.13) and APM AIR-1 (see Section 3.3.4) would both minimize any unnecessary construction vehicle idling time, which would reduce total fuel consumption during construction of the Proposed Project. Therefore, the Proposed Project's impact would be less than significant and would not result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources during the Proposed Project construction.

Operation and Maintenance

Operation of the existing subtransmission lines uses electricity through station lights and power equipment that are used to power the existing SCE substations within the Proposed Project alignment. The use of station lengths and power equipment at the existing substations would not be modified as a result of the Proposed Project. Operation and maintenance (O&M) activities of the Proposed Project would be carried out in the same or similar manner as those conducted for the existing infrastructure. Therefore, O&M of the Proposed Project would not result in a change to energy consumption, and no impact to energy use would occur.

Required APMs and MMs: APM NOI-1 and APM AIR-1. Refer to Table 3.6-1.

b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?

The Proposed Project would rebuild and replace the existing subtransmission lines in order to address reliability concerns related to the condition of existing infrastructure on the affected subtransmission line and ensure compliance with CPUC G.O. 95 standards. Because SCE operates an interconnected grid, all renewable and non-renewable energy projects connected to any one portion of that grid may be interconnected to the subtransmission lines included under the Proposed Project. The Proposed Project would replace existing electrical power lines and would not conflict with or obstruct a state or local plan for renewable energy or energy

efficiency or impede future use of renewable energy sources, progress towards RPS goals, or implementation of energy efficiency programs. Therefore, construction of the Proposed Project would not impede the development of existing or future renewable energy projects and would have no significant impact.

Required APMs and MMs: None

3.6.5 References

Alternative Fuels Data Center. (2020b). California Transportation Data for Alternative Fuels and Vehicles. Retrieved from https://afdc.energy.gov/states/ca

Alternative Fuels Data Center. (2021). California Transportation Data for Alternative Fuels and Vehicles. Retrieved June 2023, from https://afdc.energy.gov/states/ca

California Public Utilities Commission. (2022, November). 2022 California's Annual Renewables Portfolia Standards. Retrieved from https://www.cpuc.ca.gov/-/media/cpuc-website/industries-and-topics/documents/energy/rps/2022-rps-annual-report-to-the-legislature.pdf

CEC. (2022). 2020 Total System Electric Generation. Retrieved June 2023, from https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2020-total-system-electric-generation

CEC. (2022). 2022 Building Energy Efficiency Standards Summary. Retrieved June 2022, from https://www.energy.ca.gov/sites/default/files/2021-08/CEC_2022_EnergyCodeUpdateSummary_ADA.pdf

CEC. (2022, January). 2022 Petroleum Watch. Retrieved from https://www.energy.ca.gov/sites/default/files/2022-01/2022-01_Petroleum_Watch_ada.pdf

County of Merced Community and Economic Development Department. (2014, December). Final Environmental Impact Report For The Wright Solar Park Conditional Use Permit Application Cup12-017. Retrieved from https://web2.co.merced.ca.us/pdfs/env_docs/eir/wright_solar_feir_12_24_14.pdf

CPUC. (2022). Natural Gas and California. Retrieved June 2022, from https://www.cpuc.ca.gov/industries-and-topics/natural-gas/natural-gas-and-california

EIA. (2020, May). Natural Gas Consumption by End Use. Retrieved June 2022, from https://www.eia.gov/opendata/v1/qb.php?sdid=NG.NA1490_SCA_2.A

EIA. (2022, June). Total Petroleum Consumption Estimates, 2020. Retrieved June 2022, from https://www.eia.gov/state/seds/data.php?incfile=/state/seds/sep_fuel/html/fuel_use_pa.html&sid=US&sid=CA

Kern County. (2009). Kern County General Plan. Retrieved June 2023, from https://psbweb.co.kern.ca.us/planning/pdfs/kcgp/KCGPChp5Energy.pdf

PG&E. (2023). Company profile. Retrieved June 6, 2023, from https://www.pge.com/en_US/about-pge/company-information/profile/profile.page

Southern California Edison. (2021, June 29). Southern California Edison Facts. Retrieved June 2022, from https://download.newsroom.edison.com/create_memory_file/?f_id=5c4108cd2cfac23ed1a901ac&content_verified=True

3.7 Geology, Soils and Paleontology

This section presents the environmental setting and impact analysis for the Proposed Project as it relates to geology, soils, and paleontological resources. This section addresses the existing geological, soil, and paleontological conditions in the Proposed Project area, applicable regulations, environmental impacts, and mitigation measures to avoid significant effects. The geology, soils, and paleontological resources analysis focuses on the potential for the Proposed Project to result in impacts related to fault rupture, ground shaking, seismic-related ground failure, landslides, soil erosion and loss of topsoil, unstable geologic units or soils, expansive and collapsible soils, and effects on known paleontological resources.

3.7.1 Environmental Setting

Geologic Setting and Units

Two general geologic units are particularly widespread in the Proposed Project area. The mountainous areas crossed by the Proposed Project alignment have been mapped predominantly as granitic rocks including granodiorite and quartz monzonite, typically of Mesozoic age (grMz; "Mesozoic granitic rocks"). The valley areas crossed by the Proposed Project alignment have been mapped predominantly as alluvial and terrace deposits of Pliocene to Holocene age (Q; "alluvial deposits"). Figure 3.7-1 shows the mapped geologic units within the Proposed Project alignment. The mapped geologic units along the Proposed Project alignment are detailed in Table 3.7-1.

Table 3.7-1 Mapped Geologic Units in the Proposed Project Region

Project segment	Miles of Proposed Project within unit	Age	Unit
1, 2, 3, 4, 5	19.41	Permian to Tertiary; most Mesozoic granodiorite and quartz monzonite	grMz
1, 2, 3, 4, 5	51.64	Pliocene to Holocene alluvium and terrace deposits	Q
1	3.69	Oligocene to Pleistocene sandstone and conglomerate	Mc
1	3.67	Oligocene to Pliocene; marine sedimentary rocks	M
1	4.92	Miocene to Pleistocene; sandstone, shale, and gravel deposits; mostly loosely consolidated	Qpc
2	0.66	Paleocene to Oligocene; marine sedimentary rocks	E

Source: (U.S. Geological Survey, California Geological Survey 2000)

Soil Types and Hazards

Soil Types

The U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) has mapped soils in the Proposed Project area. A summary of the properties of the major soil types in the Proposed Project area, as accessed through the NRCS Web Soil Survey, is presented in Table 3.7-2. Maps of the major NRCS soil units in the Proposed Project area are shown in Figure 3.7-2 through Figure 3.7-5.

Table 3.7-2 Mapped Soil Units and Soil Properties.

Map unit name	Proposed Project Segments containing soil unit	Segment length within soil unit (miles)	Percentage of Proposed Project area within soil unit	Hydrologic group [a]	Wind erodibility group [b]	Soil erodibility factor (K factor) [c]	Linear extensibility percent [d]
Area not surveyed, access denied	2, 3	6.6	9.5%	nil	nil	nil	nil
Arvin sandy loam, 2 to 5 percent slopes	2, 4	1.6	2.3%	A	5	0.15	1.5
Arvin sandy loam, 5 to 9 percent slopes	4	0.3	0.4%	A	5	0.15	1.5
Brecken-Cuyama-Pleito complex, 15 to 60 percent slopes	1	3.8	5.4%	C	5	0.10	2.9
Calicreek loamy coarse sand, 0 to 2 percent slopes, occasionally flooded	1	0.3	0.4%	A	2	0.10	1.5
Calicreek sandy loam, 0 to 2 percent slopes, occasionally flooded	1	0.1	0.2%	A	2	0.15	1.5
Chanac-Pleito complex, 2 to 5 percent slopes	1	0.4	0.6%	C	5	0.24	4.1
Chanac-Pleito complex, 5 to 30 percent slopes	1	0.1	0.1%	C	5	0.28	3
Chuchupate gravelly sandy loam, 50 to 75 percent slopes	2	0.0	0.0%	B	5	nil	2
Cieneba-Vista-Rock outcrop complex, 30 to 60 percent slopes	1	1.1	1.6%	D	5	0.17	1.5
Delano loamy sand, 0 to 2 percent slopes	1	2.3	3.3%	C	2	0.15	3.3

Map unit name	Proposed Project Segments containing soil unit	Segment length within soil unit (miles)	Percentage of Proposed Project area within soil unit	Hydrologic group [a]	Wind erodibility group [b]	Soil erodibility factor (K factor) [c]	Linear extensibility percent [d]
DiGiorgio sandy clay loam, 0 to 2 percent slopes	1, 2, 4	1.5	2.2%	C	5	0.24	3.8
Dune land	1	0.3	0.4%	nil	1	0.02	1.5
Edmundston gravelly sandy loam, 50 to 75 percent slopes	4	0.4	0.6%	A	5	0.10	1.5
Frazier very gravelly sandy loam, 50 to 75 percent slopes	2	1.6	2.3%	B	6	0.10	2
Geghus-Tecuya association, 30 to 75 percent slopes	2	1.0	1.5%	B	5	0.32	3.3
Gorman sandy loam, 30 to 50 percent slopes, eroded	3	3.0	4.3%	C	3	0.17	1.5
Guijarral sandy loam, 2 to 9 percent slopes	2	1.1	1.5%	B	3	0.24	2
Haploxerolls, hilly	2	0.2	0.3%	nil	nil	nil	nil
Havala sandy loam, 0 to 2 percent slopes	5	1.5	2.2%	C	5	0.15	2.6
Hawk gravelly sandy loam, 9 to 15 percent slopes	2	0.7	1.1%	A	5	nil	2
Hesperia sandy loam, 0 to 2 percent slopes	1, 2	11.9	17.1%	A	3	0.20	1.5
Lodo-Modjeska-Botella families association, 10 to 70 percent slopes	2	0.2	0.2%	D	3	0.28	2.1

Map unit name	Proposed Project Segments containing soil unit	Segment length within soil unit (miles)	Percentage of Proposed Project area within soil unit	Hydrologic group [a]	Wind erodibility group [b]	Soil erodibility factor (K factor) [c]	Linear extensibility percent [d]
Oak Glen sandy loam, 2 to 9 percent slopes	3	0.1	0.1%	A	3	0.20	1.5
Pleito gravelly sandy clay loam, 2 to 5 percent slopes	1	0.8	1.1%	C	6	0.15	3.4
Pleito-Chanac-Raggulch complex, 5 to 30 percent slopes	1	0.5	0.7%	C	6	0.17	3.9
Pleito-Trigo-Chanac complex, 15 to 50 percent slopes	1	1.9	2.7%	C	7	0.37	3.3
Premier sandy loam, 0 to 2 percent slopes	2	1.9	2.7%	A	3	0.15	2
Psamments-Xerolls complex, nearly level	2	1.9	2.7%	A	2	0.15	1.5
Riverwash	1	0.5	0.8%	nil	nil	nil	nil
Rosamond variant sandy loam, 5 to 15 percent slopes	2	1.5	2.1%	C	3	0.17	4.1
Sheridan sandy loam, 30 to 50 percent slopes, eroded	3	0.6	0.9%	B	3	0.15	1.5
Steuber sandy loam, 0 to 2 percent slopes	5	0.4	0.6%	A	5	0.10	1.5
Steuber sandy loam, 2 to 5 percent slopes	4, 5	0.7	1.0%	A	5	0.10	1.5
Steuber sandy loam, 5 to 9 percent slopes	3	1.4	2.0%	A	5	0.10	1.5

Map unit name	Proposed Project Segments containing soil unit	Segment length within soil unit (miles)	Percentage of Proposed Project area within soil unit	Hydrologic group [a]	Wind erodibility group [b]	Soil erodibility factor (K factor) [c]	Linear extensibility percent [d]
Tehachapi sandy loam, 2 to 15 percent slopes	5	0.1	0.1%	C	3	0.24	3.2
Tunis sandy loam, 5 to 30 percent slopes	4	0.3	0.4%	D	3	0.24	1.5
Tunis-Walong complex, 50 to 75 percent slopes	4	2.1	3.0%	D	5	0.43	1.5
Walong sandy loam, 15 to 30 percent slopes	4, 5	3.7	6.7%	B	3	0.15	1.5
Walong sandy loam, 30 to 50 percent slopes	3, 4	1.2	1.7%	B	3	0.15	1.5
Walong-Arujo sandy loams, 50 to 75 percent slopes	4	0.3	0.5%	B	3	0.15	2.7
Walong-Rock outcrop complex, 30 to 75 percent slopes	4	0.8	1.1%	B	3	nil	1.5
Wasioja sandy loam, 2 to 9 percent slopes	2	0.9	1.3%	C	3	0.24	2.2
Water	2, 3	0.2	0.3%	nil	nil	nil	nil
Wheelridge gravelly loamy sand, 0 to 2 percent slopes	2	2.3	3.4%	A	2	0.15	1
Whitewolf loamy sand, 0 to 2 percent slopes	2	0.8	1.1%	A	2	0.17	1.5
Whitewolf loamy sand, 0 to 2 percent slopes, occasionally flooded	1	1.0	1.4%	A	2	0.15	1.5

Map unit name	Proposed Project Segments containing soil unit	Segment length within soil unit (miles)	Percentage of Proposed Project area within soil unit	Hydrologic group [a]	Wind erodibility group [b]	Soil erodibility factor (K factor) [c]	Linear extensibility percent [d]
Whitewolf loamy sand, 0 to 2 percent slopes, rarely flooded	1	0.8	1.1%	A	2	0.15	1.5
Whitewolf-Riverwash complex, 0 to 5 percent slopes, frequently flooded	1	0.2	0.3%	A	2	0.02	1.5
Xererts-Xerolls complex, steep	4	0.3	0.5%	D	4	0.24	7.1
Xerofluvents, occasionally flooded-Riverwash complex, 0 to 5 percent slopes	1	0.1	0.1%	C	6	0.37	2.5
Xerorthents-Rock outcrop complex, very steep	4	0.6	0.9%	D	6	0.15	4

Notes :

[a] A Hydrologic Group is a group of soils having similar runoff potential under similar storm and cover conditions. Soil properties that influence runoff potential depth to a seasonal high-water table, saturated hydraulic conductivity after prolonged wetting, and depth to a layer with a very slow water transmission rate. Soils in Group A have the lowest runoff potential when wet and transmit water freely, while soils in Group D have the highest runoff potential when wet and water movement through the soil is restricted (NRCS Staff n.d.).

[b] A *wind erodibility group* (WEG) consists of soils that have similar properties affecting their susceptibility to wind erosion, which varies according to factors such as soil texture, organic matter content, carbonates, rock fragments, and minerology (NRCS Staff n.d.). Soil moisture and frozen soil layers also influence wind erosion. WEG values are assigned to soil map units by NRCS and range from a value of 1 to 8: high wind erosion susceptibility (WEG 1 or 2), moderate wind erosion susceptibility (WEG 3 or 4), low wind erosion susceptibility (WEG 5, 6, or 7), and no susceptibility to wind erosion (WEG 8) (NRCS Staff n.d.).

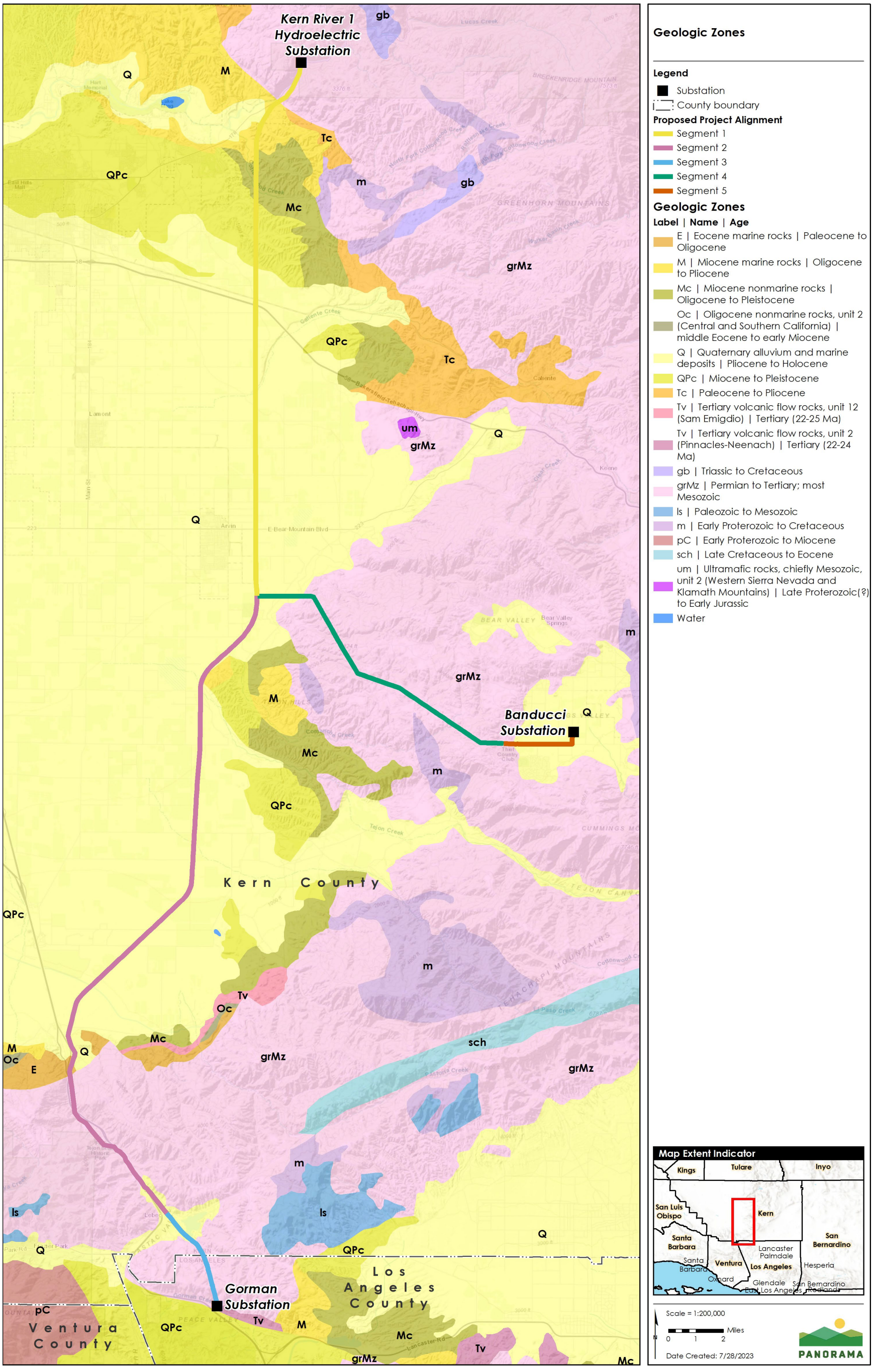
[c] The soil erodibility factor (known as the *K factor*) is used to indicate the susceptibility of soils to sheet and rill erosion by water and the rate of runoff. K factor values range from 0.02 (least erodible soils) to 0.69 (most erodible soils). Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water (NRCS Staff n.d.).

[d] The linear extensibility percent of a soil is used to identify shrink-swell classes as follows: low (<3), moderate (3-6), high (6-9), and very high (>9).

Source: (NRCS Staff n.d.)

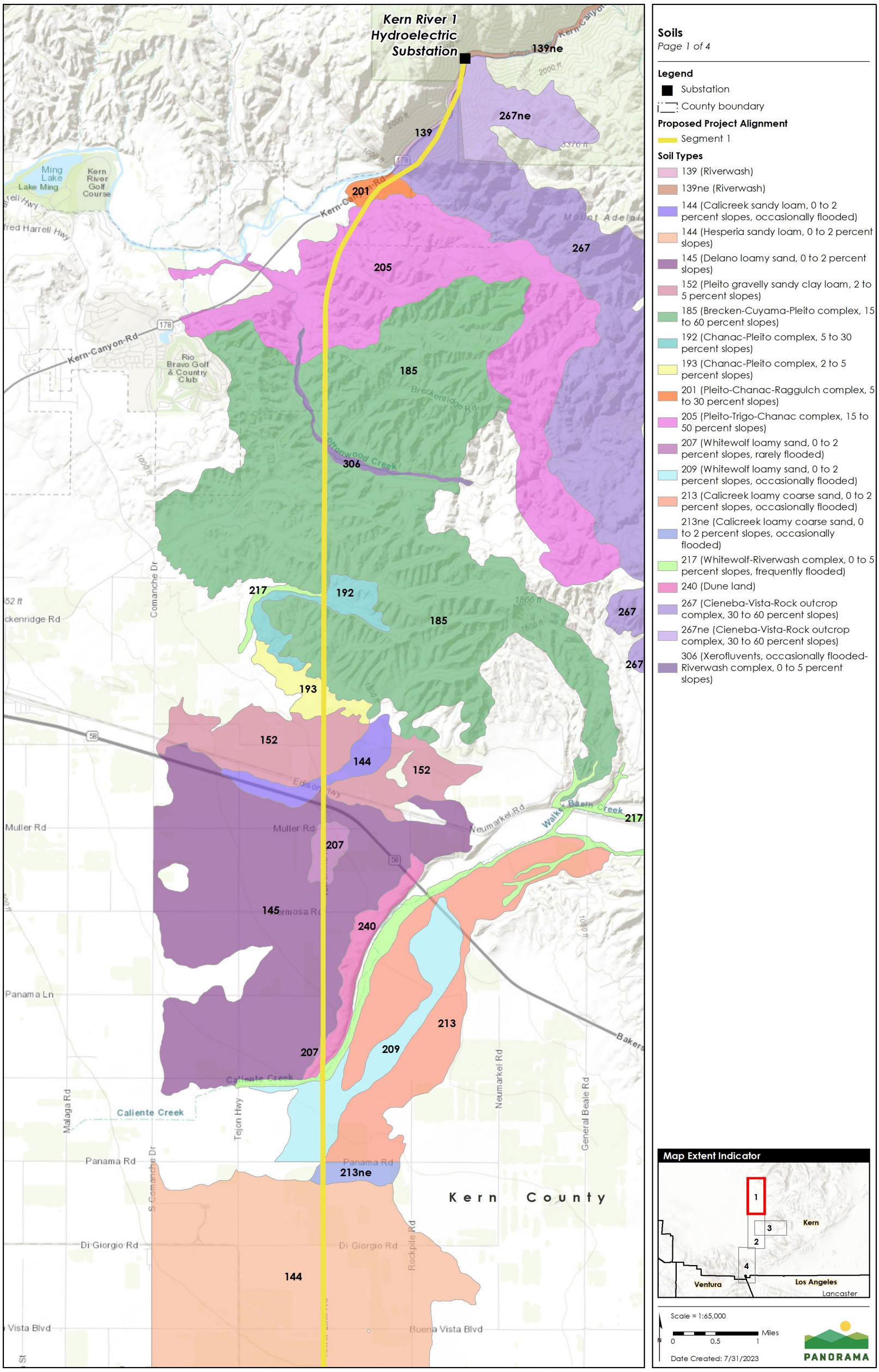
This page is intentionally left blank.

Figure 3.7-1 Mapped Geologic Units in the Proposed Project Area



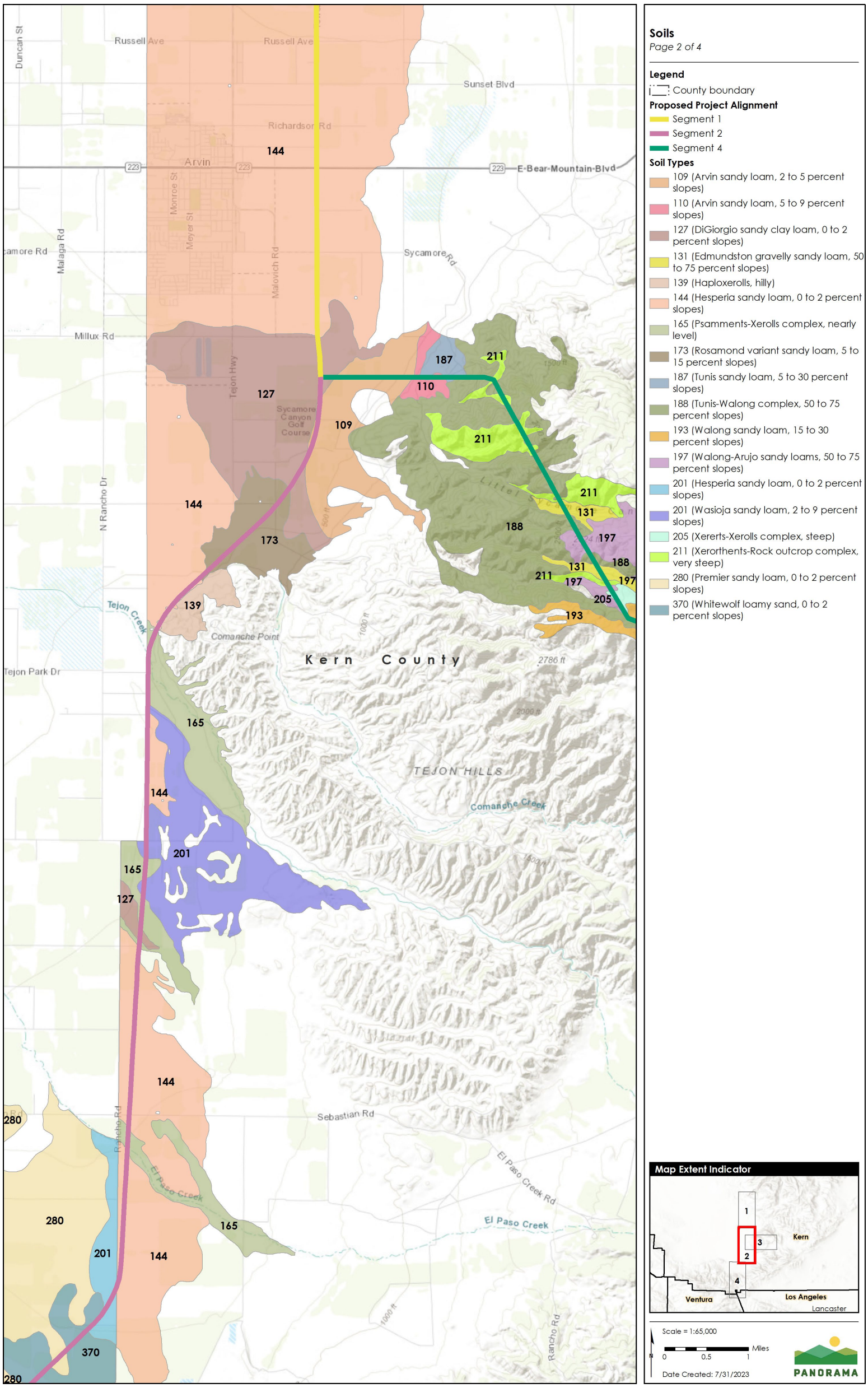
Source: (U.S. Geological Survey, California Geological Survey, 2000)

Figure 3.7-2 Soil Units in the Proposed Project Area (Map 1 of 4)



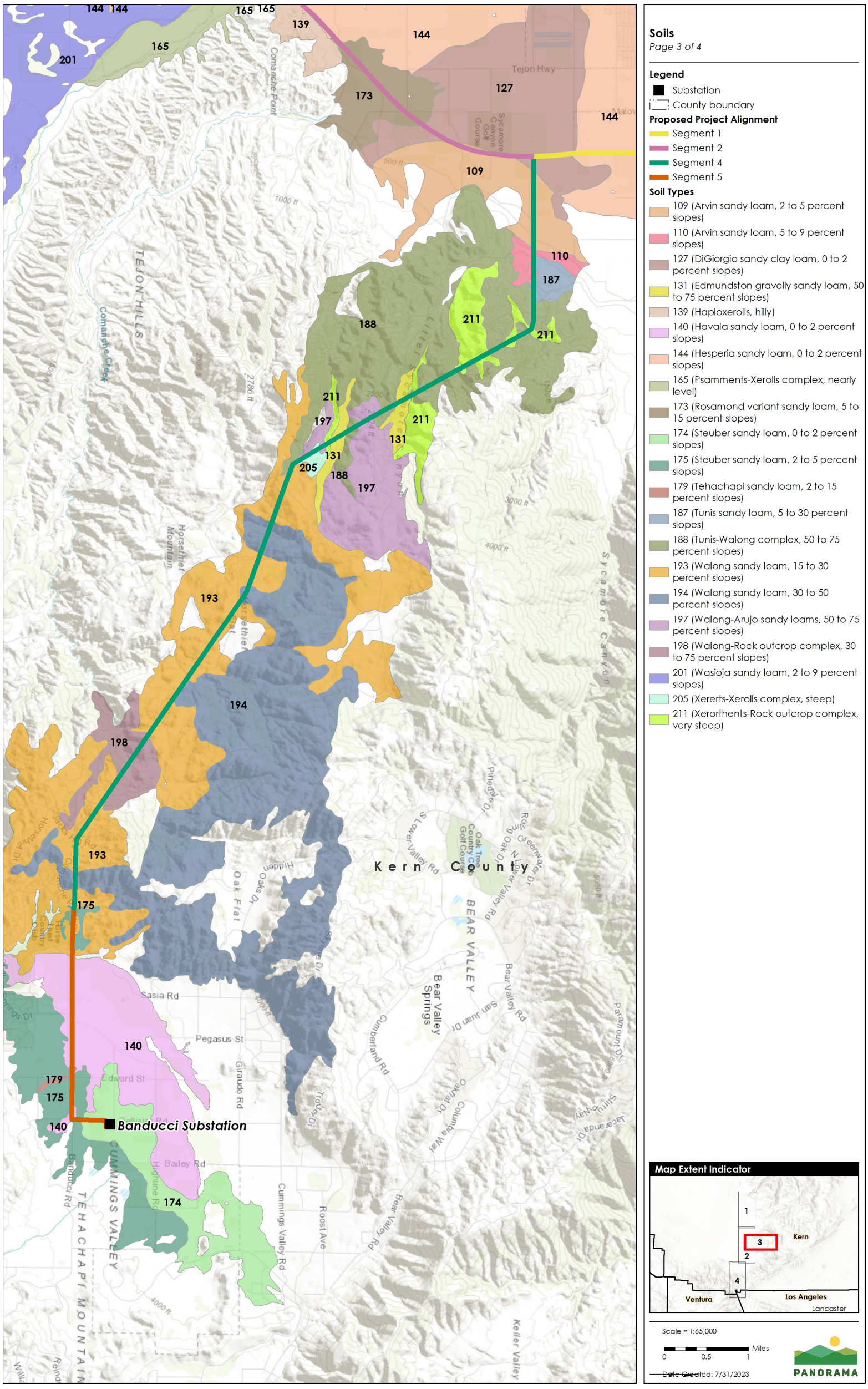
Source: (U.S. Department of Agriculture National Resources Conservation Service, 2013-2015)

Figure 3.7-3 Soil Units in the Proposed Project Area (Map 2 of 4)



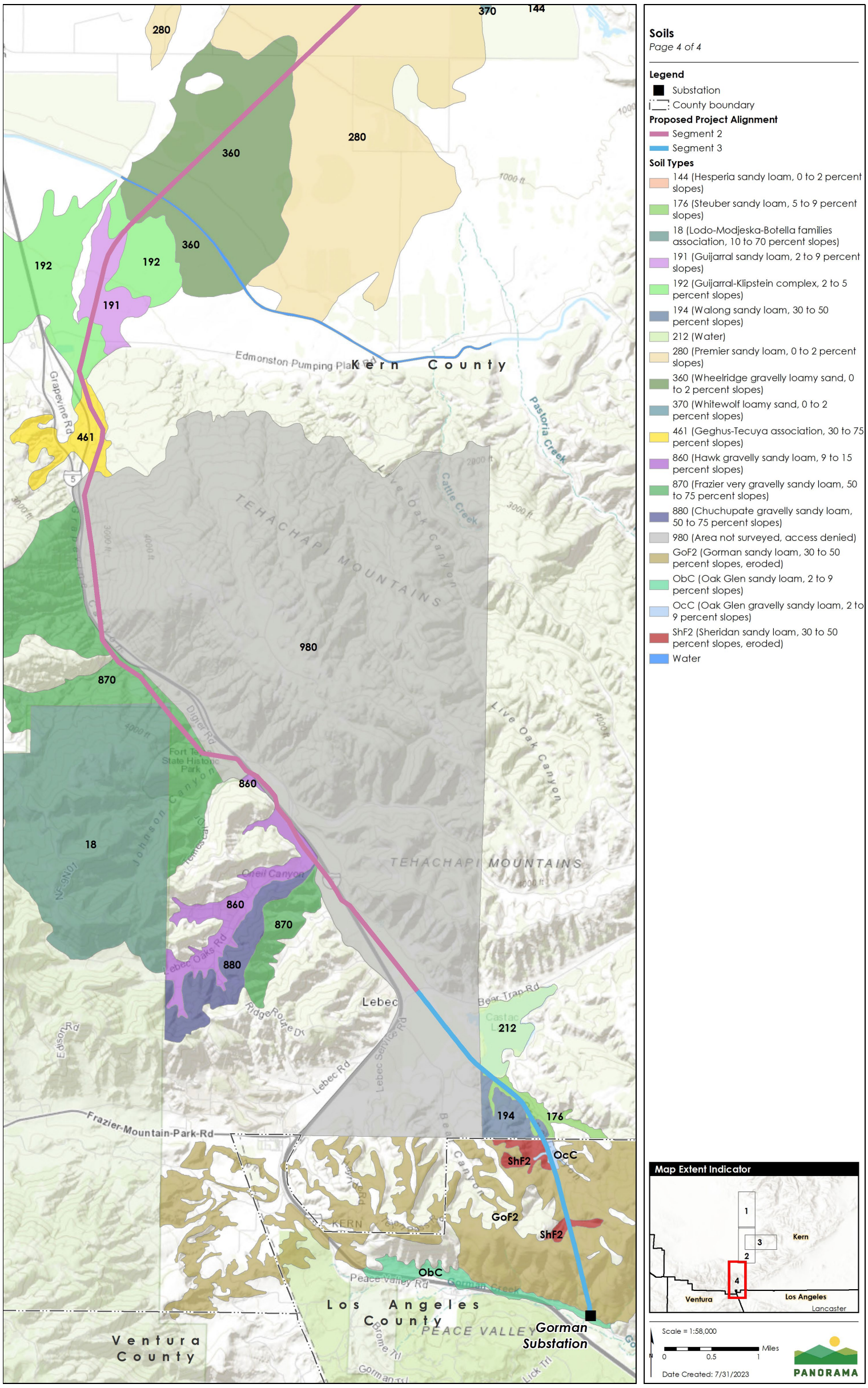
Source : (U.S. Department of Agriculture National Resources Conservation Service, 2013-2015)

Figure 3.7-4 Soil Units in the Proposed Project Area (Map 3 of 4)



Source: (U.S. Department of Agriculture National Resources Conservation Service, 2013-2015)

Figure 3.7-5 Soil Units in the Proposed Project Area (Map 4 of 4)



Source: (U.S. Department of Agriculture National Resources Conservation Service, 2013-2015)

This page is intentionally left blank.

Expansive and Collapsible Soils

Expansive soils contain large amounts of clays that expand when wetted and cause damage to foundations if moisture collects beneath structures (e.g., settlement, structure heave, or slab-on-grade foundation shifting). Wetting can occur as a result of precipitation, a rise in the water table, irrigation water application, water line leakage, and other factors. Damage from expansive soils also occurs when the soils dry out and contract. Linear extensibility percent is the linear expression of the volume difference of natural soil between wet and dry conditions (NRCS n.d., tit. National soil survey handbook, title 430-VI). The linear extensibility percent of a soil is used to identify shrink-swell classes as follows: low (<3), moderate (3-6), high (6-9), and very high (>9). Approximately 0.5 percent of the soils along the Proposed Project alignment were classified as high, and 15.2 percent were classified as moderate. The rest are low to very low, and none were classified as very high (NRCS Staff n.d., tit. Web Soil Survey).

Soil collapse occurs when increased moisture weakens chemical or physical bonds between soil particles, which allows the soil structure to collapse and the ground surface to subside. Collapsible soils occur as relatively dry alluvial fan, colluvium, and wind-blown deposits or as generally low-density, fine-grained combinations of clay and sand left by mudflows that have dried, resulting in the formation of small air pockets in the subsurface. These soils typically consist of silt and sand, with minor amounts of clay. When moisture is added the soils weaken, resulting in collapse or subsidence. No records of soil collapse were identified near the Proposed Project alignment (Arcadis 2022). During the geotechnical investigation, shallow clayey soils that were encountered were found to have low plasticity and liquid limits (Arcadis 2022).

Erosion

Erosion is the process by which rocks, soil, and other land materials are abraded or worn away from the Earth's surface over time by physical forces such as rainfall, flowing water, wind, or anthropogenic agents. The erosion rate depends on factors such as geologic parent material, soil type, slope, soil placement, vegetation, and human activity. Erosion potential generally is higher in areas with steep slopes and on granular soils. Erosion potential also increases when vegetation is removed and soils are exposed. The soil erodibility factor (known as the K factor) is used to indicate the susceptibility of soils to sheet and rill erosion by water and the rate of runoff. K factor values range from 0.02 (least erodible soils) to 0.69 (most erodible soils). Other factors being equal, the higher the value, the more susceptible the soil is to sheet and rill erosion by water (NRCS, 2023). The NRCS assigns two separate K factors to soil map units: factor Kw considers the whole soil while factor Kf considers only the fine-earth material, which are soil particles less than 2.0 millimeter in diameter. The K factor does not apply to organic horizons. The soils along the Proposed Project alignment typically have low to moderate K-factor ratings (0.4 or lower). As shown in Table 3.7-2 and Figure 3.7-4, the only area with a higher erodibility rating is in Segment 4 through the Tejon Hills. The affected area (which has a K-factor rating of 0.43) represents approximately 3 percent of the Proposed Project alignment (NRCS Staff n.d., tit. Web Soil Survey). Wind erosion is most prevalent in silty and fine sandy soils with disturbed vegetation. High winds can create hazardous dust storms in Kern County. Dust storms are also

a health hazard to residents that are forced to breathe particulates in the air. Dust storms in Kern County are most likely to occur in valley and desert areas (Kern County Fire Department Office of Emergency Services 2021). *Wind erodibility groups* (WEGs) are made up of soils that have similar properties affecting their susceptibility to wind erosion. WEG values are assigned to soil map units by NRCS and range from a value of 1 to 8: high wind erosion susceptibility (WEG 1 or 2), moderate wind erosion susceptibility (WEG 3, 4, or 4L), low wind erosion susceptibility (WEG 5, 6, or 7), and no susceptibility to wind erosion (WEG 8) (NRCS Staff n.d., tit. Web Soil Survey). As shown in Table 3.7-2, the majority of the WEGs for soils within the Proposed Project area range between 3 and 6, which represents low to moderate susceptibility to wind erosion. Ten soil units (approximately 14.3 percent of the Proposed Project area) have a WEG of 1 or 2, which is high susceptibility (NRCS Staff n.d., tit. Web Soil Survey).

Subsidence

Subsidence is the deep-seated settlement of soils due to mining, dissolution of subsurface carbonate rocks, or fluid withdrawal (oil, natural gas, or groundwater). Subsidence also can be caused by consolidation, hydrocompaction, oxidation or dewatering of organic-rich soils, and, more rarely, tectonic down-warping during earthquakes. Land subsidence associated with groundwater overdraft is a concern in many valley areas in California.

Subsidence has been recognized as a significant issue in the San Joaquin Valley Groundwater Basin, which is the largest groundwater basin within the Proposed Project alignment. The principal cause of subsidence is excessive groundwater extraction. The southern portion of Segment 1, the northern portion of Segment 2, and the western portion of Segment 4 are located in the San Joaquin Valley–Kern County Subbasin, to the south of Bakersfield. While subsidence has historically occurred in the Kern County Subbasin area, it is less significant than in other parts of the San Joaquin Valley. In the most affected part of the Proposed Project area, near the southern portion of Section 1, subsidence was measured at a continuous GPS station near Arvin to be approximately 2 feet between 2001 and 2023, with a 10-year vertical displacement rate of 0.13 feet per year (California Natural Resources Agency 2022).

Landslides

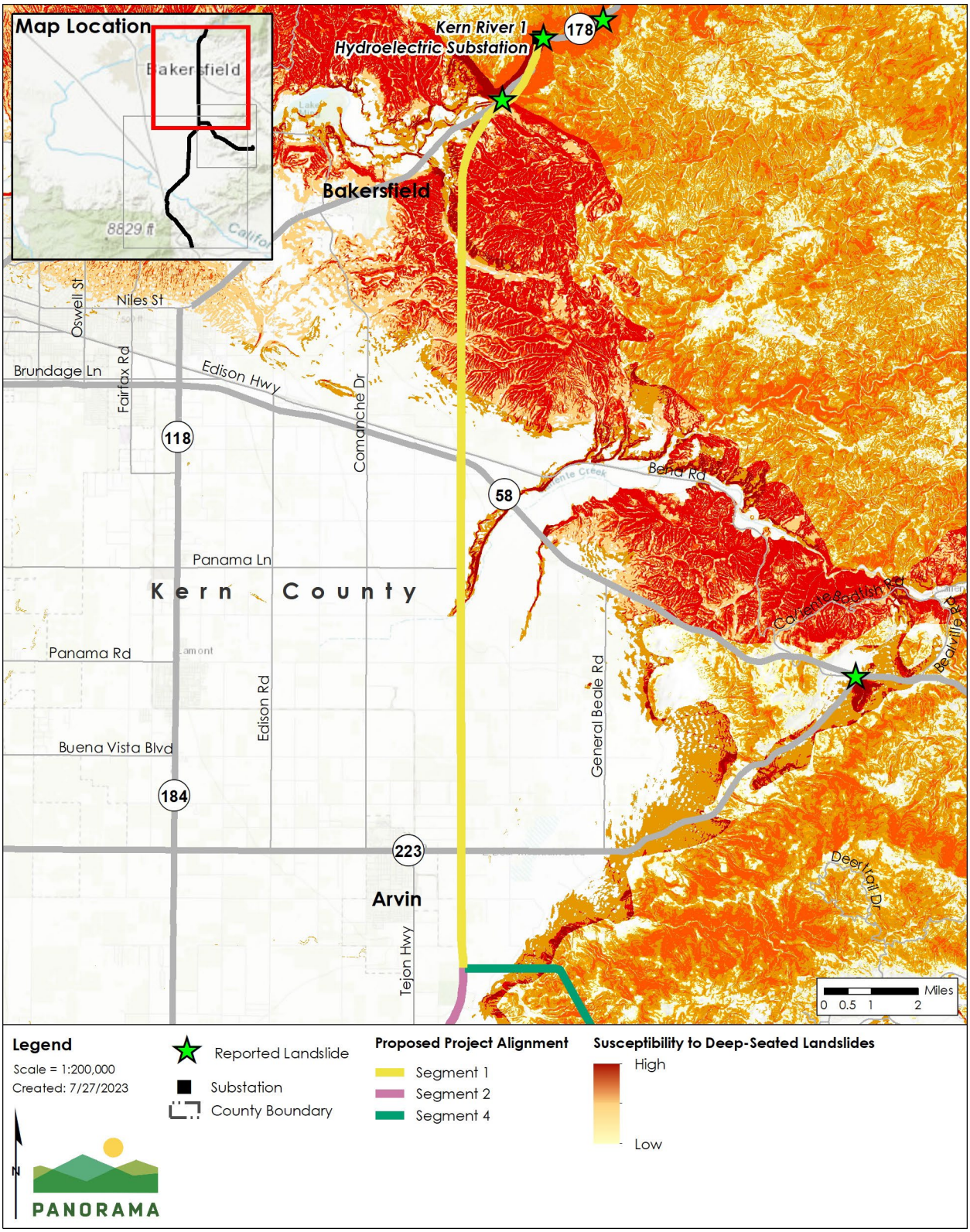
A landslide is the slipping down or flowing of a mass of land (rock, soil, and debris) from a mountain or hill. Landslide potential is high in steeply sloped areas underlain by alluvial soils, highly weathered material, thinly bedded shale, or bedrock where the bedding planes are oriented in an out-of-slope direction (i.e., bedding plane angles that are greater than horizontal but less than the slope face) or with fracture planes. Landslides can be caused by human activities (slope over-steepening or overloading) and natural events (e.g., earthquakes, rainfall, and erosion).

Much of the Proposed Project area is in relatively flat valley areas with low potential for landslides. Some local areas where the Proposed Project alignment runs on or near steeper slopes may be susceptible to landslides or rockfall. Areas that may be susceptible to landslide or rockfall are based on the California Geological Survey (CGS) landslide susceptibility maps (CDOC 2021), on observations collected during the field work, and on historical records of

landslides or rockfall events presented in the Desktop Geologic Hazard Study (Arcadis 2022). Localized areas of relatively steep slopes and increased landslide hazards occur where the Proposed Project alignment is within hills and mountains, such as the Kern River Canyon area and the adjacent foothills (Segment 1), Grapevine Canyon (Segment 2), the Tehachapi Mountains (Segments 2 and 3), and the Tejon Hills (Segment 4). There are historical records of significant rockfalls and landslides in three parts of the Proposed Project alignment, including Kern River Canyon (Segment 1), Grapevine Canyon (Segment 2), and the Gorman Substation area (Segment 3). Maps of the landslide-susceptible areas are presented in Figure 3.7-6 through Figure 3.7-8.

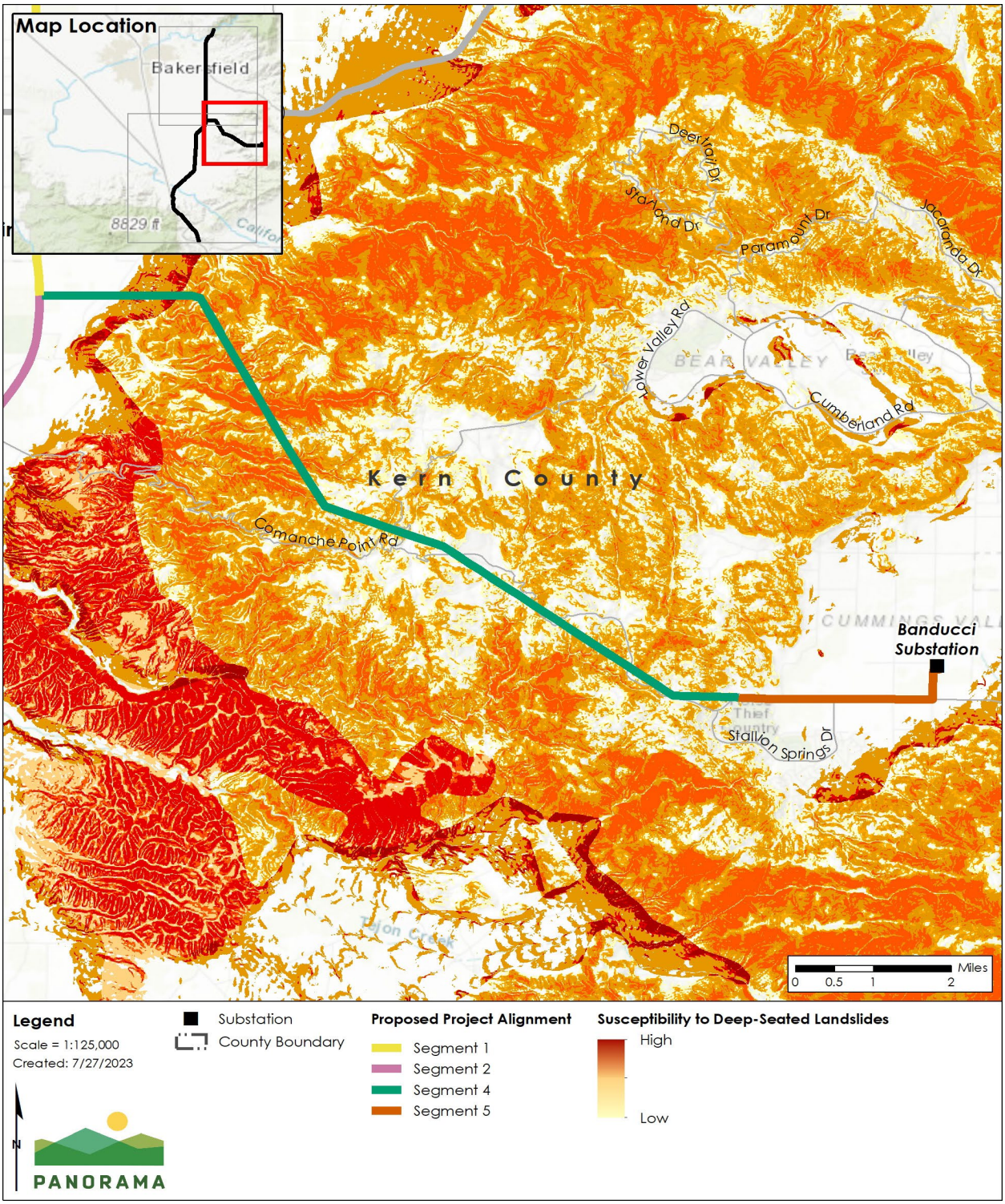
There is a large area of mapped landslide deposits in the Proposed Project area in Grapevine Canyon (Arcadis 2022). Based on the topographic and geologic settings and the thickness of unconsolidated material, these landslide deposits were likely formed as the result of an ancient deep-seated landslide. SCE has operated power structures in this area since this line was installed in the early twentieth century, which indicates the landslide is not actively moving.

Figure 3.7-6 Landslide Susceptibility (Map 1 of 3)



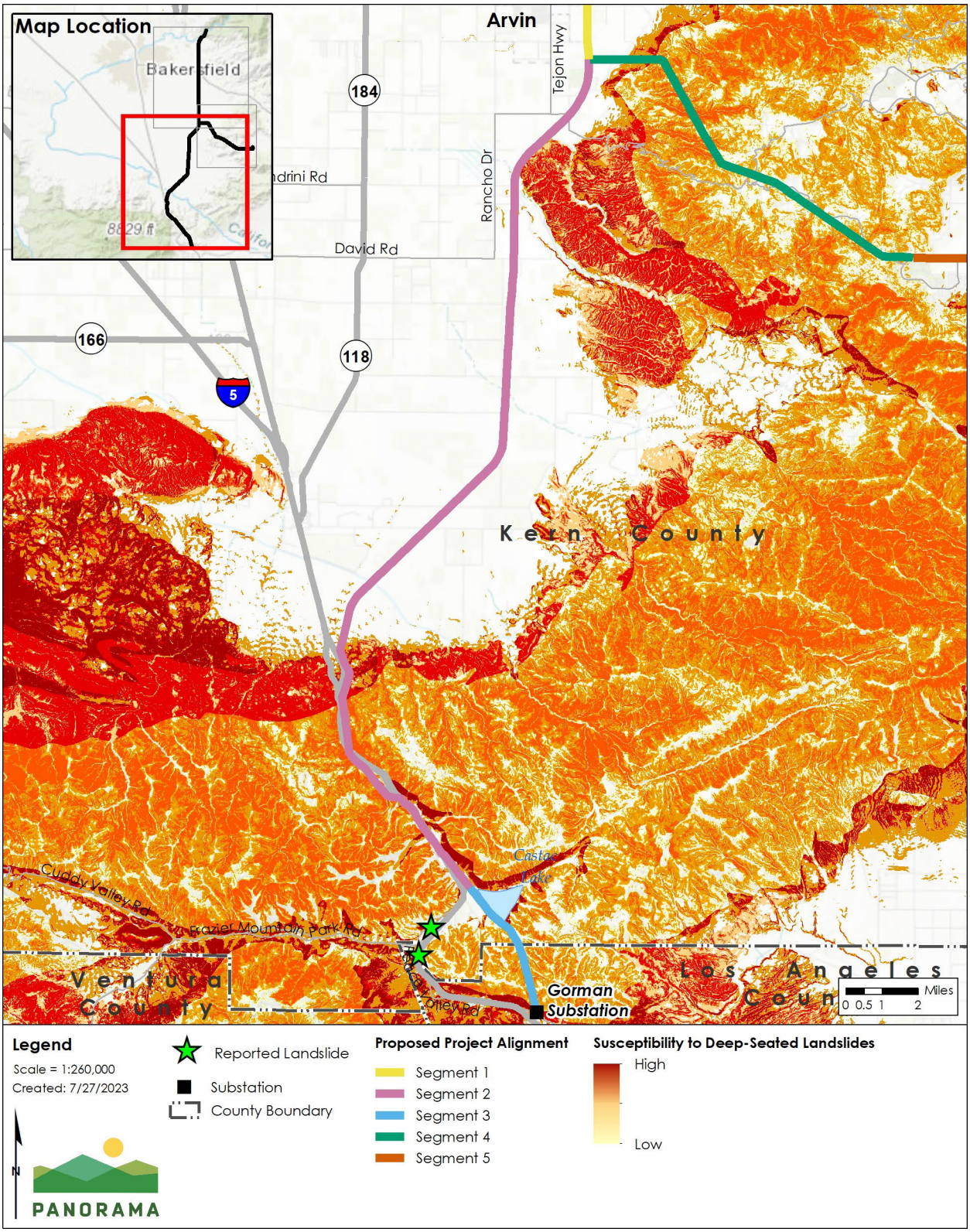
Source: (California Department of Conservation (CDOC) 2021b)

Figure 3.7-7 Landslide Susceptibility (Map 2 of 3)



Source: (California Department of Conservation (CDOC) 2021b)

Figure 3.7-8 Landslide Susceptibility (Map 3 of 3)



Source: (California Department of Conservation (CDOC) 2021b)

Faults and Seismicity

Faults

Faults are fractures or lines of weakness in the Earth's crust. Sudden movement along a fault generates an earthquake. The Alquist-Priolo Earthquake Fault Zoning Act (A-P Act) designates Earthquake Fault Zones based on the presence of an active fault. The CGS has developed criteria to classify fault activity for the A-P Act. By definition, an active fault is one "sufficiently active and well-defined," with evidence of surface displacement within Holocene time, roughly the last 11,000 years (California Geological Survey [1999] 2007). A potentially active fault displaces Quaternary deposits (last 1.6 million years). Potentially active faults also represent possible surface rupture hazards although to a lesser degree. In contrast to active or potentially active faults, faults considered inactive have not moved in the last 1.6 million years. New construction for human occupancy within active fault zones is prohibited unless a comprehensive geologic study shows that the fault does not pose a hazard to the proposed structure. Power transmission support structures are not intended for human occupancy; therefore, they do not fall within the Alquist-Priolo Special Studies Zones requirements. However, the active fault zones represent the best available information for the potential for fault surface ruptures along the Proposed Project alignment.

The Proposed Project area is located in a seismically active region that is traversed by several major active faults. These faults are shown in Figure 3.7-9 through Figure 3.7-11 and summarized in Table 3.7-3. Older Quaternary faults also occur near the Proposed Project alignment, but they are not classified as active in the Proposed Project vicinity. Segments located within Alquist-Priolo active fault zones are listed in Table 3.7-3, and portions of the Proposed Project alignment that cross these faults are shown in Figure 3.7-9 through Figure 3.7-11.

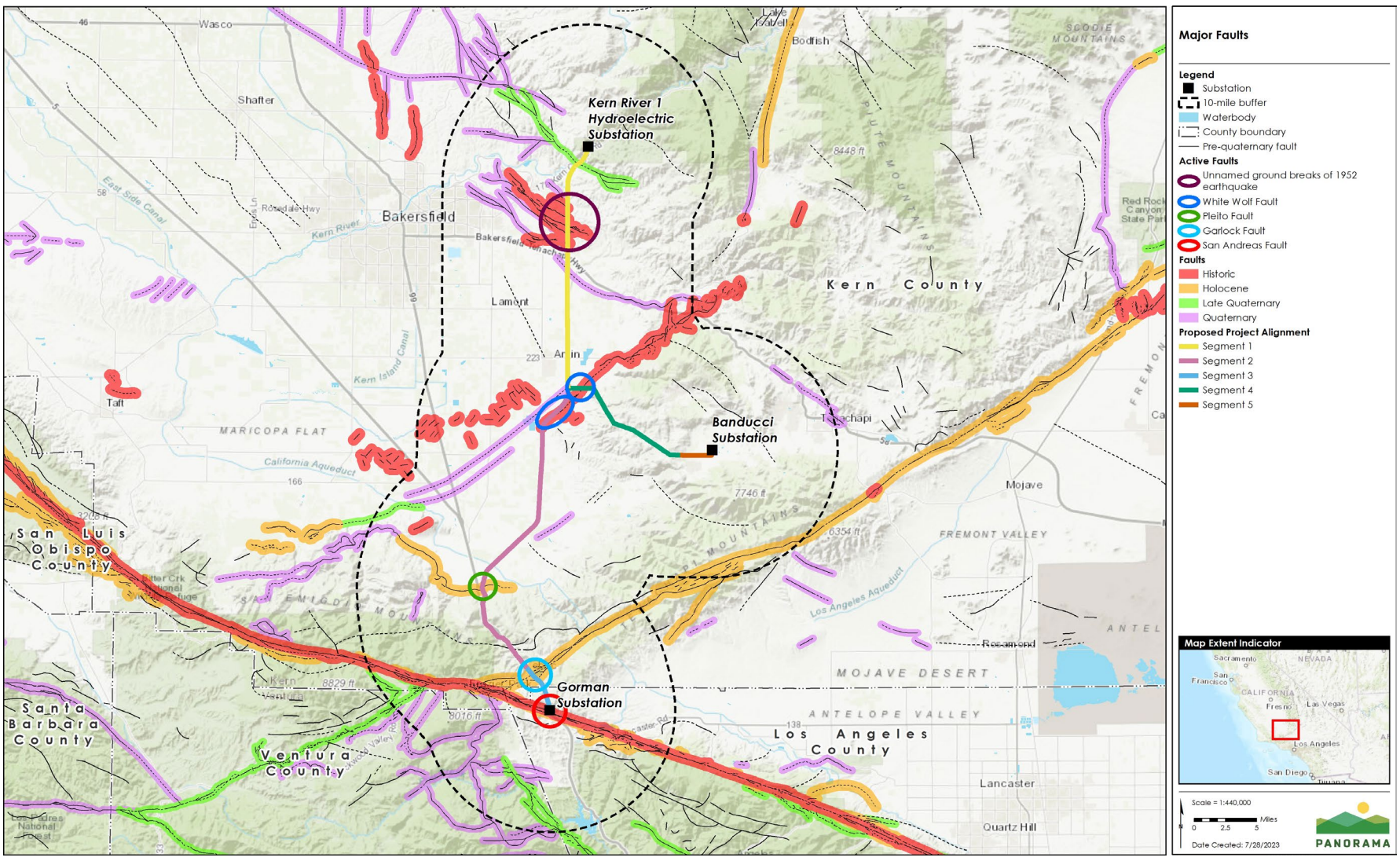
Table 3.7-3 Major Active Faults in the Proposed Project Region

Project segment	USGS fault name (USGS section name) [Non-USGS identifying data]	Fault activity	Fault type	Fault length (section length) (miles)	Slip rate (mm/yr)	Maximum moment magnitude	Number of structures in active fault zone
1	Unnamed ground breaks of 1952 earthquake	historically active (1952)	unspecified	unspecified	unspecified	unspecified	12
2, 4	White Wolf fault zone	historically active (1952)	reverse	39	1.0 to 5.0	7.0 – 7.2	15

Project segment	USGS fault name (USGS section name) [Non-USGS identifying data]	Fault activity	Fault type	Fault length (section length) (miles)	Slip rate (mm/yr)	Maximum moment magnitude	Number of structures in active fault zone
2	Wheeler Ridge fault zone	active (<15,000 years BP)	reverse	unspecified	unspecified	unspecified	0 (five miles from Proposed Project alignment)
2	Pleito fault zone (Eastern Pleito section)	active (<15,000 years BP)	reverse	38 (16)	1.0–5.0	7.0–7.1	2
3	Garlock fault zone (Western Garlock section)	active (<15,000 years BP)	left-lateral	160 (68)	>5.0	7.3	14
3	San Andreas fault zone (Cholame-Carrizo section)	historically active (1857; 1916)	right-lateral	672 (125)	>5.0	7.4	3

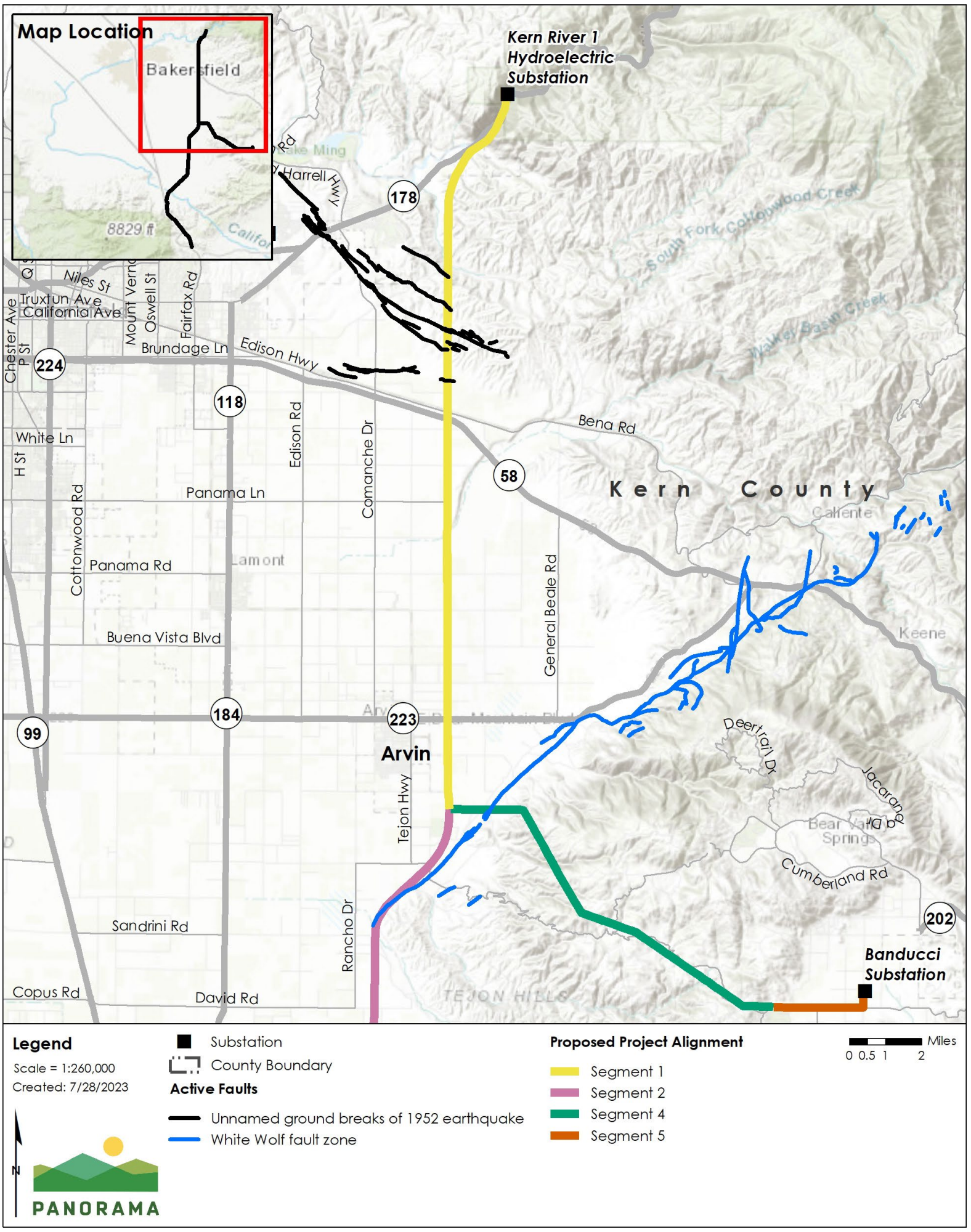
Source: (California Geological Survey 2012)

Figure 3.7-9 Major Earthquake Faults in the Proposed Project Region



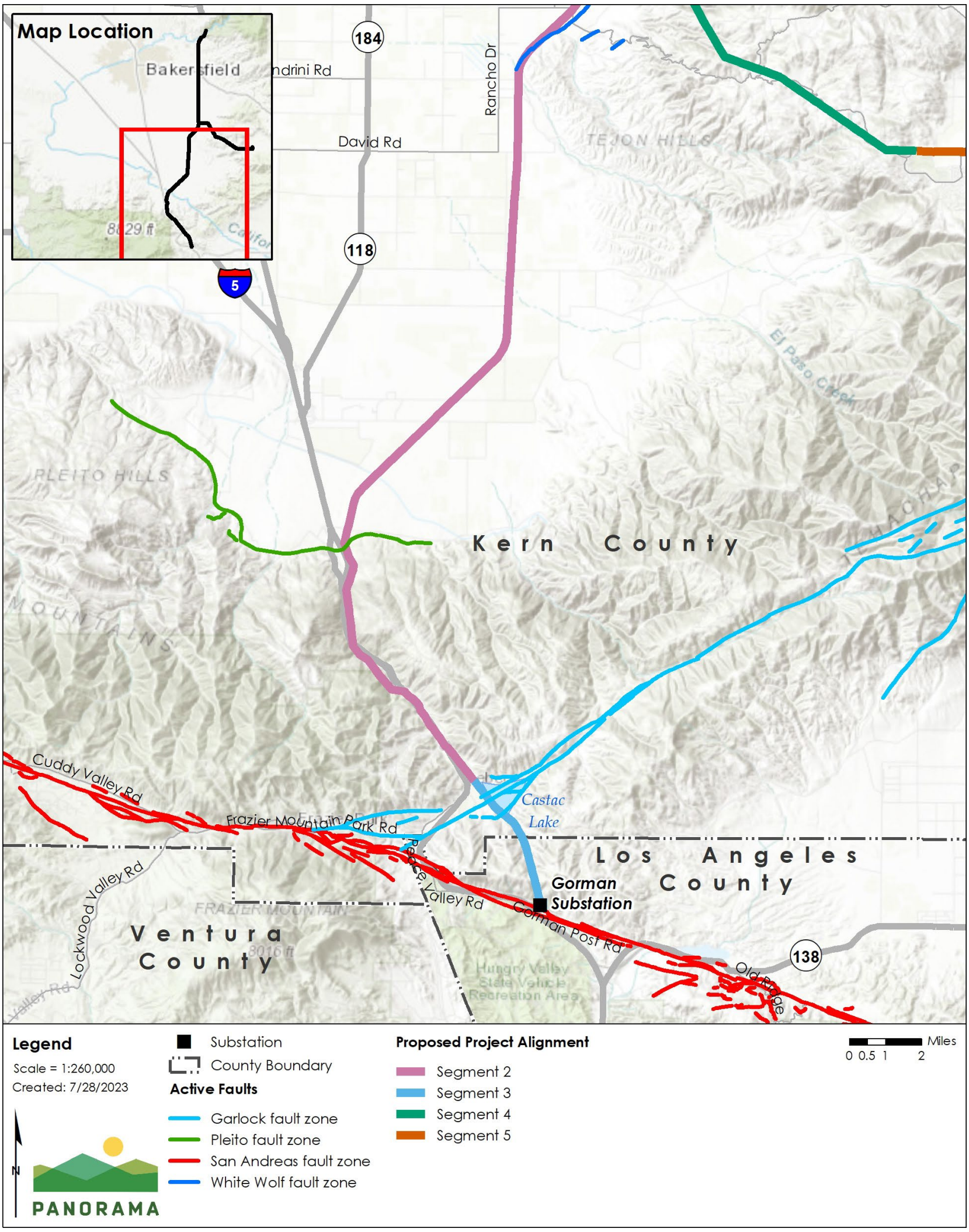
Source: (California Geological Survey 2012)

Figure 3.7-10 Major Earthquake Faults in the Proposed Project Area (Map 1 of 2)



Source: (California Geological Survey 2012)

Figure 3.7-11 Major Earthquake Faults in the Proposed Project Area (Map 2 of 2)



Source: (California Geological Survey 2012)

Fault Rupture

Surface fault rupture occurs when fault movement causes displacement of surface deposits. The displacement may result from a large-magnitude earthquake or from "creep" (measurable surface displacement in the absence of an earthquake) along a fault without an associated earthquake. There is a risk of surface fault rupture associated with the active faults found along the Proposed Project alignment, as shown in Figure 3.7-9 through Figure 3.7-11 and summarized in Table 3.7-3. There may also be a risk of surface fault rupture in other areas, outside of active fault zones, where active faults have either not been identified or are incompletely studied.

Ground Motion

Ground shaking is the seismic effect that results in most structural damage. The Proposed Project area is located in Seismic Zone 4, as defined by the most recent Uniform Building Code. Seismic Zone 4 areas include those closest to active faults that are expected to experience ground motion during an earthquake of at least 0.40 g (g is the acceleration due to gravity). The faults and fault systems in the Proposed Project region have the potential to produce high-magnitude earthquakes, including within the Proposed Project area and vicinity. Earthquake magnitude, distance from the earthquake epicenter, and the geologic materials underlying and surrounding the area determine the intensity of ground motion (seismic shaking) during a seismic event.

The lowest estimated ground motion values along the Proposed Project alignment occur in the Kern River Canyon area in the northern part of Segment 1. Most of the Kern River Canyon area is characterized by consolidated bedrock and is relatively distant from Holocene faults. The highest estimated ground motion values along the Proposed Project alignment are in valley areas along Segment 3 that are characterized by unconsolidated sediments and is located in close proximity to the Garlock and San Andreas fault zones.

Liquefaction

Liquefaction is a seismic phenomenon in which water-saturated, cohesionless sediments (such as sand and silt) temporarily lose strength and liquefy during a seismic event. Liquefaction occurs when saturated sediments are subjected to dynamic forces, such as intense and prolonged ground-shaking during an earthquake. Liquefaction is affected by soil type, soil density and grain size, confining pressure, depth to groundwater, and intensity and duration of ground-shaking. Liquefaction can result in loss of bearing capacity below foundations, settlement, ground tilting, and instability on sloped areas. Liquefaction is most common in areas with shallow groundwater (i.e., less than 50 feet below ground surface [bgs]) dominated by granular, unconsolidated materials.

Liquefaction susceptibility zones in Kern County were mapped at low resolution by the USGS (Jones et al. 2008). In general, the mountainous areas in Kern County were considered to have low or no susceptibility to liquefaction while the valley areas were

considered to have low to moderate susceptibility. Areas with high risk of liquefaction along the Proposed Project alignment include the following:

- **Kern River Canyon:** Shallow groundwater is likely to occur in alluvial sediments at the base of the canyon near the Kern River. Segment 1 runs close to the river in two areas: at the existing Kern River 1 Hydroelectric substation and near the mouth of Kern Canyon. Potential liquefaction risks may exist in these areas; however, geologic surveys have found that the existing Kern River 1 Hydroelectric substation was constructed on granitic bedrock (Wilkerson 2017).
- **Cummings Valley.** Cummings valley is "subject to high risk of liquefaction" (Kern County Fire Department Office of Emergency Services 2021). The mapped areas of liquefaction risk include most of Segment 5. The western part of Segment 5 in the Tejon Hills is outside the mapped area of liquefaction risk.
- **Castac Valley.** Little relevant information is available, but there is evidence of shallow groundwater near Castac Lake (EKI Environment & Water, Inc. 2019), which is close to Segment 3.

In addition to the areas listed above, localized liquefaction risks could be higher near creek crossings, such as the Caliente Creek crossing in Segment 1 and the Tejon Creek crossing in Segment 2.

Lateral Spreading

Lateral spreading is a phenomenon that involves lateral displacement of large, intact blocks of soil down gentle slopes or toward a steep, free face such as a stream bank. Lateral spreading can occur in fine-grained, sensitive soils such as quick clays, particularly if remolded or disturbed by construction and grading. Loose, granular soils present on gentle slopes and underlain by a shallow water table commonly produce lateral spreads through liquefaction. Lateral spreading occurs as a result of liquefaction of a shallow underlying deposit during an earthquake. It typically occurs on slopes of 0.3 to 5 percent underlain by loose sands and a shallow water table. There is potential for lateral spreading in areas that are prone to liquefaction.

Paleontological Resources

Definitions

Paleontological resources—or *fossils*—are the remains of ancient plants and animals that can provide scientifically significant information about the history of life on earth. Paleontological "sensitivity" is defined as the potential for a geologic unit to produce scientifically significant fossils. Paleontological sensitivity is determined by rock type, past history of the rock unit in producing significant fossils, and fossil localities that are recorded from that unit. Paleontological sensitivity is assigned based on fossil data

collected from the entire geologic unit, not just at a specific site. Paleontological sensitivity ratings are described below:

- *High Sensitivity*: Indicates fossils are currently observed onsite, localities are recorded within the study area, and/or the unit has a history of producing numerous significant fossil remains.
- *Moderate Sensitivity*: Fossils within the unit are generally not unique or are so poorly preserved as to have only moderate scientific significance.
- *Low Sensitivity*: Indicates significant fossils are not likely to be found because of a random fossil distribution pattern, extreme youth of the rock unit and/or the method of rock formation, such as alteration by heat and pressure.
- *No Sensitivity*: Origin of the geologic unit renders it not conducive to the existence of organisms and/or preservation of fossils, such as high-grade metamorphic rocks, intrusive igneous rocks, and most volcanic rocks.
- *Indeterminate Sensitivity*: Unknown or undetermined sensitivity indicates that the rock unit has not been sufficiently studied or lacks good exposures to warrant a definitive rating. An experienced, professional paleontologist can often determine whether the stratigraphic unit should be categorized as having high or low sensitivity after reconnaissance surveys including observations of road cuts, stream banks, and possible subsurface testing, such as augering or trenching.

Fossils are considered to be non-renewable because they are the remains of prehistoric animal and plant life. Impacts to paleontological resources are identified from high to zero depending on the resource sensitivity of impacted formations.

Paleontological Resource Investigation

A paleontological resource investigation was conducted for the Proposed Project area (Paleo Solutions, Inc. 2021). The paleontological investigation methods and results are summarized below.

Literature Review and Records Search

The paleontological potential of the Proposed Project area was evaluated based on an analysis of existing paleontological data and field surveys (Paleo Solutions, Inc. 2021). The three analysis components of the existing data included a geologic map review, literature search, and institutional records searches at the Natural History Museum of Los Angeles County (LACM) and the University of California Museum of Paleontology (UCMP) in Berkeley, California.

Pedestrian Survey

A paleontological resource pedestrian survey was performed for the Proposed Project area on May 2, 3, and 4, 2017 and September 1, 2017. The paleontological survey was performed in order to determine the paleontological potential of the geologic deposits underlying the Proposed Project area. The survey was conducted after a review of aerial

photographs indicated the Proposed Project area included areas of undisturbed native sediment. The pedestrian survey included inspection of the Proposed Project area, with the majority of the focus occurring in areas with native sediment exposures. This included close inspection of sediment and bedrock outcrops. Rock exposures as well as the surrounding areas were photographed and documented. Reference points were acquired using a Trimble GPS unit. Sediment and bedrock lithologies were recorded and analyzed and used to better interpret the Proposed Project's paleontological potential and, thus, better understand the Proposed Project's potential impact.

Records Search and Literature Review Results

According to the records search and the literature search (Paleo Solutions, Inc. 2021), there are no previously recorded paleontological resource localities within the Proposed Project area. However, LACM reported localities in the Proposed Project vicinity, including thirteen vertebrate localities (Paleo Solutions, Inc. 2021). The reviews also identified numerous vertebrate fossils recovered from sedimentary units that are not mapped within the Proposed Project area but are within the Proposed Project vicinity. Although the geologic formations are not mapped within the Proposed Project area, they may underlie younger deposits within the Proposed Project area and, therefore, may be impacted at depth.

Pedestrian Survey Results

No significant paleontological resources were discovered during the field survey. Moderately to well preserved fossilized invertebrate shell molds and casts were observed during field surveys; however, these fossils lack identifiable features and are considered non-significant (Paleo Solutions, Inc. 2021). The pedestrian survey performed along the Proposed Project alignment confirmed the presence of very high potential for areas to contain paleontological resources. Landslide deposits were not observed during the field survey; however, the sedimentary and igneous units of which they are comprised were observed. Furthermore, if it is determined that the stratigraphy within the landslide deposits is intact and not jumbled, any fossils discovered would still have stratigraphic context and would thus be scientifically viable. Below is a description of the geological units mapped within the Proposed Project area and the associated paleontological sensitivity.

Project Area Geologic Units and Associated Paleontological Sensitivity

Geologic mapping indicates that the Proposed Project is underlain by Paleozoic and Mesozoic igneous and metamorphic rocks; Miocene Neenach Volcanic Formation; and sedimentary deposits of the Eocene Tejon Formation; Eocene to Miocene Walker Formation; Miocene Round Mountain Silt, Bena Gravel, Miocene Santa Margarita Formation; Miocene to Pleistocene Kern River Formation; Pleistocene older deposits; and Holocene younger deposits. Additionally, several sedimentary units are mapped within the Proposed Project vicinity but not within the Proposed Project area, including Eocene to Miocene Tecuya Formation, Miocene Olcese Formation, Miocene to Pliocene Chanac Formation, and Pliocene Hungry Valley Formation (Paleo Solutions, Inc. 2021).

Although these geologic formations are not mapped within the Proposed Project area, they may underlie younger deposits within the Proposed Project area and, therefore, may be impacted at depth. The geologic descriptions below are presented from oldest to most recent in age (Paleo Solutions, Inc. 2021).

Identifying the geologic units and associated fossil productivity allows for prediction of where fossils could or could not be encountered within the project study area. The paleontological sensitivity of geologic units that underlay the Proposed Project area is shown in Table 3.7-4.

Table 3.7-4 Paleontological Sensitivity of Geologic Units in Proposed Project Area

Project segment	Geologic unit	Age	Paleontological sensitivity (PFYC) [1]
1, 2, 3, 4, and 5	Igneous and Metamorphic Rocks	Paleozoic and Mesozoic	1 (very low)
2	Tejon Formation	Eocene	4 (high)
1	Walker Formation	Eocene to Miocene	U (unknown)
2	Tecuya Formation	Eocene to Miocene	4 (high)
3	Neenach Volcanic Formation	Miocene	1 (very low)
1	Olcese Formation	Miocene	4 (high)
1	Round Mountain Silt (Temblor Formation)	Miocene	5 (very high)

[1] The Potential Fossil Yield Classification (PFYC) system was developed by the Bureau of Land Management (BLM 2016). Because of its demonstrated usefulness as a resource management tool, the PFYC has been utilized for many years for projects across the county, regardless of land ownership. It is a predictive resource management tool that classifies geologic units on their likelihood to contain paleontological resource on a scale of 1 (very low potential) to 5 (very high potential). This system is intended to aid in predicting, assessing, and mitigating impacts to paleontological resources.

.

Project segment	Geologic unit	Age	Paleontological sensitivity (PFYC) [1]
1 and 2	Bena Gravel	Miocene	4 (high)
2	Santa Margarita Formation	Miocene	4 (high)
2	Chanac Formation	Late Miocene to Early Pliocene	4 (high)
3	Hungry Valley Formation	Pliocene	3 (moderate)
1	Kern River Gravel	Miocene to Pleistocene	5 (very high)
1, 2, 3 and 5	Pleistocene Older Deposits		U (unknown) and 3 (moderate)
1, 2, 3, 4, and 5	Holocene Younger Deposit		U (unknown) and 2 (low)

Source: (Paleo Solutions, Inc. 2021)

Igneous and Metamorphic Rocks – Paleozoic and Mesozoic

The Proposed Project area is underlain by eight igneous and metamorphic rock units, all of which have very low potential to produce scientifically important paleontological resources.

Tejon Formation – Eocene

The Tejon Formation is generally composed of conglomerate, sandstone, and shale. The provenance areas of the Tejon Formation include the underlying basement rocks of the San Emigdio and Tehachapi Mountains to the south and, possibly, basement rocks of both the Mojave Desert province to the southeast and the southern Sierra Nevada province to the east. The Tejon Formation is thickest in the central part of the outcrop belt, thinning to both the east and west.

Numerous marine invertebrate fossils have been observed in the Tejon Formation including gastropods, pelecypods, scaphopods, foraminifera, annelids, and coral. The richly fossiliferous Eocene beds of the Tejon Formation between Live Oak Canyon and San Emigdio Creek have provided material for study by many investigators. Due to the

abundance, diversity, and excellent preservation of scientifically significant invertebrates, the Tejon Formation is considered to have high paleontological potential.

Walker Formation – Eocene to Miocene
The Eocene to Miocene Walker Formation has a type section along the southeast bank of Walker Basin Creek. The scarcity of fossils in the Walker Formation makes it difficult to assign a precise age and correlate this unit across the basin accurately. Based on the lack of known fossils within the Walker Formation, this unit has been assigned unknown paleontological potential.

Tecuya Formation – Late Eocene to Early Miocene
The Tecuya Formation contains well-preserved vertebrate taxa that are the only known Arikareean mammals in the San Joaquin Basin and, therefore, it is considered to have high paleontological potential.

Neenach Volcanic Formation – Early Miocene
The Neenach Volcanic Formation does not contain fossils due to the nature of this kind of rock (igneous; see description in the igneous and metamorphic rock unit section for explanation) and, therefore, has very low paleontological potential.

Olcese Formation – Early Miocene
The Olcese Formation is a shallow water marine formation, predominately silty sandstone, very light bluish gray, weathering white, very fine-grained, occasional calcareous concretions, massive, and friable (Paleo Solutions, Inc. 2021). The majority of the fossils collected and/or described from the Olcese Formation are shallow water, marine invertebrates. Due to the presence of both stratigraphically important invertebrates and well-preserved marine and terrestrial mammals, the Olcese Formation is assigned a high paleontological potential.

Round Mountain Silt (Temblor Formation) – Early to Middle Miocene
Round Mountain Silt contains an abundance of invertebrate marine fossils as well as vertebrate marine fossils and other plant remains. Lower units of the Round Mountain Silt contain an abundance of foraminifera, mollusks, and fish scales. The middle and upper units contain scattered diatoms, arenaceous and calcareous foraminifera, and fish scales as well as an abundance of shark teeth. The uppermost unit contains arenaceous foraminifera, fish remains, and carbonaceous material. The Round Mountain Silt is one of the richest known vertebrate fossil deposits in the world and, therefore, has very high paleontological potential.

Bena Gravel – Miocene
The Miocene Bena Gravel contains sediments deposited in terrestrial (alluvial), paralic (interfingered terrestrial and marine), and shallow-marine settings. Due to the presence of a diverse vertebrate fauna, the Bena Gravel is considered to have high paleontological potential.

Santa Margarita Formation – Middle to Late Miocene

The sandstone beds of the Santa Margarita bear late Miocene marine invertebrates including gastropods, pelecypods, barnacles, brachiopods, and echinoderms (Paleo Solutions, Inc. 2021). Late Miocene marine invertebrates have also been reported from cores of the Santa Margarita Formation in the subsurface to the west farther toward the basin center (Paleo Solutions, Inc. 2021). These invertebrates give the Santa Margarita a late Miocene age. Due to the abundance and diversity of well-preserved marine and terrestrial vertebrates within the Santa Margarita, this formation is considered to have high paleontological potential.

Chanac Formation – Late Miocene to Early Pliocene

The most common fossils found in the Chanac Formation are from terrestrial mammals, mainly horses. The Chanac Formation is considered to have high paleontological potential.

Hungry Valley Formation – Early to Late Pliocene

The Hungry Valley Formation contains vertebrate fossils in Hungry Valley in the northwest corner of Los Angeles County in the lower portion of the formation, approximately 600 feet above the base (Dibblee 1967; Miller and Downs 1974). These fossils consist of the teeth from *Pliohippus* sp. (horse), camels, early elephants, *Tapirus* sp. (tapir), pronghorn, and the turtles *Actinemys marmorata* cf. and *Geochelone* sp. (Miller and Downs 1974, tbl. 3). This fauna provides a Hemphillian (early Pliocene) age for this stratum. The Hungry Valley Formation has been assigned moderate paleontological potential.

Kern River Gravel – Miocene to Pleistocene

Fossils from the Kern River Formation are not well studied, and the record primarily consists of a mammalian fauna documented near the base of the formation to the northeast of Bakersfield at the base of the foothills of the Sierra Nevada (Paleo Solutions, Inc. 2021). Based on the good preservation and abundance of vertebrate fossils, the Kern River Gravel is considered to have very high paleontological potential.

Pleistocene Older Deposits

Several unnamed Pleistocene older deposits (middle to late Pleistocene; 780,000 to 11,000 years old) are exposed throughout the Proposed Project area and consist of terrace fanglomerate (Qfg), landslide debris (Qls), older alluvium (Qoa), and terrace deposits (Qt) (Paleo Solutions, Inc. 2021). Some Pleistocene older deposits are composed of coarse-grained material, which is not typically conducive to the preservation of fossils. For example, coarse-grained Pleistocene older deposits derived from the local plutonic igneous rocks have a low probability to contain fossils; however, older, finer grained alluvial sediments may contain significant paleontological resources. Furthermore, landslide deposits may potentially retain the stratigraphic structures of the sedimentary units of which they are composed. If the stratigraphy is intact and not jumbled, any fossils discovered would still have stratigraphic context and would thus be

scientifically viable. However, landslide deposits that have lost their stratigraphic context or are sourced from geologic units with no to low potential (e.g., igneous rock units) are unlikely to contain significant fossils. Therefore, the Pleistocene older deposits are assigned unknown and moderate paleontological potential.

Holocene Younger Deposit

Holocene younger deposits within the Proposed Project area typically consist of variable compositions of unconsolidated silt, sand, gravel, and larger clasts. Holocene younger deposits are assigned low paleontological potential (PFYC 2) at the surface using BLM guidelines (BLM 2016). However, they have an unknown paleontological potential in the subsurface since there is potential for these deposits to be conformably underlain by older, paleontologically sensitive geologic units.

3.7.2 Applicable Regulations, Policies and Standards

Federal, State, and local regulations were reviewed for applicability to the Proposed Project.

Federal Regulations, Policies and Standards

Earthquake Hazards Reduction Act

The Earthquake Hazards Reduction Act was enacted in 1977 to "reduce the risks to life and property from future earthquakes in the United States through the establishment and maintenance of an effective earthquake hazards and reduction program." To accomplish this, the act established the National Earthquake Hazards Reduction Program (NEHRP). This program was significantly amended in November 1990 by NEHRP, which refined the description of agency responsibilities, program goals, and objectives.

NEHRP's mission includes improved understanding, characterization, and prediction of hazards and vulnerabilities; improvement of building codes and land use practices; risk reduction through post-earthquake investigations and education; development and improvement of design and construction techniques; improvement of mitigation capacity; and accelerated application of research results. The NEHRP designates the Federal Emergency Management Agency (FEMA) as the lead agency of the program and assigns it several planning, coordinating, and reporting responsibilities. Programs under NEHRP help inform and guide planning and building code requirements such as emergency evacuation responsibilities and seismic code standards.

Paleontological Resources

A variety of federal statutes specifically address paleontological resources. They are generally applicable to a project if that project includes federally owned or federally managed lands or involves a federal agency license, permit, approval, or funding. The first of these is the Antiquities Act of 1906 (54 United States Code [USC] §§ 320301–320303 and 18 USC § 1866(b)), which calls for protection of historic landmarks and

historic and prehistoric structures as well as other objects of historic or scientific interest on federally administered lands, the latter of which would include fossils. The Antiquities Act both establishes a permit system for the disturbance of any object of antiquity on federal land and sets criminal sanctions for violation of these requirements. The Antiquities Act was extended to specifically apply to paleontological resources by the Federal-Aid Highway Act of 1958. More recent federal statutes that address the preservation of paleontological resources include the National Environmental Policy Act, which requires the consideration of important natural aspects of national heritage when assessing the environmental impacts of a project (Public Law [P.L.] §§ 91–190, 31 Stat. 852; 42 USC §§ 4321–4327). The Federal Land Policy Management Act of 1976 (P.L. 94–579; 90 Stat. 2743; USC §§ 1701–1782) requires that public lands be managed in a manner that will protect the quality of their scientific values while Code of Federal Regulations Title 40 section 1508.2 identifies paleontological resources as a subset of scientific resources. The Paleontological Resources Preservation Act (Title VI subtitle D of the Omnibus Land Management Act of 2009) is the primary piece of federal legislation.

Paleontological Resources Preservation Act

The Paleontological Resources Preservation Act offers provisions of paleontological resources identified on federal, Native American, or State lands and guidance for their management and protection and promotes public awareness and scientific education regarding vertebrate fossils. The law also requires federal agencies to develop plans for inventory, collection, and monitoring of paleontological resources and establishes stronger criminal and civil penalties for the removal of scientifically significant fossils on federal lands.

State Regulations, Policies, and Standards

The Alquist-Priolo Earthquake Fault Zoning Act

The A-P Act was passed in 1972 to mitigate the hazard of surface faulting to structures intended for human occupancy. The main purpose of the A-P Act is to prevent the construction of buildings used for human occupancy on the surface traces of active faults. The A-P Act requires the State Geologist to delineate Earthquake Fault Zones along active faults within the state and to issue appropriate maps. Setbacks from active faults are required within the specified zones. For the purpose of the A-P Act, an active fault is one that has moved in the last 11,000 years. For projects located within active fault zones, the State's Guidelines for Evaluating the Hazard of Surface Fault Rupture (CGS Note 49) must be followed by the engineering geologists who prepare fault rupture hazard investigation reports that are required and reviewed by the county geologist.

Seismic Hazard Mapping Act of 1990

The Seismic Hazard Mapping Act (SHMA) was passed in 1990 following the 1989 Loma-Prieta earthquake to reduce the potential impacts of earthquakes on public health and

safety and to minimize property damage caused by earthquakes related to ground deformation. The SHMA established a requirement for the identification and mapping of areas prone to the earthquake hazards of liquefaction, earthquake-induced landslides, and amplified ground-shaking. The SHMA requires the State Geologist to establish regulatory zones (Zones of Required Investigation) and to issue appropriate maps (Seismic Hazard Zone maps). Zones of Required Investigation have been designated for portions of Kern and Los Angeles counties, and Seismic Hazard Zone maps have been completed for portions of both counties that are located within the Proposed Project area (CDOC 2021a)

California Building Code

The California Building Code (CBC) contains general building design and construction requirements relating to fire and life safety, structural safety, and access compliance. It is based on the 2021 International Building Code, with the addition of more extensive structural seismic provisions. The 2022 CBC was published July 1, 2022, by the California Building Standards Commission and became effective January 1, 2023. The CBC is included in the Title 24 of the CCR, California Building Standards Code, and is a compilation of three types of building standards from three different origins:

- Building standards that have been adopted by state agencies without change from building standards contained in national model codes
- Building standards that have been adopted and adapted from the national model code standards to meet California conditions
- Building standards authorized by the California legislature that constitute extensive additions not covered by the model codes that have been adopted to address particular California concerns

Seismic sources and the procedures used to calculate seismic forces on structures are defined in Section 1613 of the CBC. The code requires that all structures and permanently attached nonstructural components be designed and built to resist the effects of earthquakes. The code also includes grading and other geotechnical issues, building specifications, and non-building structures.

Local Regulations, Policies and Standards

The CPUC has sole and exclusive State jurisdiction over the siting and design of the Proposed Project because it authorizes the construction, operation, and maintenance of investor-owned public utility facilities. Pursuant to GO 131-D section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters." Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the counties' and cities' regulations are not applicable as the counties and cities do not have jurisdiction over the Proposed Project. Accordingly, the following

discussion of local land use laws, regulations, and policies is provided for informational purposes only.

Kern County

Kern County General Plan

Construction and operation of the Proposed Project would be subject to policies and regulations contained within the Kern County General Plan (County of Kern 2009), Kern County Zoning Ordinance, and Kern County Code of Building Regulations pertaining to the avoidance of geologic hazards and/or the protection of unique geologic features, as well as policies for the preservation of paleontological resources. The policies, goals, and implementation measures in the Kern County General Plan for geology and soils that are applicable to the project are provided below.

Chapter 1: Land Use, Conservation, and Open Space Element

1.3: Physical and Environmental Constraints

Measure D: Review and revise the County's current Grading Ordinance as needed to ensure that its standards minimize permitted topographic alteration and soil erosion while maintaining soil stability.

1.10.3: Archaeological, Paleontological, Cultural, and Historical Preservation

Measure M: In areas of known paleontological resources, the County should address the preservation of these resources where feasible.

Chapter 4 Safety Element

Goals:

Goal 1: Minimize injuries and loss of life and reduce property damage.

4.3: Seismically Induced Surface Rupture, Ground Shaking, and Ground Failure

Measure B: Require geological and soils engineering investigations in identifying significant geologic hazard areas in accordance with the Kern County Code of Building Regulations.

Measure C: The fault zones designated in the Kern County Seismic Hazard Atlas should be considered significant geologic hazard areas. Proper precautions should be instituted to reduce seismic hazard, whenever possible in accordance with State and County regulations.

Los Angeles County

Los Angeles County General Plan

The Conservation and Natural Resources Element of the County of Los Angeles General Plan recognizes paleontological resources as non-renewable and irreplaceable resources that are an important part of the County's identity (Los Angeles County Department of

Regional Planning 2015). The general plan includes four policies to protect paleontological resources (Goal C/NR 14):

- **Policy C/NR 14.1**: Mitigate all impacts from new development on or adjacent to historic, cultural, and paleontological resources to the greatest extent feasible.
- **Policy C/NR 14.2**: Support an inter-jurisdictional collaborative system that protects and enhances historic, cultural, and paleontological resources.
- **Policy C/NR 14.5**: Promote public awareness of historic, cultural, and paleontological resources.
- **Policy C/NR 14.6**: Ensure proper notification and recovery processes are carried out for development on or near historic, cultural, and paleontological resources.

3.7.3 Applicant Proposed Measures

SCE has proposed measures to reduce environmental impacts. The significance of the impact is first considered prior to application of applicant proposed measures (APMs), and a significance determination is made. The implementation of the APMs is then considered as part of the Proposed Project when determining whether impacts would be significant and thus would require mitigation. These APMs would be incorporated as part of any CPUC project approval, and SCE would be required to adhere to the APMs as well as any identified mitigation measures. The APMs are included in the MMRP for the Proposed Project, and the implementation of the measures would be monitored and documented in the same manner as mitigation measures. The APMs that are applicable to the geology, soils and paleontology are provided in Table 3.7-5.

Table 3.7-5 Applicant Proposed Measures for Geology, Soils, and Paleontological Resources

APM Number	Requirements
PAL-1	**Develop Paleontological Resource Mitigation and Monitoring Plan.** SCE will prepare a Paleontological Resources Mitigation and Monitoring Plan (PRMMP) to guide all paleontological management activities during project construction. The PRMMP will be submitted to the CPUC for review and approval prior to the start of construction. The PRMMP will be prepared by a qualified paleontologist, based on Society of Vertebrate Paleontology (SVP) 2010 guidelines, and meet all regulatory requirements. The qualified paleontologist will have a Master's degree or Ph.D. in paleontology, have local paleontology knowledge, and will be familiar with paleontological procedures and techniques. The PRMMP will include, but not be limited to, the following sections: 1. Paleontological Resource Monitoring and Reporting: Detail monitoring procedures and methodologies, which will require a qualified paleontological monitor for all construction-related ground disturbance that reach approximate depths for significant paleontological resources in sediments with moderate (PFYC 3a) to very high (PFYC 5) and Unknown sensitivity. Sediments of undetermined sensitivity will be monitored on a part-time basis as outlined in the PRMMP. Sediments with very low or low sensitivity will not require monitoring. Paleontological monitors will meet standard qualifications per the SVP (2010).

APM Number	Requirements
	2. Unanticipated Discovery Protocol: Detail procedures for halting construction, defining work stoppage zones, notifying stakeholders, and assessing the paleontological find for scientific significance. If indicators of potential microvertebrate fossils are found, screening of a test sample will be carried out as outlined in SVP 2010. 3. Data Analysis and Reporting: Detail methods for data recovery, analysis in a regional context, reporting of results within one year of completion of field studies, curation of all fossil specimens in an accredited museum repository approved by the CPUC, and dissemination of reports to appropriate repositories.
PAL-2	**Paleontology Resources Awareness Training.** Prior to the initiation of construction, all construction personnel will be trained regarding the recognition of possible buried paleontological resources (i.e., fossils) and protection of all paleontological resources during construction. Training will inform all construction personnel of the procedures to be followed upon the discovery of paleontological materials. All personnel will be instructed that unauthorized removal or collection of fossils is a violation of Federal and State laws. Any excavation contract (or contracts for other activities that may have subsurface soil impacts) will include clauses that require construction personnel to attend a Worker's Environmental Awareness Training Program (WEAP). The WEAP will include the project's potential for inadvertently exposing buried paleontological resources, how to operate adjacent to and avoid any potential Environmentally Sensitive Area, and procedures to treat unanticipated discoveries.
PAL-3	**Conduct Paleontology Resources Construction Monitoring.** Paleontological monitoring will be conducted by a qualified paleontologist familiar with the types of resources that could occur within the project area. The qualifications of the principal paleontologist and monitors will be approved by the CPUC. Monitoring reports will be submitted to the CPUC on a monthly basis.

3.7.4 Environmental Analysis

Summary of Impacts

Table 3.7-6 presents a summary of the CEQA significance criteria and impacts on geology, soils and paleontology that would occur during the construction, and operation and maintenance (O&M) phases of the Proposed Project.

Table 3.7-6 Summary of Proposed Project Impacts to Geology, Soils and Paleontology

Would the proposed project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving: i. Rupture or a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (Refer to Division of Mines and Geology Special Publication 42)? ii. Strong seismic ground shaking? iii. Seismic-related ground failure, including liquefaction? iv. Landslides?	☐	☒	☐	☐
b. Result in substantial soil erosion or the loss of topsoil?	☐	☐	☒	☐
c. 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?	☐	☒	☐	☐
d. 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?	☐	☐	☐	☒
e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒
f. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☐	☒	☐

Impact Discussion

a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:

i. Rupture or a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault (Refer to Division of Mines and Geology Special Publication 42)?

ii. Strong seismic ground shaking?

iii. Seismic-related ground failure, including liquefaction?

iv. Landslides?

Construction

Fault Rupture

The Proposed Project is located in a region with several active and potentially active fault zones that have a history of strong earthquakes. The potential for fault rupture to occur is greatest in the immediate vicinity of a fault trace. The Proposed Project alignment crosses or runs parallel to six A-P earthquake fault zones, which are listed in Table 3.7-3 There are a total of 46 Proposed Project transmission structures located in active fault zones. A fault rupture during construction has the potential to cause human injury as well as road damage resulting in closures and safety hazards for construction crews. Due to the limited time construction would occur at each structure located within an active fault zone, there is a low probability of a seismic event occurring during construction within the active fault zone, and the potential for workers to experience impacts from fault rupture during construction is minimal. Impacts of fault rupture during construction would be less than significant, and no mitigation is required.

Seismic Ground Shaking

Significant portions of the Proposed Project alignment are located in areas with the potential for strong seismic ground shaking. Construction personnel and structures have the potential to be exposed to strong seismic ground shaking in the event of an earthquake during the 2-year construction period. The potential for strong ground motions is lowest in the northern portion of the Proposed Project alignment and greatest in the southern portion of the alignment. Construction activities alone would not increase the risk of seismic ground shaking to people or structures over the baseline risks. Due to the short duration of construction in areas susceptible to strong ground shaking and the low probability of a seismic event occurring during construction, there is a low potential for workers and structures to be exposed to adverse effects resulting from seismically induced ground shaking. Earthquake safety training pursuant to Occupational Safety and Health Administration (OSHA) regulations would further minimize the potential for adverse impacts to workers. Impacts during construction would be less than significant, and no mitigation is required.

Seismic-related Ground Failure, Including Liquefaction

Liquefaction is most common in areas with shallow groundwater. The Proposed Project alignment is located in areas with potential for liquefaction in Kern River Canyon, Castac and Cummings valleys, and potentially near creek crossings. Replacing the existing transmission structures with new structures in areas of moderate to high liquefaction potential would not change baseline risks from the soil properties and seismic zone. The potential for construction crews and structures to be exposed to seismically induced liquefaction or other types of ground failure is minimal due to the short duration of construction in moderate to high liquefaction hazard areas and the low probability of a seismic event occurring during construction. The impact would be less than significant, and no mitigation is required.

Landslides

The Proposed Project area has high potential for landslides to occur in portions of Segment 1 (Kern River Canyon area and the adjacent foothills), Segment 2 (Comanche Point, Grapevine Canyon, and the Tehachapi Mountains), Segment 3 (Tehachapi Mountains and the area around Gorman Substation), and Segment 4 (Tejon Hills). Areas with high potential for landslides have steeper slopes that are more prone to rockfall and erosion (refer to Figure 3.7-6 through Figure 3.7-8 for locations of mapped landslide susceptibility). Landslides or rockfalls due to storm events commonly occur in the Kern River Canyon. Ground motions associated with earthquakes could also potentially trigger landslides or rockfalls in the Proposed Project area. Seismically induced landslides are most commonly associated with earthquakes of magnitude 4.0 or greater. The active faults in the Proposed Project area could potentially generate earthquakes of greater magnitude. Those portions of the Proposed Project alignment located in valley areas and low-angle foothills have relatively low to absent potential of landslides or other slope-related hazards.

Destabilization of slopes could result from Proposed Project construction activities, such as grading and excavation, which could contribute to landslide hazards. Grading would occur in work areas and along access roads to provide a stable work surface for equipment and vehicle use. Localized excavations would occur for installation of structure foundations. Grading and excavation during construction could alter existing slope profiles, making them unstable and causing a landslide. Adverse effects to people or structures could be significant if a landslide were to occur. MM Geology-1 requires SCE to incorporate engineering design and construction measures recommended in the Preliminary Geotechnical Investigation to address slopes prone to landslides. The potential for construction activities to expose and adversely impact people and structures due to landslides would be less than significant with mitigation.

Seismically induced landslides also have the potential to occur during Proposed Project construction. The potential for construction crews and Project components to be exposed to seismically induced landslides is low due to the short duration of construction in high hazard areas and the low probability of a seismic event occurring during this time. In

addition, construction activities would not increase the risk of seismically induced landslides; therefore, the impact would be less than significant.

Operation and Maintenance

Fault Rupture and Seismic Ground Shaking

A surface fault rupture or strong seismic ground shaking could occur during the lifetime of the Proposed Project. Fault ruptures or seismic ground shaking would not generally impact overhead power lines due to their location above ground; however, a resulting ground failure may lead to fallen poles and line failure, posing a significant impact to nearby structures or roads, including potential for human injuries or death. Project transmission structures located directly on or adjacent a fault may be at a higher risk for damage during a seismic event due to surface rupture of the fault. There is a potential for damage to property if fault rupture or seismic shaking were to affect power line structures.

The Proposed Project would be designed in accordance with CPUC GO 95 and the Institute of Electrical and Electronics Engineers, Inc., Standard 693 to withstand damage from ground rupture and strong seismic shaking. Occupied structures are located in proximity to the Proposed Project in Segment 4. The area with occupied structures in proximity to the Proposed Project alignment is not an area with active faults. The new structures within the A-P fault zone could pose an increased risk of damage if they were not properly constructed or installed. Because the Proposed Project would install 46 structures within an A-P fault zone, the impact from fault rupture is potentially significant. Mitigation Measure Geology-2 specifies procedures for design and engineering of structures in the A-P fault zone to include minor shifts in the structure location to avoid active fault traces. The impact would be less than significant with implementation of Mitigation Measure Geology-2.

Seismic-related Ground Failure, Including Liquefaction

As discussed previously, portions of the Proposed Project alignment are located in areas with localized liquefaction hazard (Kern River Canyon, Castac and Cummings valleys, and larger creek crossings) where moderate to large regional earthquakes could cause ground failure and liquefaction. Settlements induced by seismic activity are generally anticipated to be uniform for the proposed replacement structures given their small footprints and the relatively level topography in areas with elevated liquefaction hazards. However, localized seismically related ground failure could occur in areas with liquefaction hazard and result in the loss of functionality of the transmission line or risk of injury or loss of life, which would result in a significant impact. MM Geology-1 requires SCE to incorporate engineering design and construction measures recommended in the Preliminary Geotechnical Investigation to address areas prone to liquefaction. The potential for operation and maintenance to expose and adversely impact people and structures due to liquefaction would be less than significant with mitigation.

Landslides

As discussed in the discussion above for construction impacts, landslide deposits occur in the steep slopes in Grapevine Canyon (Segment 2), and areas with higher susceptibility of landslides occur in the mountainous areas of the Proposed Project alignment. The Proposed Project structures would be located within close proximity to the existing structures within the powerline ROW through these high hazard areas and would replace existing structures that are located in the same landslide deposits or steeper terrain. New or existing structures would not impose significant loads relative to the mass of the landslide deposit, and the replaced structures would not increase the landslide potential from the present condition. Many of these higher-hazard areas are generally unpopulated; however, some of these areas are located adjacent public roads, including highways and Interstate-5, and would remain at risk from landslides causing damage to the powerline, and the impact would be significant. MM Geology-2 requires SCE to incorporate engineering design and construction measures recommended in the Preliminary Geotechnical Investigation to address areas prone to landslides. The potential for operation and maintenance to expose to risk from landslides and thus adversely impact people and structures would be less than significant with mitigation.

Required APMs and MMs: MM Geology-1 and MM Geology-2

Mitigation Measures

MM Geology-1: Geotechnical Hazards

Where geotechnical hazards are found to occur, including risk of fault rupture, seismic ground shaking, liquefaction, and landslides, appropriate engineering design and construction measures shall be incorporated into the final project designs, as deemed appropriate by a California licensed Geotechnical Engineer or Certified Engineering Geologist. Design measures that would mitigate seismic and landslide-related impacts shall include, but are not limited to, retaining walls, removal of unstable materials, and avoidance of highly unstable areas. If highly plastic clay soil is unexpectedly encountered at shallow depths during subsequent soil investigations or during construction, the potential for soil expansion shall be evaluated and accounted for in design and construction.

Disturbed and engineered slopes shall be monitored by qualified construction personnel on an occasional basis (bi-monthly or as needed) until the slope is fully stabilized and no longer poses an increased risk of failure or erosion as compared to similar undisturbed slopes in the immediate vicinity.

More detailed studies to quantify the potential for landslides and rockfall in areas with high landslide susceptibility, as well as shallow groundwater and liquefiable soils, should be considered during a subsequent stage of design. The analysis should consider the effect of earthquake-related ground motions. The studies should recommend measures to mitigate or eliminate the hazard, which may include:

- Moving the Project alignment or structure locations.
- Use of longer spans and/or different structures to avoid placing structures in higher hazard areas.
- Founding structures on deep foundations adequate to withstand the hazard.
- Mitigating the potential for landslide on the slope.
- Fences, screens, or other barriers to protect structures from rockfall or landslides.
- MM Geology-1: Geotechnical Hazards

Applicable locations: All project areas that are suspected to have unstable soils or landslide susceptibility, underlain by a fault, expansive soils, or areas that could be subject to strong ground shaking and ground failure.

Performance standards and timing:

- **Before construction**: Incorporate geotechnical recommendations into final design.
- **During construction**: Project design measures will mitigate seismic and landslide-related impacts.
- **After Construction:** Disturbed and engineered slopes are monitored until fully stabilized.

MM Geology2: Structures within Alquist- Priolo Fault Zones

SCE shall adhere to recommendations outlined in the Geotechnical Investigation Report to prevent damage to structures from fault ruptures. Structures located directly on or adjacent to a fault may be at a higher risk for damage during a seismic event due to surface rupture of the fault. The following measures shall be considered to reduce the potential for damage due to fault rupture for structures located within the Alquist-Priolo zones or structures that will span Alquist-Priolo zones:

- Move the structures so that they are not located in Alquist-Priolo zones or away from active fault traces if structures must be placed in an Alquist-Priolo zone.
- The alignment could be modified so that fault crossings are perpendicular to the fault to reduce the potential change in loading on the structure(s) and lines.
- Structures capable of spanning across faults and/or fault zones could be used to reduce the potential for foundation damage or failure.
- Use more robust structures and/or structure foundations (including ground improvement) near faults to reduce the potential for damage due to changes in structure loading from fault movement.

If specific structures must be located within Alquist-Priolo zones, additional fault studies may be needed to confirm structure foundations do not span an active surface fault.

Applicable locations: Structures located within Alquist-Priolo fault zones.

Performance standards and timing:

- **Before construction**: N/A
- **During construction**: The Project alignment shall be modified or reinforced in fault zones to reduce potential for damage.
- **After construction**: N/A

b) Result in substantial soil erosion or the loss of topsoil?

Construction

Ground disturbance would occur at construction work areas, staging areas, and access routes. Work areas and access roads may be graded and cleared of vegetation to establish work pads and access, where necessary. Vegetation trimming or removal and minor earthwork may occur at stringing sites, work areas, temporary overland routes, and footpaths to access pole sites. Staging areas would occur primarily in developed or disturbed areas. More intensive earth-moving activities would include excavating new structure holes and foundations and minor cut-and-fill where the ground is uneven. Ground disturbance on steep slopes where vegetation has been removed would increase the potential for erosion. Rain and wind can detach soil particles and transport them off site in areas of exposed soil. Areas subject to temporary disturbance may be subject to

soil erosion over the long term if not reclaimed and stabilized. Construction would result in a significant erosion impact if the work areas were not properly stabilized and substantial erosion were to occur at one or more work areas.

The Proposed Project would disturb more the 1 acre of land and would be required to comply with the Construction Stormwater General Permit (Order Number 2009-0009-DWQ), including preparation of a project-specific Stormwater Pollution Prevention Plan. The SWPPP developed for the Proposed Project would need to include BMPs to reduce the potential for erosion and address project-specific risk factors in compliance with Order Number 2009-0009-DWQ. The SWPPP would include measures such as silt fencing, straw waddles, geotextiles, and other BMPs to control sediment and erosion. The Construction General Permit also requires implementation of permanent BMPs including revegetation of areas of disturbance. Impacts would be less than significant due to compliance with the requirements of the Construction Stormwater General Permit. No mitigation is required.

Operation and Maintenance

Operation and maintenance activities of the Proposed Project would be the same as for the existing lines and substation. SCE would continue to regularly inspect, maintain, and repair conductor, structures, and substation facilities as well as maintain vegetation clearances around all Proposed Project facilities. Proposed Project structures and conductor would be accessed using existing access routes or by helicopter. Minor ground-disturbing activities may be required periodically to perform maintenance and repair activities; however, the area of disturbance for maintenance activities would be minimal and would not cause significant loss of topsoil or erosion. Operation and maintenance would not result in increased erosion or topsoil loss. The impact would be less than significant, and no mitigation is required.

Required APMs and MMs: None required.

C) 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?

Construction

Landslides

The Proposed Project would include installation of new subtransmission structures within areas of high susceptibility for landslides. Grading associated with construction, access roads, stringing sites, staging yards, and other work zones could alter existing slope profiles, making them unstable as a result of over-excavating slope material, steepening slopes, or increasing loads. Localized excavations for installation of structure foundations, vehicle access, and grading could potentially destabilize the soils and trigger a localized landslide in landslide-prone areas, which would be a significant impact. MM Geology-1 requires SCE to incorporate appropriate engineering design and construction measures to minimize the potential damages to proposed structures if

unstable grounds are encountered. The impact from construction in landslide-prone areas would be less than significant with mitigation.

Lateral Spreading and Liquefaction

The Proposed Project alignment crosses through areas of liquefaction hazard, including Kern River Canyon, Cummings Valley, Castac Valley, and creek crossings. Liquefaction-induced lateral spreading may also be a hazard in these areas. Construction activities would not exacerbate existing liquefaction and lateral spreading risk in the area. The impact of construction on liquefaction and lateral spread would be less than significant.

Subsidence

The Proposed Project would cross groundwater basins where there is potential for subsidence due to past and present groundwater pumping. Construction could require temporary dewatering of shallow groundwater encountered in excavations (refer to Section 3.9: Hydrology and Water Quality). The temporary dewatering of excavations would not result in subsidence due to the small amount of water that would be extracted and the short-term nature of the dewatering (i.e., a week or less during foundation construction). The impact would be less than significant, and no mitigation is required.

Collapse

No records of soil collapse have been identified near the Proposed Project alignment; however, soils subject to collapse due to water infiltration may be locally present, including 0.5 percent of the alignment with high potential and 15.2 percent with moderate potential. Construction would involve excavation and installation of structures with minimal fill and would not introduce any potentially collapsible soils to the area. The risk of soil collapse is considered low for the majority of the Proposed Project area; however, construction that occurs within soils that have a moderate to high potential for soil expansion could lead to collapse, which would be a significant impact. MM Geology-1 requires SCE to incorporate appropriate engineering design and construction measures to minimize the potential damages to proposed structures if shallow, highly plastic clay soils are encountered. The impact from construction in collapsible soil areas would be less than significant with mitigation.

Operation and Maintenance

Landslides

As discussed in Impact a) above, landslide deposits occur in the steep slopes in Grapevine Canyon (Segment 2), and areas with higher susceptibility of landslides occur in the mountainous areas of the Proposed Project alignment. New or existing structures would not impose significant loads relative to the mass of the landslide deposit, and the replaced structures would not increase the landslide potential from the present condition. However, landslides could occur during operation and cause damage to the proposed structures and down the powerline, which would result in a significant impact. The Proposed Project would be designed in accordance with CPUC GO 95 and

industry standards, and MM Geology-1 requires SCE to incorporate appropriate engineering design and construction measures to minimize the potential damages to proposed structures in areas with high potential for landslides. The impact from operation and maintenance in landslide-prone areas would be less than significant with mitigation.

Lateral Spreading and Liquefaction

As discussed above for construction, the Proposed Project alignment crosses through areas of liquefaction hazard. Lateral displacement or liquefaction could happen during operation and maintenance and could adversely impact Proposed Project structures and powerlines. Operation and maintenance activities for the Proposed Project would not alter the soil properties or proximity to groundwater and would not affect the risk of lateral spreading or liquefaction in the area. However, areas of shallower groundwater are present, and the risk of liquefaction in these areas would remain significant. MM Geology-1 requires SCE to incorporate appropriate engineering design and construction measures to minimize the potential damage to proposed structures in areas with the potential for liquefaction. The impact from operation and maintenance from lateral spreading and liquefaction would be less than significant with mitigation.

Subsidence

Operation and maintenance activities would not involve extraction of groundwater that would result in subsidence. The presence of the Proposed Project would not cause or increase the rate of subsidence. The structures that cross groundwater basins in the Proposed Project area have been in place for several decades; any subsidence that would occur in the area has likely already taken place. Subsidence would also be expected to occur uniformly over the Proposed Project area and would not significantly appear at individual structures. The impact would be less than significant.

Collapse

No records of soil collapse have been identified near the Proposed Project alignment; however, soils subject to collapse due to water infiltration may be locally present. MM Geology-1 requires that any structures where collapsible soils are encountered during construction are designed with stabilization methods to minimize the potential for damages from soil collapse during operation. The impact from operation and maintenance in collapsible soil areas would be less than significant with mitigation.

Required APMs and MMs: MM Geology-1

d) 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?

Expansive soils shrink and swell and can damage foundations if moisture collects beneath structures. Shallow, clayey soil has the greatest potential for large seasonal changes in moisture content. Soils along the Proposed Project alignment generally have

a low to moderate shrink-swell potential, with the exception of a very limited area of high potential in Segment 4. Accordingly, there is the potential for foundation problems due to expansive soils in areas with high potential for soil expansion. There are no residences, third-party improvements, or roads near the components of the Proposed Project that will be constructed in the area where a high potential for expansive soils is present. However, if soil expansion were to occur and cause damage or failure of the transmission line, it could result in a significant impact from the downing of the powerline and the danger it could pose to human life or the environment. MM Geology-1 would require that, if highly plastic clay soil is unexpectedly encountered at shallow depths during construction, the potential for soil expansion shall be evaluated and accounted-for with structural design. Impacts from expansive soils would be less than significant with mitigation.

Required APMs and MMs: MM Geology-1

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

No septic tanks or alternative wastewater disposal systems (e.g., leach fields) would be constructed as part of the Proposed Project. No impact would occur during construction or operation and maintenance from the use of septic tanks for wastewater disposal.

Required APMs and MMs: None

f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Construction

As described in Table 3.7-4 portions of Segments 1, 2, 3, and 5 are located within geologic units with moderate to very high paleontological sensitivity. Ground-disturbing activities that could damage fossils would involve removal of existing structures and poles, excavation for pole foundations, and grading of access roads. While there are no known significant paleontological resources within the Proposed Project area, paleontological resources could be encountered and damaged during excavation and ground disturbance in areas with moderate to very high paleontological sensitivity. Damage to previously undiscovered, unique paleontological resources from construction activities would be a significant impact.

SCE has proposed APMs PAL-1, PAL-2, and PAL-3 to reduce impacts on paleontological resources. APM PAL-1 would require SCE to develop a Paleontological Resource Mitigation and Monitoring Plan (PRMMP) to guide all paleontological management activities during project construction. The PRMMP would include a Paleontological Resource Monitoring and Reporting Plan, Unanticipated Discovery Protocol, and Data Analysis and Reporting and requires monitoring in areas with moderate to high paleontological sensitivity. APM PAL-2 requires Paleontology Resources Awareness

Training that would require all construction personnel to be trained regarding the recognition of possible buried paleontological resources (i.e., fossils) and protection of all paleontological resources during construction. APM PAL-3 would require paleontological monitoring to be conducted by a qualified paleontologist familiar with the types of resources that could occur within the Proposed Project area.

Operation and Maintenance

Operation and maintenance activities associated with the Proposed Project would be conducted in areas that would be disturbed during Proposed Project construction. Operation and maintenance of the Proposed Project would not impact paleontological resources because no activities would occur in undisturbed areas. The impact would therefore be less than significant.

Required APMs and MMs: APM PAL-1, APM PAL-2 and APM PAL -3

3.7.5 References

Arcadis. 2022. "Preliminary Geotechnical Investigation Report." Southern California Edison.

Bureau of Land Management (BLM). 2016. "Potential Fossil Yield Classification System: BLM Instruction." Instruction Memorandum IM-2016–124. Available: https://www.blm.gov/policy/im-2016-124.

California Department of Conservation (CDOC). 2021a. "CGS Information Warehouse: Regulatory Maps." Feature Service. Using Arc GIS Online (9/25/2023). https://maps.conservation.ca.gov/cgs/informationwarehouse/.

———. 2021b. "CGS Map Sheet 58: Deep-Seated Landslide Susceptibility." Map Service. Raster digital data. Using Arc GIS (7/27/2023). https://gis.conservation.ca.gov/server/rest/services/CGS/MS58_LandslideSusceptibility_Classes/MapServer.

California Geological Survey. (1999) 2007. "Fault-Rupture Hazard Zones in California: Alquist-Priolo Earthquake Fault Zoning Act with Index to Earthquake Fault Zones Maps (2007 Interim Edition)." Special Publication 42. California Department of Conservation, Division of Mines and Geology.

———. 2012. "Fault Activity Map of California." Map Service. Vector digital data. Using Arc GIS (1/3/2023). https://gis.conservation.ca.gov/server/rest/services/CGS/FaultActivityMapCA/MapServer.

California Natural Resources Agency. 2022. "GPS Stations and Vertical Displacement Data." Feature Server. GPS data. "GPS Station Near Arvin Vertical Displacement" created by Panorama Environmental, Inc.: Using: California's Groundwater Live (11/18/2023). https://sgma.water.ca.gov/CalGWLive/.

County of Kern. 2009. "Kern County General Plan." Bakersfield, CA: Kern County Planning Department. Available: https://kernplanning.com/planning/planning-documents/general-plans-elements/.

Dibblee, Thomas. 1967. "Areal Geology of the Western Mojave Desert California." Geological Survey Professional Paper 522. Professional Paper. U.S. Department of the Interior.

EKI Environment & Water, Inc. 2019. "EKI Technical Presentation #3." Castac Basin GSA Board of Directors, June 4. https://www.castacgsa.org/files/10302db33/EKI+Castac+Basin+Technical+Presentation+2019-06-04.pdf.

Jones, Lucile M., Richard Bernknopf, Dale Cox, James Goltz, Kenneth Hudnut, Dennis Mileti, Suzanne Perry, et al. 2008. "The ShakeOut Scenario." USGS Open File Report 2008–1150. *Open-File Report*. U.S. Geological Survey. https://doi.org/10.3133/ofr20081150.

Kern County Fire Department Office of Emergency Services. 2021. "2020 Kern County Multi-Jurisdictional Hazard Mitigation Plan." Available: https://mitigatehazards.com/county-of-kern/kern-hmp-docs/.

Los Angeles County Department of Regional Planning. 2015. "Los Angeles County 2035 General Plan." Available: https://planning.lacounty.gov/long-range-planning/general-plan/.

Miller, Wade E, and Theodore Downs. 1974. "A Hemphillian Local Fauna Containing a New Genus of Antilocaprid from Southern California."

Natural Resources Conservation Service (NRCS). n.d. "National Soil Survey Handbook Title 430-VI." Accessed August 1, 2023. Available: https://directives.sc.egov.usda.gov.

Natural Resources Conservation Service (NRCS) Staff. n.d. "Web Soil Survey." Soil Survey Geographic Database (SSURGO). Using Web Soil Survey (WSS). Accessed October 13, 2023. https://websoilsurvey.nrcs.usda.gov/app/.

Paleo Solutions, Inc. 2021. "Paleontological Technical Study."

U.S. Geological Survey, California Geological Survey. 2000. "Geologic Zones."

Wilkerson, Gregg. 2017. "Kern Canyon, Lake Isabella and Walker Basin, Kern County California: Geology and Mining History Field Guide."

3.8 Greenhouse Gas Emissions

This section presents the physical and regulatory setting for *greenhouse gas* (GHG) emissions and identifies and evaluates potential GHG impacts that could result from the construction and operation and maintenance of the Proposed Project. This section provides information regarding the Proposed Project's GHG emissions, applicable regulations, environmental impacts, and mitigation measures to reduce or avoid significant effects.

3.8.1 Environmental Setting

Climate Change Overview

According to the U.S. Environmental Protection Agency (EPA), the term *climate change* refers to any significant change in measures of climate (e.g., temperature, precipitation, wind) lasting for an extended period (i.e., several decades or longer). Scientific consensus is that climate change is occurring, and that human activity contributes in some measure (perhaps substantially) to that change. The potential effects of climate change in California include sea-level rise and reductions in snowpack as well as an increased number of extreme-heat days per year, high ozone days, large forest fires, and drought years (CARB 2014). Globally, climate change could affect numerous environmental resources through potential, although uncertain, changes in future air temperatures and precipitation patterns. According to the International Panel on Climate Change (IPCC), the projected effects of climate change are likely to vary regionally but are expected to include the following direct effects (IPCC 2007):

- Higher maximum temperatures and more hot days over nearly all land areas
- Higher minimum temperatures and fewer cold days and frost days over nearly all land areas
- Reduced diurnal temperature range over most land areas
- Increase in the heat index over most land areas
- More intense precipitation events

Many secondary effects also are projected to result from climate change, including global rise in sea level, ocean acidification, impacts on agriculture, changes in disease vectors, and changes in habitat and biodiversity. The possible outcomes and feedback mechanisms that are involved are not understood fully, and much research remains to be done. However, over the long term, the potential exists for substantial environmental, social, and economic consequences.

Greenhouse Gases

Gases that trap heat in the atmosphere, known as the *greenhouse effect*, are called *greenhouse gasses*, or GHGs. Emissions of GHGs, if not sufficiently curtailed, contribute to global climate change.

GHG emissions from human activities primarily include carbon dioxide (CO_2), with much smaller amounts of nitrous oxide (N_2O), methane (CH_4, often from unburned natural gas),

sulfur hexafluoride (SF_6) from high-voltage power equipment, and hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs) from refrigeration/chiller equipment. Because the potential contribution to the greenhouse effect varies widely among GHGs, and because CO_2 is the gas most commonly referenced as a contributor to climate change, GHG emissions are often quantified and reported as CO_2-equivalent (CO_2e) emissions. *Global warming potential* (GWP) is a value calculated by the IPCC that reflects the *climate forcing* (the physical process of affecting the of climate) potential of 1 kilogram of a given GHG relative to that of an equivalent mass of CO_2e such that the GWP for CO_2 is always 1. The GWP of a GHG is calculated based on the intensity of infrared absorption (i.e., *radiative efficiency)* of the gas and how long the gas persists in the atmosphere (i.e., *lifetime*). CARB uses a GHG's 100-year GWP from IPCC's 4th Assessment Report (AR4) as the multiplying factor to determine CO_2e (IPCC 2007; CARB 2023). For example, SF_6 (which represents a small fraction of the total GHG emissions worldwide) has both a high lifetime relative to other GHGs and a very high radiative efficiency, with a calculated 100-year GWP of 22,800 as of the IPCC's 4AR. (IPCC 2007, tbl. TS.2). Therefore, an emission of 1 metric ton of SF_6 would be reported by CARB as 22,800 metric tons CO_2e ($MTCO_2e$). The 100-year GWPs of CH_4 and N_2O as of the 4AR are 25 and 298, respectively (IPCC 2007, tbl. TS.2). The principal GHG emissions from human activity that enter and accumulate in the atmosphere are as follows:

- **Carbon dioxide (CO_2):** CO_2 is a naturally occurring gas that enters the atmosphere through natural as well as anthropogenic (human) sources. Key anthropogenic sources include the burning of fossil fuels (e.g., oil, natural gas, coal), solid waste, trees, wood products, and other biomass as well as industrial chemical reactions, such as those associated with manufacturing cement. CO_2 is removed from the atmosphere when it is absorbed by plants as part of the biological carbon cycle.
- **Methane (CH_4):** Like CO_2, CH_4 is emitted from both natural and anthropogenic sources. Key anthropogenic sources of CH_4 include gaseous emissions from landfills, releases associated with the mining and materials extraction industries (in particular, coal mining), and fugitive releases from extraction and transport of natural gas and crude oil. Livestock and agricultural practices also emit CH_4. Small quantities of CH_4 are released during fossil fuel combustion.
- **Nitrous oxide (N_2O):** N_2O is emitted from both natural and anthropogenic sources. Significant anthropogenic sources include industrial activities, agricultural activities (primarily the application of nitrogen fertilizer), the use of explosives, combustion of fossil fuels, and decay of solid waste.
- **Fluorinated gases (HFCs, PFCs, and SF_6):** HFCs, PFCs, and SF_6 are synthetic gases emitted from a variety of industrial processes and contribute substantially more to the greenhouse effect on a pound-for-pound basis than the previously described GHGs. Fluorinated gases often are used as substitutes for ozone-depleting substances (i.e., chlorofluorocarbons, HFCs, and halons). These gases typically are emitted in small quantities, but because of their high GWPs, they are sometimes referred to as "high global warming potential gases."

GHG emissions cumulatively contribute to planet-wide atmospheric accumulations and, consequently, no regional "hot spots" of elevated concentrations of GHGs exist. Therefore, GHG emissions, existing or future, are not a localized phenomenon, and there are no localized geographical constraints related to GHG emissions within in the Proposed Project area.

Regional Setting

Human-caused GHG emissions have increased substantially since the pre-industrial era (last 150 years) and now are higher than ever (IPCC 2023). GHG emissions in the United States were 5 percent lower in 2020 than in 20202, the difference stemming largely from the impacts of the coronavirus (COVID-19) pandemic on travel and other economic activity. The 5-percent increase in total GHG emissions on 2021 was driven largely by an increase in CO_2 emissions from fossil fuel combustion due to economic activity rebounding after the height of the COVID-19 pandemic (EPA 2023).

The primary sources of GHG emissions in the U.S. are transportation (nearly 28 percent of 2021 GHG emissions), electricity production (25 percent), industry (23 percent), commercial and residential (13 percent), and agriculture (10 percent) emissions. Land use and forestry offset 12 percent of the total emissions by acting as a sink that absorbs CO_2 from the atmosphere. In the United States since 1990, managed forests and other lands have absorbed more CO_2 from the atmosphere than they emit (EPA 2023).

California GHG Emissions Inventory

In 2020, California's GHG emissions totaled approximately 369.2 million $MTCO_2e$ (CARB 2022). The primary sources of GHG emissions in the state by sector are as follows:

- Transportation: 38 percent
- Industrial: 22 percent
- Electricity generation: 11 percent
- Residential: 8 percent
- Agriculture and forestry: 9 percent
- Commercial: 6 percent

California's GHG emissions from 2014 to 2020 are shown in Table 3.8-1.

Table 3.8-1 California Greenhouse Gas Emissions, 2014 to 2020

Emission inventory category	2014	2015	2016	2017	2018	2019	2020	Percent total GHG emissions in 2020
Transportation	157.7	161.5	165.2	166.6	165.3	162.4	135.8	36.8%
Electric power	89.8	86.0	70.4	64.2	65.0	60.2	59.5	19.9%
Industrial	85.2	83.2	81.6	81.7	81.9	80.4	73.3	16.1%
Commercial & residential	35.6	36.3	37.2	37.6	37.4	40.5	38.7	10.5%

Emission inventory category	2014	2015	2016	2017	2018	2019	2020	Percent total GHG emissions in 2020
Agriculture	33.9	32.6	32.2	31.7	32.2	31.4	31.6	8.6%
High Global Warming Potential Gases	17.7	18.6	19.4	20.1	20.5	20.7	21.3	5.8%
Recycling & Waste	8.3	8.4	8.5	8.6	8.7	8.8	8.9	2.4%

Note: Percentage may not add to 100 percent due to independent rounding. All measurements are shown in million MT CO_2e.

Source: (CARB 2022)

Kern County GHG Emissions Inventory

In 2011, the Kern County Board of Supervisors signed a memorandum of understanding (MOU) with the San Joaquin Valley Air Pollution Control District (SJVAPCD) to develop a communitywide GHG emission inventory for the County of Kern. The MOU required GHG emission inventory to be developed for a base year (2005) and a forecasted year (2020). The GHG emissions inventories were estimated for nine primary sectors (Electricity Production and Consumption, Residential/ Commercial/ Industrial Combustion, Transportation, Fossil Fuels Industry, Industrial Processes, Waste Management, Agriculture, Forestry and Land Use, and Other Sources). The 2005 base year GHG emissions inventory was estimated to be 27 million $MTCO_2e$, of which the Fossil Fuel Industry sector represents 40 percent, followed by the Electricity Consumption sector at 22 percent. The 2020 forecasted GHG emissions inventory was estimated to be 27 million $MTCO_2e$, of which the Electricity Consumption sector represents 31 percent, followed by the Fossil Fuel Industry sector at 26 percent.

3.8.2 Applicable Regulations, Policies and Standards

Federal Regulations, Policies and Standards

Clean Air Act

In response to a lawsuit filed by California along with other states, cities, and environmental organizations on April 2, 2007, the U.S. Supreme Court found that GHGs are air pollutants covered by the Clean Air Act. The Court held that EPA must determine whether GHG emissions from new motor vehicles cause or contribute to air pollution that may reasonably be anticipated to endanger public health or welfare or whether the science is too uncertain to make a reasoned decision. In making such decisions, the EPA is required to follow the language of Section 202(a) of the Clean Air Act, which obligates it to prescribe (and from time-to-time revise) standards applicable to the emission of any air pollutant from any class or classes of new motor vehicles or new motor vehicle engines. The Supreme Court decision resulted from a petition for rulemaking under Section 202(a), filed by more than a dozen environmental, renewable energy, and other types of organizations.

On December 7, 2009, the EPA Administrator signed two findings regarding GHGs under Section 202(a) of the federal Clean Air Act:

- **Endangerment finding:** The current and projected concentrations of six key GHGs—CO_2, CH_4, N_2O, HFCs, PFCs, and SF_6—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 that threatens public health and welfare.

Energy Independence and Security Act

The Energy Independence and Security Act (EISA) of 2007 was signed into law on December 19, 2007, by President Bush. The EISA reinforces the energy reduction goals for federal agencies put forth in Executive Order 13423 and also introduces more aggressive requirements. The three key provisions enacted are the Corporate Average Fuel Economy Standards, the Renewable Fuel Standard, and the appliance/lighting efficiency standards (EPA 2023a). This act aids in the reduction of national GHG emissions through the following measures, among others (One Hundred Tenth Congress of the United States of America 2007):

- Increase the supply of alternative fuel sources by setting a mandatory renewable fuel standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022.
- Set a target of 35 miles per gallon for the combined fleet of cars and light trucks by model year 2020, direct National Highway Traffic Safety Administration (NHTSA) to establish a fuel economy program for medium- and heavy-duty trucks and create a separate fuel economy standard for work trucks.
- Prescribe or revise standards affecting regional efficiency for heating and cooling products, procedures for new or amended standards, energy conservation, energy efficiency labeling for consumer electronic products, residential boiler efficiency, electric motor efficiency, and home appliances.

Federal Vehicle Standards

In response to the Executive Order (EO) 13432 in 2007, the Bush Administration directed the EPA, the U.S. Department of Transportation, and the U.S. Department of Energy to establish regulations that reduce GHG emissions from motor vehicles, non-road vehicles, and non-road engines by 2008. In 2009, the NHTSA issued a final rule regulating fuel efficiency and GHG emissions from cars and light-duty trucks for model year 2011, and in 2010, the EPA and NHTSA issued a final rule regulating cars and light-duty trucks for model years 2012 to 2016.

In December 2021, EPA issued its final rule to revise existing national GHG standards for passenger cars and light trucks through model year 2026. NHTSA issued its fuel economy standards for model year 2024 to 2026 light-duty vehicles in March 2022. EPA also released new standards limiting nitrogen oxide (NO_x) emissions from heavy-duty trucks in December 2022. The standards increase fuel efficiency by 8 percent each year in model years 2024 and 2025 and 10 percent in model year 2026, reaching a fleetwide average of 49 miles per gallon (mpg) by

2026, an increase of almost 10 mpg from model year 2021 (Center for Climate and Energy Solutions, n.d.).

Prevention of Significant Deterioration and Title V Tailoring Rule

On May 13, 2010, the EPA issued a final rule that establishes a commonsense approach to addressing GHG emissions from stationary sources under the CAA permitting programs. This final rule sets thresholds for GHG emissions that define when permits under the New Source Review Prevention of Significant Deterioration (PSD) and Title V operating permit programs are required for new and existing industrial facilities. This final rule "tailors" the requirements of these CAA permitting programs to limit which facilities will be required to obtain PSD and Title V permits. Facilities responsible for nearly 70 percent of the national GHG emissions from stationary sources will be subject to permitting requirements under this rule. This includes the nation's largest GHG emitters: power plants, refineries, and cement production facilities (EPA 2010).

Use of Electric Transmission and Distribution Equipment Use

In accordance with 40 CFR part 98, subpart DD, owners and operators of electric power system facilities with a total nameplate capacity that exceeds 17,820 pounds (7,838 kilograms) of SF_6 and/or PFCs must report emissions of SF_6 and/or PFCs from the use of electrical transmission and distribution equipment. The electrical transmission and distribution equipment use source category consists of all electric transmission and distribution equipment and servicing inventory insulated with or containing SF_6 or PFCs used within an electric power system. This equipment includes, but is not limited to, gas-insulated substations; circuit breakers; switchgear, including closed-pressure and hermetically sealed-pressure switchgear; gas-insulated lines containing SF_6 or PFCs; gas containers such as pressurized cylinders; gas carts; electric power transformers; and other containers of SF_6 or PFC. Owners and operators are required to collect emissions data, calculate GHG emissions, and follow the specified procedures for quality assurance, missing data, recordkeeping, and reporting per then requirements of 40 CFR part 98 subpart DD – Electric Transmission and Distribution Equipment Use (EPA 2024).

State Regulations, Policies and Standards

California Air Resources Board (CARB) is the agency responsible for coordination and oversight of State and local air pollution control programs in California. Currently, no State regulations establish ambient air quality standards for GHGs. However, California has passed laws directing CARB to develop actions to reduce GHG emissions, and several State legislative actions related to climate change and GHG emissions have been enacted.

Executive Order S-3-05

In 2005, in recognition of California's vulnerability to the effects of climate change, Executive Order S-3-05 established a series of target dates by which statewide emissions of GHGs would be progressively reduced, as follows:

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.

- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

The 2020 reduction target was codified in 2006 as AB 32. However, the 2050 reduction target has not been codified, and the California Supreme Court has ruled that CEQA lead agencies are not required to use it as a significance threshold (Cleveland National Forest Foundation v. San Diego Association of Governments [2017] 3 Cal.5th 497).

Assembly Bill 32 and the California Climate Change Scoping Plan

In 2006, the California legislature passed AB 32 (Health and Safety Code §§ 38500 et seq.), also known as the Global Warming Solutions Act of 2006. AB 32 required CARB to design and implement feasible and cost-effective emission limits, regulations, and other measures so that statewide GHG emissions were reduced to 1990 levels by 2020 (representing a 25 percent reduction in emissions), anticipating that the GHG reduction goals would be met, in part, through local government actions. CARB identified a GHG emissions reduction target of 15 percent from existing levels for local governments and noted that successful implementation would rely on local government land use planning and urban growth decisions.

Pursuant to AB 32, CARB adopted the first Scoping Plan in December 2008 (CARB 2008), which was re-approved by CARB on August 24, 2011. The Scoping Plan outlined measures to meet the 2020 GHG emissions reduction goals by reducing the state's GHG emissions by 30 percent below projected 2020 business-as-usual emissions levels or about 15 percent from 2008 levels. The plan recommended measures for further study and possible State implementation such as new fuel regulations. The Scoping Plan estimated that a reduction of 174 million $MTCO_2e$ (about 191 million U.S. tons) from the transportation, energy, agriculture, and forestry sectors, and other sources could be achieved if the State implemented all the measures in the Scoping Plan. The Scoping Plan relied on the requirements of SB 375 (discussed next) to implement the carbon emission reductions anticipated from land use decisions.

AB 32 requires the Scoping Plan to be updated at least every 5 years. CARB approved the first update to the plan on May 22, 2014, and then again in 2017. The latest update was issued in December 2022. The 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan) lays out a path to achieve targets for carbon neutrality and reduce anthropogenic GHG emissions by 85 percent below 1990 levels no later than 2045. The actions and outcomes in the plan will achieve significant reductions in fossil fuel combustion by deploying clean technologies and fuels, further reductions in short-lived climate pollutants, support for sustainable development, increased action on natural and working lands to reduce emissions and sequester carbon, and the capture and storage of carbon (CARB 2022a).

Executive Order S-1-07

Executive Order S-1-07, signed in 2007, identified the transportation sector as the main source of GHG emissions in California, generating more than 40 percent of statewide emissions. Executive Order S-1-07 established a goal to reduce the carbon intensity of transportation fuels sold in California by at least 10 percent by 2020 and directed CARB to determine whether the Low Carbon Fuel Standard (LCFS) could be adopted as a discrete, early-action measure as part

of the effort to meet the mandates in AB 32. On April 23, 2009, CARB approved the proposed regulation to implement the LCFS. The LCFS was intended to reduce GHG emissions from the transportation sector in California by about 16 million metric tons in 2020 (CARB, n.d.).

Senate Bill 97

Senate Bill (SB) 97, enacted in August 2007, acknowledges that climate change is a prominent environmental issue requiring analysis under CEQA. SB 97 directed the Governor's Office of Planning and Research (OPR) to prepare, develop, and transmit guidelines to the California Natural Resources Agency for the feasible mitigation of GHG emissions or the effects of GHG emissions, as required by CEQA, no later than July 1, 2009. The California Natural Resources Agency was required to certify or adopt those guidelines by January 1, 2010. On December 30, 2009, the agency adopted the State CEQA Guidelines amendments, as required by SB 97. These amendments provided guidance to public agencies regarding analysis and mitigation of the effects of GHG emissions in draft CEQA documents. The amendments became effective on March 18, 2010 (California Natural Resources Agency 2009).

Senate Bill 605

SB 605 was enacted on September 21, 2014, requiring CARB to develop a comprehensive strategy to reduce emissions of short-lived GHGs in the state no later than January 1, 2016. As defined in SB 605, short-lived climate pollutant means "an agent that has a relatively short lifetime in the atmosphere, from a few days to a few decades, and a warming influence on the climate that is more potent than that of carbon dioxide." However, SB 605 does not prescribe specific compounds as *short-lived climate pollutants* or add to the list of GHGs regulated under AB 32. In developing the strategy, CARB completed an inventory of sources and emissions of short-lived GHGs in the state and, based on available data, identified research needs to address data gaps, identified existing and potential new control measures to reduce emissions, and prioritized development of new measures for short-lived climate pollutants that offer co-benefits by improving water quality or reducing other air pollutants that impact community health and benefit disadvantaged communities The *2022 Scoping Plan for Achieving Carbon Neutrality* (2022 Scoping Plan) lays out a path to achieving carbon neutrality and reducing anthropogenic GHG emissions by 85 percent below 1990 levels no later than 2045 and assesses progress toward the statutory 2030 target (see Executive Order B-30-15, below) (CARB 2022c).

Executive Order B-30-15 and Senate Bill 32

California Executive Order B-30-15 (April 29, 2015) set an "interim" statewide emission target to reduce GHG emissions to 40 percent below 1990 levels by 2030 and directed State agencies with jurisdiction over GHG emissions to implement measures pursuant to statutory authority to achieve the 2030 target. Specifically, the Executive Order directed CARB to update the Scoping Plan to express the 2030 target in metric tons. SB 32 was enacted on September 8, 2016, codifying the 2030 reduction target in Executive Order B-30-15. CARB's 2022 Scoping Plan update addressed the 2030 target, as discussed previously.

Senate Bill 375

SB 375 builds on the existing framework of regional planning to tie together the regional allocation of housing needs and regional transportation planning to reduce GHG emissions from motor vehicle trips. SB 375 directs CARB to set regional targets for reducing GHG emissions, to establish a "bottom up" approach so that cities and counties participate in development of regional plans to achieve those targets. To increase public participation and local government input, the law strengthens several existing requirements for public involvement in regional planning. It establishes a collaborative process between regional and State agencies to set regional GHG reduction targets and provides CEQA incentives for development projects that are consistent with a regional plan meeting those targets. Cities and counties maintain their existing authority over local planning and land use decisions.

Executive Order B-55-18

Executive Order B-55-18 was issued on September 10, 2018, establishing a new statewide goal of achieving carbon neutrality by 2045 and maintaining net negative emissions thereafter. This goal is in addition to the existing statewide GHG emissions reduction targets that were established by SB 375, SB 32, SB 1383, and SB 100.

Senate Bill 100

Adopted on September 10, 2018, SB 100 supports the reduction of GHG emissions from the electricity sector by accelerating the State's Renewables Portfolio Standard Program, which was established in 2002 with SB 1070 and last updated by Senate Bill 2 of the First Extraordinary Session (SB X1-2) in 2011. SB 100 required electricity providers to increase procurement from eligible renewable energy resources to 33 percent of total retail sales by 2020, 60 percent by 2030, and 100 percent by 2045 (CEC 2021).

Local Regulations, Policies and Standards

The CPUC has sole and exclusive State jurisdiction over the siting and design of the Proposed Project because it authorizes the construction, operation, and maintenance of investor-owned public utility facilities. Pursuant to GO 131-D section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters." Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the counties' and cities' regulations are not applicable as the counties and cities do not have jurisdiction over the Proposed Project. Accordingly, the following discussion of local land use laws, regulations, and policies is provided for informational purposes only.

San Joaquin Valley Air Pollution Control District Climate Change Action Plan

The SJVAPCD adopted the Climate Change Action Plan (CCAP) in August of 2008 (SJVAPCD 2008). The CCAP directed the District Air Pollution Control Officer to develop guidance to assist Lead Agencies, project proponents, permit applicants, and interested parties in assessing and reducing the impacts of project specific GHG emissions on global climate change.

In response to the CCAP, SJVAPCD developed and adopted the *Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA* and *District Policy – Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency* (SJVAPCD 2009a; 2009b). The guidance and policy rely on the use of performance-based standards, referred to as *best performance standards*, to assess significance of project-specific GHG emissions on global climate change during the environmental review process, as required by CEQA.

Eastern Kern Air Pollution Control District CEQA Guidelines Addendum

The EKAPCD has adopted an addendum to their EKAPCD CEQA Guidelines, *Addressing GHG Emission Impacts for Stationary Source Projects When Serving as the Lead CEQA* Agency (EKAPCD 2012). This addendum establishes a significant threshold of 25,000 $MTCO_2e$ per year. Therefore, projects that emit less than 25,000 $MTCO_2e$ per year would have a less than significant individual or cumulatively considerable impact on GHG emissions. The EKAPCD approach is compatible with SJVAPCD's approach to addressing GHGs.

South Coast Air Quality Management District Draft Interim CEQA Greenhouse Gas Significance Threshold

In October 2008, the SCAQMD prepared its Draft Interim CEQA Greenhouse Gas Significance Threshold (SCAQMD 2008). To evaluate operational impacts of proposed industrial projects, the SCAQMD recommended an interim threshold of 10,000 $MTCO_2e$ per year. Per SCAQMD guidance, construction emissions should be amortized over the operational life of a project, which is proposed at 30 years.

Los Angeles County Climate Action Plan – Revised Draft

The *Revised Draft 2045 Climate Action Plan* (2045 CAP) is the County's path toward meeting the goals of the Paris Agreement and achieving carbon neutrality for unincorporated Los Angeles County. The 2045 CAP builds on previous climate action work from the *Unincorporated Los Angeles County Community Climate Action Plan 2020* (2020 CCAP), adopted in October 2015 as a subcomponent of the Air Quality Element of the *Los Angeles County General Plan 2035* (General Plan). The 2045 CAP identifies strategies, measures, and actions to mitigate GHG emissions from community activities, which may include some municipal operations; however, municipal operations are not the focus of this plan. The 2045 CAP is an update to the 2020 CCAP, and it sets new GHG emissions reduction targets beyond the 2020 timeframe that are consistent with state goals pursuant to SB 32, AB 1279, and the 2022 Scoping Plan (Los Angeles County Department of Regional Planning 2015a; 2015b; 2023).

3.8.3 Applicant Proposed Measures

SCE has proposed measures to reduce environmental impacts. The significance of the impact is first considered prior to application of *applicant proposed measures* (APMs), and a significance determination is made. The implementation of the APMs is then considered as part of the Proposed Project when determining whether impacts would be significant and thus would require mitigation. These APMs would be incorporated as part of any CPUC project approval,

and SCE would be required to adhere to the APMs as well as any identified mitigation measures. The APMs are included in the MMRP for the Proposed Project, and the implementation of the measures would be monitored and documented in the same manner as mitigation measures. There are no APMs that would apply to potential GHG emissions for the Proposed Project.

3.8.4 Environmental Analysis

Approach to Impact Analysis

Section 15064.4 of the CEQA Guidelines addresses the significance of GHG emissions. Section 15064.4 calls for a lead agency to make a "good-faith effort" to "describe, calculate, or estimate" GHG emissions in CEQA environmental documents. Section 15064.4 further states that the analysis of GHG impacts should include consideration of: (1) the extent to which a project may increase or reduce GHG emissions, (2) whether project emissions would exceed a locally applicable threshold of significance, and (3) the extent to which a project would comply with "regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions."

The CEQA Guidelines also state that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project would comply with the requirements in a previously approved plan or mitigation program (including plans or regulations for the reduction of GHG emissions) that provides specific requirements to avoid or substantially lessen the cumulative problem within the geographic area in which the project site is located (CEQA Guidelines § 15064(h)(3)). However, it does not set a numerical threshold of significance for GHG emissions. The following guidance on measures to mitigate GHG emissions are provided when GHG emissions are found to be significant:

Consistent with section 15126.4(a), lead agencies shall consider feasible means, supported by substantial evidence and subject to monitoring or reporting, of mitigating the significant effects of greenhouse gas emissions. Measures to mitigate the significant effects of greenhouse gas emissions may include, among others, the following:

1. Measures in an existing plan or mitigation program for the reduction of emissions that are required as part of the lead agency's decision
2. Reductions in emissions resulting from a project through implementation of project features, project design, or other measures
3. Off-site measures, including offsets that are not otherwise required, to mitigate a project's emissions
4. Measures that sequester GHGs

In the case of the adoption of a plan such as a general plan, long range development plan, or plans for the reduction of greenhouse gas emissions, mitigation may include the identification of specific measures that may be implemented on a project-by-project basis. Mitigation may also include the incorporation of specific measures or policies found in an adopted ordinance or regulation that reduces the cumulative effect of emissions.

Calculation of GHG Emissions

For the Proposed Project, construction activities would be the primary source of GHG emissions. After becoming operational, the Project would not include any stationary sources of emissions. GHG emissions from worker trips for maintenance activities would be comparable to maintenance of the existing subtransmission line. Annual GHG emissions were estimated for construction activities using the CalEEMod model (CalEEMod.2020.4.0) for both on-road and off-road sources. Helicopter emissions were estimated based on the Swiss Federal Office of Civil Aviation (FOCA) Guidance on the Determination of Helicopter Emissions (FOCA 2015).

Appendix C presents emission calculations and assumptions spreadsheets supporting the GHG emissions inventory in this section.

Thresholds

See "Local Regulations, Policies and Standards", within Section 3.8.2.

The SJVAPCD has not adopted significant thresholds for GHG emissions. The EKAPCD has adopted a significant threshold of 25,000 $MTCO_2e$ per year. The most conservative emissions significance threshold of 10,000 $MTCO_2e$ per year established by the SCAQMD has been applied to assess the Proposed Project's impact on GHG emissions.

Summary of Impacts

Table 3.8-2 provides a summary of the CEQA significance criteria and impacts related to greenhouse gas emissions that would occur during construction and operation and maintenance of the Proposed Project.

Table 3.8-2 Summary of Proposed Project Impacts to Greenhouse Gas Emissions

Would the proposed project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.	☐	☐	☒	☐
b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.	☐	☐	☐	☒

Impacts Discussion

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?

Construction

During construction of the Proposed Project, the majority of GHG emissions would be generated from the operation of heavy equipment, construction-related vehicles, and helicopters. The following Proposed Project construction activities would produce GHG emissions:

- Vegetation clearing at pole work areas, along access roads, and at staging yards
- Grading of staging areas
- Removing old poles and excavating for new pole holes
- Pull boxes and vault construction at each end of underground conduit
- Vehicle traffic to and from work sites and staging yards
- Equipment and material transport via trucks and helicopters
- Conductor stringing via helicopters

A total of approximately 4,543 $MTCO_2e$ would be emitted by construction equipment over the 3-year construction period, as shown in Table 3.8-3. GHG construction emissions from construction activities amortized over 30 years is approximately 151 $MTCO_2e$.

The combined emissions from Proposed Project construction would be below the threshold of 10,000 $MTCO_2e$ per year. Therefore, impacts from GHG emissions would be less than significant. No mitigation is required.

Operation

The Proposed Project's GHG emissions from operation and maintenance would primarily result from vehicle travel to and from the Proposed Project area to conduct routine inspections and maintenance. Vehicle emissions associated with subtransmission line operation and maintenance would be similar to existing conditions because SCE currently conducts maintenance on the transmission of the existing subtransmission line, and the Proposed Project would not increase the intensity, frequency, or duration of inspections or maintenance for the subtransmission line.

Since the operation and maintenance activities and associated emissions would be far less than those for the construction activities and emissions, the annual CO_2e emissions from operation and maintenance activities would be well below the threshold of 10,000 $MTCO_2e$ per year. Therefore, impacts from GHG emissions during operation and maintenance would be less than significant. No mitigation is required.

Table 3.8-3 Proposed Project GHG Emissions

Year/criteria	Estimated Annual CO2e Emissions (MT)
2024	533
2025	2,227
2026	1,782
Total	**4,543**
30-year amortized	151
SJVAPCD	-
EKAPCD threshold	25,000
SCAQMD threshold	10,000
Thresholds exceeded?	No

Source: (SCE 2022)

Required APMs and MMs: None required.

b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases?

Construction, Operation, and Maintenance

Plans and policies adopted for the purpose of reducing GHG emissions in the Proposed Project area includes the *2017 Scoping Plan Update*, SB 32, SJVAPCD CCAP, and *Los Angeles County Revised Draft 2045 CAP*. The Proposed Project's consistency with these plans and policies is evaluated to determine whether the Proposed Project would conflict with an applicable plan, policy, or regulation adopted for reducing GHG emissions.

In 2008, SB 32 set a goal to achieve GHG emissions reductions of 40 percent below 1990 levels by 2030 and achieve eventual net carbon neutrality. Under AB 32, the first Climate Change Scoping Plan, which set the goal of reducing GHG emissions to 1990 levels by 2020, was released in 2008, to be updated every five years. The 2017 Scoping Plan Update shifted focus to achieving the SB 32 goal of reducing GHG emissions to 40 percent below 1990 levels by 2030 and assessed progress towards achieving the SB 32 goal of returning to 1990 GHG levels by 2020. The latter goal was achieved in 2016, and the 2022 Scoping Plan Update identified how the State could reach the 2030 climate target and substantially advance toward the State's goal of achieving net carbon neutrality by 2045, incorporating five dozen recommendations from the AB 32 Environmental Justice Advisory Committee (EJAC) (CARB 2022b; EJAC 2022).

The State's plan for meeting the SB 32 targets includes implementation of the LCFS and Renewables Portfolio Standard, which is aimed at delivering cleaner fuels and energy, the Advanced Clean Cars Program, which has put more than a quarter-million clean vehicles on the road, and the Sustainable Freight Action Plan, which will result in efficient and cleaner systems

to move goods throughout the state. The 2022 Scoping Plan Update enhances and implements these ongoing efforts to put the State on the path to achieving its 2030 target. These statewide programs are implemented at the State level, and compliance at a specific plan or project level is not addressed in the Scoping Plan. The Proposed Project would utilize vehicles that meet current standards at the time of construction and operation and would not conflict with the statewide programs designed to address the GHG emissions reduction goals in SB 32.

The SJVAPCD CCAP (SJVAPCD 2008) adopted the *Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA* and *District Policy – Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency (SJVAPCD 2009a; 2009b)*. The guidance and policy rely on the use of performance-based standards to assess significance of project specific GHG emissions on global climate change. However, these guidance plans are not applicable to the Proposed Project because the SCE is not a land use agency, and the Proposed Project is not considered a stationary source of GHG emissions; therefore, the Proposed Project would not conflict with the SJVAPCD CCAP and associated guidance for implementation.

The Los Angeles County 2045 CAP identifies strategies, measures, and actions to mitigate GHG emissions from community activities, under the categories of energy supply, transportation, building energy and water, waste, agriculture, forestry, and other land use in Los Angeles County (Los Angeles County Department of Regional Planning 2023). The CAP strategies and measures would not apply to the Proposed Project except for the transportation strategy to institutionalize low-carbon transportation that includes Measure T9: Expand use of zero-emission technologies for off-road vehicles and equipment. The performance objective for this measure is to increase the fleetwide percentage of off-road fleet and equipment in unincorporated Los Angeles County that are zero emission vehicles (ZEVs) by 20 percent by 2030 as well as construction, agriculture, and manufacturing equipment in unincorporated Los Angeles County that are ZEVs by 50 percent by 2030. The Proposed Project construction is anticipated to be completed before 2030; hence, the Proposed Project would not conflict with the measures in the CAP. None of the measures in the CAP apply to operation of electrical utility lines. Because the CAP transportation measure would not apply at the time of Proposed Project construction and the CAP strategies do not address electrical utility lines, the Proposed Project would not conflict with the Los Angeles County 2045 CAP.

As discussed above, the Proposed Project would be implemented under the framework of the statewide policies, and programs designed to implement SB 32 and the Proposed Project would not conflict with the strategies or measures in the SJVAPCD CCAP or Los Angeles County 2045 CAP; therefore, the Proposed Project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs, and no impact would occur.

Required APMs and MMs: None required.

3.8.5 References

California Air Resources Board (CARB). 2008. *Climate Change Scoping Plan*. Pursuant to AB 32 The California Global Warming Solutions Act of 2006. https://ww2.arb.ca.gov/sites/default/files/classic/cc/scopingplan/document/adopted_scoping_plan.pdf.

———. 2014. *First Update to the Climate Change Scoping Plan: Building on the Framework*. Available: https://ww2.arb.ca.gov/news/california-air-resources-board-approves-first-ab-32-scoping-plan-update.

———. 2022a. *2022 Scoping Plan for Achieving Carbon Neutrality: Executive Summary*. Available: https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents.

———. 2022b. "California's 2022 Climate Change Scoping Plan." Fact sheet. https://ww2.arb.ca.gov/sites/default/files/2022-06/2022_Scoping_Plan_FAQ_6.21.22.pdf.

———. 2022c. *California Greenhouse Gas Emissions for 2000 to 2020 Trends of Emissions and Other Indicators*. Sacramento, CA.

———. 2022d. *2022 Scoping Plan for Achieving Carbon Neutrality*. Available: https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents.

———. 2023. *California Greenhouse Gas Emissions from 2000 to 2021: Trends of Emissions and Other Indicators*. Sacramento, CA.

———. n.d. "LCFS Basics." Accessed March 7, 2024. Available: https://ww2.arb.ca.gov/resources/documents/lcfs-basics.

California Energy Commission (CEC). 2021. "2021 SB 100 Joint Agency Report: Achieving 100 Percent Clean Electricity in California: An Initial Assessment." CEC-200-2021-001. SB 100 Joint Agency Report: Charting a Path to a 100% Clean Energy Future. California Energy Commission.

California Natural Resources Agency. 2009. "Adopted Text of the CEQA Guidelines Amendments." Available: https://resources.ca.gov/admin/Legal/CEQA-Supplemental-Documents.

California Public Utilities Commission (CPUC). 1994. "General Order No. 131-D." Decision 94-06-014. https://docs.cpuc.ca.gov/PUBLISHED/Graphics/589.PDF.

———. 2019. *Guidelines for Energy Project Applications Requiring CEQA Compliance: Pre-Filing and Proponent's Environmental Assessments*. Version 1.0. Energy Division Infrastructure Permitting and CEQA Unit.

Center for Climate and Energy Solutions. n.d. "Federal Vehicle Standards." Policy Hub. Accessed October 31, 2023. https://www.c2es.org/content/regulating-transportation-sector-carbon-emissions/.

Eastern Kern Air Pollution Control District (EKAPCD). 2012. "Addendum to CEQA Guidelines Addressing GHG Emission Impacts from Stationary Source Projects When Serving As Lead CEQA Agency." Available: http://www.kernair.org/Main_Pages/Subpages/Rules_Sub/CEQA_Guidelines.html.

Environmental Justice Advisory Committee (EJAC). 2022. "Preliminary Draft of EJAC Scoping Plan Recommendations." https://ww2.arb.ca.gov/sites/default/files/barcu/board/books/2022/031022/ejacrecsrevised.pdf.

Federal Office Civil Aviation (FOCA). 2015. *Guidance on the Determination of Helicopter Emissions*. Edition 2. https://www.bazl.admin.ch/dam/bazl/de/dokumente/Fachleute/Regulationen_und_Grundlagen/guidance_on_the_determinationofhelicopteremissions.pdf.download.pdf/guidance_on_the_determinationofhelicopteremissions.pdf.

Intergovernmental Panel on Climate Change (IPCC). 2007. *AR4 Climate Change 2007: The Physical Science Basis*. Cambridge, United Kingdom and New York, NY, USA: Cambridge University Press. Available: https://www.ipcc.ch/report/ar4/wg1/.

———. 2023. *AR6 Synthesis Report: Climate Change 2023*. https://www.ipcc.ch/report/ar6/syr/.

Los Angeles County Department of Regional Planning. 2015a. *Los Angeles County 2035 General Plan*. Available: https://planning.lacounty.gov/long-range-planning/general-plan/.

———. 2015b. *Unincorporated Los Angeles County Community Climate Action Plan 2020*. County of Los Angeles.

———. 2023. *Los Angeles County 2045 Climate Action Plan*. SCH Number 2021120568. https://planning.lacounty.gov/long-range-planning/climate-action-plan/documents/.

One Hundred Tenth Congress of the United States of America. 2007. *Energy Independence and Security Act of 2007*. Vol. H.R. 6. https://www.gpo.gov/fdsys/pkg/BILLS-110hr6enr/pdf/BILLS-110hr6enr.pdf.

San Joaquin Valley Air Pollution Control District (SJVAPCD). 2008. "Climate Change Action Plan Staff Report." Available: https://www.valleyair.org/Programs/CCAP/CCAP_idx.htm.

———. 2009a. "District Policy - Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency." Available: https://www.valleyair.org/Programs/CCAP/CCAP_idx.htm.

———. 2009b. "Guidance for Valley Land-Use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA." Available: https://www.valleyair.org/Programs/CCAP/CCAP_idx.htm.

South Coast Air Quality Management District (SCAQMD). 2008. "Draft Guidance Document – Interim CEQA Greenhouse Gas (GHG) Significance Threshold."

Southern California Edison (SCE). 2022. "Proponent's Environmental Assessment for Southern California Edison Company's TLRR Gorman Kern River 66 kV Project."

U.S. Environmental Protection Agency (EPA). 2010. "Reconsideration of Interpretation of Regulations That Determine Pollutants Covered by Clean Air Act Permitting Programs; Final Rule." *Federal Register* 75 (63).

———. 2023a. "Summary of the Energy Independence and Security Act." April 25, 2023. https://www.epa.gov/laws-regulations/summary-energy-independence-and-security-act.

———. 2023b. "Sources of Greenhouse Gas Emissions." October 5, 2023. https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions.
———. 2024. "Subpart DD – Use of Electric Transmission and Distribution Equipment." Other Policies and Guidance. March 1, 2024. https://www.epa.gov/ghgreporting/subpart-dd-use-electric-transmission-and-distribution-equipment.

3.9 Hazards and Hazardous Materials

This section presents the environmental setting and impact analysis related to hazards and hazardous materials for the Proposed Project. This section provides information regarding existing hazards and hazardous materials in the Proposed Project area, applicable regulations, environmental impacts, and mitigation measures to reduce or avoid significant effects.

3.9.1 Environmental Setting

The Environmental Setting section provides information specific to hazards and hazardous materials in the vicinity of the Proposed Project. Specifically, this section describes the hazards to the public or the environment with respect to the potential presence of hazardous materials, aviation safety, emergency response, and fire.

Hazardous Materials Definition

Hazardous materials are chemical and non-chemical substances that can pose a threat to the environment or human health if misused or released. Hazardous materials occur in various forms and can cause death, serious injury, long-lasting health effects, and damage to buildings, homes, and other property. Hazardous materials are used in industry, agriculture, medicine, research, and consumer goods. Hazardous materials can include explosives, flammable and combustible substances, poisons, radioactive materials, pesticides, petroleum products, and other materials defined as hazardous under the Resource Conservation and Recovery Act (RCRA) in 40 CFR part 261. These substances are most often released as a result of motor vehicle or equipment accidents or because of chemical accidents during industrial use. Hazardous substances have the potential to leach into soils, surface water, and groundwater if they are not properly contained.

Shock Hazards

Alternating current (AC) electric transmission lines produce electric and magnetic fields (i.e., *electromagnetic fields,* or EMFs) which have the potential to create induced voltages and currents in nearby conductive objects. Nearby conductive objects could include buildings, roofs, fences, railroads, communication lines, pipelines, farm equipment, and vehicles. Induced voltages and currents can result in a number of potential hazards including electrical shock. Regulations and industry standards for safe construction and operation of transmission lines minimize the potential for the public to be exposed to hazards resulting from induced current and voltage.

An electric current can flow when there is an induced charge and a path is presented from one point to another. Electrical currents require a complete path, or *circuit*, from one voltage source to another. The potential for induced current and voltage impacts is typically avoided when the conductive objects are *grounded*, or connected to the earth. Multiple grounding points provide redundant protection. Unlike fences or buildings, mobile objects such as vehicles and farm machinery cannot be grounded permanently.

When a person or animal comes in contact with a conductive object in the vicinity of an operational power line, a perceptible current or electric shock may occur. Electric shock is a physical response to electric current flow through a part of a person's body. Factors that influence the likelihood of electrical shocks and the extent that people notice them include line voltage, conductor clearance, the size and type of the conductive object, location relative to the transmission line, atmospheric conditions, soil resistivity, and personal physiology.

For a person to receive an electrical shock, they must have at least two contact points to a voltage source, one of which might be the earth. An electric shock is received if a body completes an electrical circuit by touching an energized object and an electrical ground or touching an energized conductor and another at a different voltage. Without two contact points on the body for current to both enter and exit, there is no hazard of shock. This is why birds can safely rest on transmission lines without getting shocked—they make contact at only one point. Avian electrocution occurs if a bird completes an electric circuit by simultaneously touching two separately energized parts or an energized part and a grounded part of the electrical equipment. Unlike birds, people are usually standing on the ground when they contact a conductive object. The person touching a conductive object is actually making contact between two points (the energized object and the ground).

Even if a long linear parallel conductive object is grounded at two distant points, a hazardous situation can occur if a person touches the object somewhere between the two points, creating a different grounding point to complete the circuit (Oregon Department of Energey, 2013). Perpendicular linear structures have significantly less potential for induced currents and voltages. Based on historical information and industry standards, a 66 kV power line would need to be significantly parallel to an existing linear metallic pipeline or a long wire fence for induced currents and voltages to be of concern.

Ground Faults

An accidental connection between an electrical system conductor and the earth is called a *ground fault*. Ground faults may be caused by many things, including dirt buildup on conductor insulators (creating a dirty-water path for current from the conductor to the pole and to the ground when it rains), groundwater infiltration in buried lines, or fallen tree branches. A tree branch touching an energized overhead line would provide an accidental path for current to flow through the tree. A ground fault could result in induced current and voltage, with potentially hazardous impacts.

Electric Arcs

Electric arcs may form across small gaps between conductive surfaces. Arcing can also occur if a conductive object is raised such that it is too close to a transmission, power, or distribution line. Even excessive smoke can potentially provide a pathway to ground. More commonly, lightning strikes on overhead lines can create an ionized air path from the line to the tower during fault conditions. These arcs can have secondary effects such as ignition of flammable materials in the vicinity of the arc. It is theoretically possible for a spark discharge from the induced voltage on a large vehicle to ignite gasoline vapor during refueling; however, the likelihood of ignition is

very low. Vehicles should not be refueled under energized lines unless specific precautions are taken to ground the vehicle and the fueling source.

Existing Gas Pipelines

As shown in Figure 3.9-1, several existing gas pipelines cross or are in close proximity to the Proposed Project, including pipelines owned and operated by Southern California Gas Company, Mojave Pipeline Company, Kern River Gas Trans Company, Pacific Gas and Electric Company (PG&E), and Calpine Pipeline Network (CPN).

Schools

El Tejon School is located within 0.25 mile from the Proposed Project alignment. The nearest classroom at El Tejon School is located approximately 200 feet east of Segment 2 of the Proposed Project and approximately 1,060 feet from a staging yard (as shown in Figure 3.13-2 in Section 3.13 Noise).

Review of Existing/Known Hazardous Materials Releases

A database search for existing potentially hazardous sites was conducted for a 0.25-mile buffer around the Proposed Project alignment. The following state and federal databases for hazardous materials sites were reviewed:

- EPA National Priorities List (NPL) (USEPA, 2022)
- California Department of Toxic Substances Control (DTSC) sites (EnviroStor database) (DTSC, 2023)
- Leaking Underground Storage Tank, Department of Defense, and Site Cleanup Program sites (GeoTracker database) (SWRCB, 2023)
- Formerly Used Defense Sites (FUDS) (USACE, 2023)

Two active hazardous material sites are located within 0.25 mile of the Proposed Project (as listed in Table 3.9-1). Fifteen inactive and closed sites are located within 0.25 mile of the Proposed Project in unincorporated Kern County. One of the open sites is an emergency truck escape ramp (L10001698895), owned and operated by the California Department of Transportation (Caltrans), and the other site is an open Valero gas station owned by Chase Inc. The constituents of concern are benzene, diesel, gasoline, and petroleum hydrocarbons. The Central Valley Regional Water Quality Control Board (Central Valley Water Board) staff conducted annual inspections of the emergency truck escape ramp on June 25, 2020, and June 16, 2021, to evaluate compliance with Waste Discharge Requirements Order No. 96-062. Caltrans is currently in violation of Standard Provisions, Standard Condition B.1 and Provisions C.2 and C.7: Failure to comply with Monitoring and Reporting Program 96-042 (State Water Resources Control Board, 2023).

Table 3.9-1 Hazardous Sites within 0.25 Mile of the Project

Hazardous site name and type	Source of contamination	Status of hazardous site and date	Approximate distance to Project component /Project component
Mobil M-1 Crude Oil Pipeline (cleanup program site)	Crude oil, gasoline, polynuclear aromatic hydrocarbons (PAHs)	Completed: case closed (12/6/2018)	1,000 feet/staging area 290 feet/Segment 2
National Cement Co (LUST)	Lead	Completed: case closed (1/1/1999)	1010 feet /staging area 7512 feet /Segment 2
Los Robles Cement Plant (LUST)	Gasoline	Completed: case closed (7/15/2003)	1010 feet /staging area
Tejon Ranch (Ft. Tejon) (LUST)	Gasoline	Completed: case closed (4/24/1989)	2 feet /staging area
Chevron Station #9-8616 (LUST)	Gasoline	Completed: case closed (11/4/1994)	1010 feet /staging area 752 feet /Segment 2
Grapevine Texaco (LUST)	Gasoline	Completed: case closed (11/4/1991)	1010 feet/Staging Area
California Highway Patrol (LUST)	Gasoline	Completed: case closed (5/5/2006)	908 feet /staging area 274 feet /Segment 2
Tejon Valero (Permitted UST)	Gasoline	Confirmed/updated information (open)	938 feet/staging area
Pacific Pipeline Project: Tejon Ranch (EPA: preliminary assessment/site inspection)	Petroleum-hydrocarbon and metals contamination	Inactive: needs evaluation	353 feet /staging area 228 feet/Segment 2
Pacific Pipeline Project: Lebec (EPA: preliminary assessment/site inspection)	Petroleum-hydrocarbon	Inactive: needs evaluation	785 feet/staging area 146 feet/Segment 2
Mobil Grapevine Pumping Station 99-Grv (cleanup program site)	Crude oil	Completed: case closed (3/24/2017)	1035 feet /Segment 2
Emergency Truck Escape Ramp (Land Disposal Site)	Benzene, diesel, gasoline, toluene, total petroleum hydrocarbons (TPH)	Open: site assessment (4/20/2010)	839 feet /Segment 2
El Tejon School (LUST Cleanup Site)	Gasoline	Completed: case closed (12/6/1996)	980 feet /Segment 2

Hazardous site name and type	Source of contamination	Status of hazardous site and date	Approximate distance to Project component /Project component
Four corners pipeline (LUST cleanup site)	Gasoline	Completed: case Closed (5/4/1992)	896 feet /Segment 2
Unocal #3691 (LUST cleanup site)	nil	Completed: case closed (6/20/1991)	219 feet /Segment 1
Chevron #9-7876 (LUST cleanup site)	Gasoline, waste oil/motor/hydraulic /lubricating	Completed: case closed (4/22/2004)	980 feet /Segment 2
Mobil #11-F23 (LUST cleanup site)	Gasoline	Completed: case closed (8/27/1996)	980 feet/Segment 2

Airports and Air Strips & Airport Land Use Compatibility

There are no existing airports and air strips in the Proposed Project area. No portion of the Proposed Project alignment is located within the planning area of an airport land use compatibility plan (Kern County, 2012; Los Angeles County, 2004).

Emergency Services/Evacuation Plans

The California Governor's Office of Emergency Services (Cal OES) is responsible for overseeing and coordinating emergency preparedness, response, recovery and homeland security activities within the State of California. Cal OES established a Standard Emergency Management System (SEMS) to harmonize incident command, mutual aid agreements, roles, responsibilities, and training. Kern County and Los Angeles County each have developed and implemented emergency response plans.

Eight agencies are responsible for emergency services within the Proposed Project area:

- Kern County Fire Department
- Kern County Emergency Operations Center (EOC)
- Kern County Emergency Communication Center (ECC)
- Kern County Medical Reserve Corps (KMRC)
- City of Arvin Police Department
- Bakersfield Fire (Fire Station Number B10)
- County of Los Angeles Office of Emergency Management
- County of Los Angeles Fire Department

There are several designated evacuation routes that are crossed by the Proposed Project along Segment 1. These evacuation routes include SR 178, Edison Highway, SR 58, East Panama Lane, Panama Road, Buena Vista Road, and SR 223 (SCE, 2022). The Proposed Project alignment also crosses Interstate 5, which is identified by Los Angeles County as a disaster route. The

following public roadways crossed by the Proposed Project alignment lack a secondary point of access or exit: Badger Court, Quail Drive, Jacks Hill Road, Elkhorn Place, Longhorn Lane, and Angus Court along Segment 4, and Birkdale Court in Segment 5.

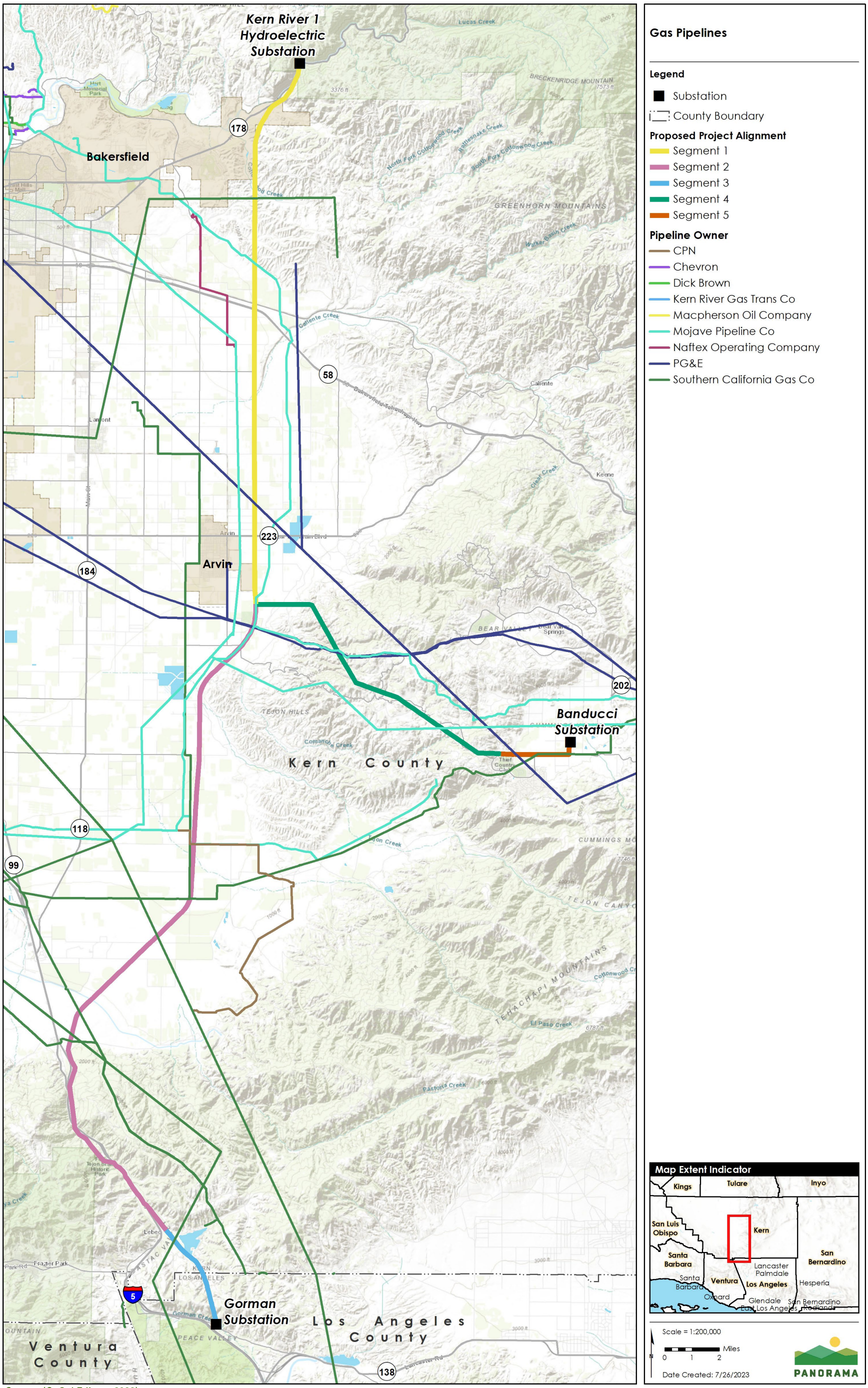
Wildfire Hazard

The CPUC has mapped high fire threat areas due to the elevated risk for power line fires. The CPUC High Fire Threat District (HFTD) map consists of three fire-threat areas (CPUC, 2023):

- Tier 1: High hazard zones on the Forest Service-CAL FIRE joint map of Tree Mortality High Hazard Zones
- Tier 2: Elevated fire risk (including likelihood and potential impacts on people and property) from utility-associated wildfires
- Tier 3: Extreme fire risk (including likelihood and potential impacts on people and property) from utility-associated wildfires

As shown in Figure 3.20-2 in Section 3.20 Wildfire, the northern portion of Segment 1, the southern portion of Segment 2, and the entire length of Segment 3 are located within a Tier 2 HTFD. The western portion of Segment 4 is located in a Tier 2 HFTD, and the eastern third of Segment 4 is located within a Tier 3 HFTD. The entirety of Segment 5 is located in a Tier 3 HTFD. For more information on the existing wildfire conditions in the Proposed Project area, applicable regulations, environmental impacts, and mitigation measures required to reduce or avoid significant effects from wildfire, see Section 3.20 Wildfire.

Figure 3.9-1 Gas Pipelines in the Proposed Project Vicinity



Source: (SoCal Edison, 2022)

3.9.2 Applicable Regulations, Policies, and Standards

Federal, state, and local regulations were reviewed for applicability to the Proposed Project.

Federal Regulations, Policies, and Standards

Federal Toxic Substances Control Act and Resource Conversation and Recovery Act

The Federal Toxic Substances Control Act (TSCA) and Resource Conservation and Recovery Act (RCRA) of 1976 established a program administered by EPA for the regulation of the generation, transportation, treatment, storage, and disposal of hazardous waste. The TSCA gives the EPA the authority to require reporting, record-keeping and testing requirements, and restrictions relating to chemical substances and/or mixtures. The RCRA, as amended in 1984 by the Hazardous and Solid Waste Act, gives the EPA the authority to control hazardous waste from the "cradle to grave" (USEPA, 2022; USEPA, 2021).

Comprehensive Environmental Response, Compensation, and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), commonly known as Superfund, was enacted by Congress on December 11, 1980. This law (USC Title 42 chapter 103) provides broad federal authority to respond directly to releases or threatened releases of hazardous substances that may endanger public health or the environment. CERCLA establishes requirements concerning closed and abandoned hazardous waste sites, provides for liability of persons responsible for releases of hazardous waste at these sites, and establishes a trust fund to provide for cleanup when no responsible party can be identified. CERCLA also enables the revision of the National Contingency Plan (NCP). The NCP (40 CFR part 300) provides the guidelines and procedures needed to respond to releases and threatened releases of hazardous substances, pollutants, and/or contaminants. The NCP also established the NPL.

CERCLA was amended by the Superfund Amendments and Reauthorization Act (SARA) on October 17, 1986. The act requires states to implement a comprehensive system to inform local agencies and the public when a significant quantity of such materials is stored or handled at a facility. Additionally, SARA identifies requirements for planning, reporting, and notification concerning hazardous materials (USEPA, 2021).

Clean Air Act

The Clean Air Act (CAA; 42 U.S.C. §§ 7401 et seq.) provides measures aimed at preventing the accidental release of hazardous materials into the atmosphere. Regulations implementing the CAA and governing hazardous materials emissions are provided in Title 40, part 68 of the CFR. Implementation of these regulations is intended to prevent the accidental release of hazardous materials into the environment.

Clean Water Act

Enacted in 1972, the Federal Clean Water Act (CWA; 33 U.S.C. §§ 1251 et seq.) and subsequent amendments outline the basic protocol for regulating discharges of pollutants to waters of the U.S. It is the primary federal law applicable to water quality of the nation's surface waters,

including lakes, rivers, and coastal wetlands. Enforced by the EPA, it was enacted "… to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." The CWA authorizes states to adopt water quality standards and includes programs addressing both point and non-point pollution sources. The CWA also established the NPDES and provides the USEPA with the authority to implement pollution control programs, such as setting wastewater standards for industry and water quality standards for surface waters (see below for a discussion of the NPDES program).

In California, regulatory authority under the CWA has been delegated by EPA to the SWRCB and its nine RWQCBs. Under Section 402 of the CWA as delegated to the State of California, a discharge of pollutants to navigable waters is prohibited unless the discharge complies with an NPDES permit. The SWRCB and RWQCBs have developed numeric and narrative water quality criteria to protect beneficial uses of state waters and waterways.

Federal Insecticide, Fungicide, and Rodenticide Act

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), amended in 1996, authorizes the EPA to register or license pesticides (including herbicides) for use in the U.S. Pesticides must be registered with EPA and the state before distribution (USEPA, 2022). Under FIFRA, the California Department of Pesticide Regulation (CDPR) is vested with primary responsibility to enforce pesticide laws and regulations in California. Pesticide rules are found in different sections of California codes and regulations, including the Food and Agriculture Code, Business and Professions Code, Health and Safety Code, and the Labor Code.

In general, CDPR regulates pesticide sales and use statewide whereas local use is enforced through the County Agricultural Commissioners. Many agricultural pesticides require a permit from the County Agricultural Commissioner before they may be purchased or used. The Agricultural Commissioner also enforces regulations to protect groundwater and surface water from pesticide contamination.

Occupational Safety and Health Administration

Occupational Safety and Health Administration (OSHA) regulations contained in 29 CFR contain employee safety provisions that are designed to minimize the hazards for employees who may encounter hazardous materials in the workplace. The regulations require training, operating procedures, and protective equipment to be used at work sites where hazardous materials could be encountered. The purpose of 29 CFR part 1910, Hazard Communication Standard, is to ensure that the hazards of all chemicals produced or imported are evaluated and that information concerning their hazards is transmitted to employers and employees. Information is to be communicated through comprehensive hazard communication programs, which are required to include container labeling and other forms of warning, Material Safety Data Sheets, and employee training (OSHA, 2022).

OSHA regulations require employers to take precautions when cranes and boomed vehicles are operated near overhead lines. Any overhead line shall be considered energized unless the

owner of the line or the electric utility company indicates that it has been de-energized and it is visibly grounded (29 CFR 1926.550 (a)(15)(vi)) (OSHA, 2022).

Pipeline and Hazardous Materials Safety Administration

The Pipeline and Hazardous Materials Safety Administration develops and enforces national policies for the safe, reliable, and environmentally sound operation of U.S. pipelines and transport of hazardous materials. 49 CFR section 192.467 (External corrosion control: Electrical isolation, part (f)) states: "Where a pipeline is located in close proximity to electrical transmission tower footings, ground cables or counterpoise, or in other areas where fault currents or unusual risk of lightning may be anticipated, it must be provided with protection against damage due to fault currents or lightning, and protective measures must also be taken at insulating devices."

Institute of Electrical and Electronics Engineers

To ensure public safety, the National Electrical Safety Code (NESC) requires induced current to be limited to less than 5 milliamperes (mA) for the largest anticipated truck, vehicle, or equipment under an energized line. This requirement is often referred to as the "5 mA Rule". The NESC is a voluntary standard adopted by most electric utilities in the U.S. The NESC is published and maintained by the Institute of Electrical and Electronics Engineers (IEEE).

IEEE Standard 80, "Guide for Safety in AC Substation Grounding" covers grounding methods at outdoor AC substations, both conventional and gas-insulated, and distribution, transmission, and generating plant substations (IEEE, 2020).

Federal Aviation Administration

Navigable airspace regulations at 14 CFR part 77 establish standards for determining obstructions in navigable airspace. The FAA issues the airspace hazard determinations (FAA, 2022).

All airports and navigable airspace not administered by the DoD are under the jurisdiction of the FAA. Title 14 part 77 of the CFR establishes the standards and required notification for objects affecting navigable airspace. In general, construction projects exceeding 200 feet in height—or those extending at a ratio greater than 100 to 1 (horizontal to vertical) from a public or military airport runway more than 3,200 feet long, out to a horizontal distance of 20,000 feet—are considered potential obstructions and require FAA notification. In addition, construction projects extending at a ratio greater than 50 to 1 (horizontal to vertical) from a public or military airport runway measuring 3,200 feet or less, out to a horizontal distance of 10,000 feet, are considered potential obstructions and require FAA notification. Title 14, Part 133 of the CFR also requires an operating plan to be developed in coordination with and approved by the local FAA Flight Standards District Office that has jurisdiction over when helicopter use would be required. FAA helicopter loading regulations are also found in 14 CFR Part 133.

Hazardous Materials Transportation Act

The U.S. Department of Transportation has the regulatory responsibility for the safe transportation of hazardous materials under the Hazardous Materials Transportation Act (HMTA), as amended and codified in 49 U.S.C. sections 5101 et seq (US Code, 2011).

State Regulations, Policies, and Standards

California Environmental Protection Agency

Cal-EPA was created in 1991. Its creation centralized California's environmental authority, consolidating the California Air Resources Board, SWRCB, Integrated Waste Management Board (IWMB), DTSC, Office of Environmental Health Hazard Assessment, and CDPR under one agency. These agencies were placed within Cal-EPA to create a cabinet-level advocate for the protection of human health and the environment and to ensure the coordinated deployment of state resources. CDPR, DTSC, IWMB, and SWRCB regulate hazardous materials and hazardous waste that have the potential to cause soil, water, and groundwater contamination (CalEPA, 2022).

Requirements for hazardous waste management in California implemented by DTSC are contained in both the California Health and Safety Code division 20 chapter 6.5: Hazardous Waste Control Law and 22 CCR. Under Government Code section 65962.5, the DTSC provides information to Cal-EPA on the lists of hazardous waste facilities, land designated as hazardous waste property, hazardous waste disposal sites, and others, and the information in the Hazardous Waste and Substances Statement required under subdivision (f) of that section (CalEPA, 2022).

Hazardous Materials Transportation

California has adopted U.S. Department of Transportation regulations for the intrastate movement of hazardous materials (26 CCR). The two state agencies with primary responsibility for enforcing federal and state regulations and responding to hazardous materials transportation emergencies are the California Highway Patrol (CHP) and the California Department of Transportation (Caltrans). CHP enforces hazardous material and hazardous waste labeling and packing regulations to prevent leakage and spills of material in transit and to provide detailed information to cleanup crews in the event of an accident. Vehicle and equipment inspection, shipment preparation, container identification, and shipping documentation are the responsibility of CHP, which conducts regular inspections of licensed transporters to assure regulatory compliance. Caltrans has emergency chemical spill identification teams at as many as 72 locations throughout the state that can respond quickly in the event of a spill.

California Occupational Safety and Health Administration

In California, California Occupational Safety and Health Administration (Cal/OSHA) regulates worker safety, as similar to OSHA. Cal/OSHA assumes primary responsibility for developing and enforcing state regulations related to workplace safety. Because California has a federal OSHA program, it is required to adopt regulations that are at least as stringent as those found

in 29 CFR. Cal/OSHA standards codified in 8 CCR are generally more stringent than federal regulations.

Title 8 CCR sections 2700 et. seq. "High Voltage Safety Orders" specifies requirements and minimum standards for safely installing, operating, working around, and maintaining electrical installations and equipment. Section 2946 identifies clearances for lines developed by the California Department of Industrial Relations, Division of Safety and Health through Cal/OSHA and contains provisions for preventing accidents due to proximity to overhead lines.

California Public Utilities Commission

CPUC General Order (GO) 95, Rules for Overhead Electric Line Construction, Section 35 covers all aspects of design, construction, and operation and maintenance (O&M) of overhead electrical lines and safety hazards. GO 95 is intended to ensure safety to workers engaged in the construction, O&M, and use of electrical facilities. The regulations are also intended to ensure the general reliability of the State's utility infrastructure and services. GO 95 establishes minimum clearances between line conductors and nearby vegetation for fire prevention purposes. These minimum clearances must be maintained through tree trimming prior to construction and throughout O&M of utility facilities (CPUC, 2021).

CPUC GO 166, Standards for Operation, Reliability, and Safety During Emergencies and Disasters, is intended to ensure that jurisdictional electric utilities are prepared for emergencies and disasters in order to minimize damage and inconvenience to the public that may occur as a result of electric system failures, major outages, or hazards posed by damage to electric distribution facilities. The standards require, among others, that each jurisdictional electric utility prepare an emergency response plan and update the plan annually; conduct annual emergency training and exercises using the utilities emergency response plan; and coordinate emergency plans with state and local public safety agencies (CPUC, 2021).

Local Regulations, Policies, and Standards

The CPUC has sole and exclusive State jurisdiction over the siting and design of the Proposed Project because it authorizes the construction, operation, and maintenance of investor-owned public utility facilities. Pursuant to GO 131-D section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters." Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the counties' and cities' regulations are not applicable as the counties and cities do not have jurisdiction over the Proposed Project. Accordingly, the following discussion of local land use laws, regulations, and policies is provided for informational purposes only.

Kern County Environmental Health Services Division

The Kern County Environmental Health Services Division is the Certified Unified Program Agency (CUPA) responsible for administering the hazardous materials program within Kern

County. The CUPA is the agency certified by the DTSC to conduct the Unified Program. The program consists of hazardous waste generator and on-site treatment programs, aboveground and underground storage tank programs, Hazardous Materials Management, Business Plans and Inventory Statements, and the Risk Management and Prevention Program.

Los Angeles County Fire Department
Los Angeles County Fire Department is the CUPA responsible for administering the hazardous materials program within the area of northern Los Angeles County, where the Proposed Project would be located.

Kern County Multi-Jurisdiction Hazard Mitigation Plan
Kern County and several participating jurisdictions prepared a Comprehensive Update to the Multi-Jurisdiction Hazard Mitigation Plan (MHMP) (Kern County Fire Department Office of Emergency Services, 2021). The purpose of the MHMP is to guide hazard mitigation planning to better protect the people and property of Kern County from the effects of hazard events. The plan demonstrates the commitment of each participating jurisdiction to reducing risks from hazards and serves as a tool to help decision makers direct mitigation activities and resources (Kern County Fire Department Office of Emergency Services, 2021).

Isabella Dam Failure Evacuation Plan
A portion of Segment 1 of the Proposed Project, including the Kern River 1 substation, is within the Isabella Dam Failure inundation area, as shown in Figure 3.10-5 of Section 3.10 Hydrology and Water Quality (Kern County, 2009). In early 2008, the United States Army Corps of Engineers completed the initial preparation of an updated map that shows the areas around metropolitan Bakersfield that would likely be flooded in the unlikely case that the Isabella Dam should fail at Lake Isabella. The Isabella Dam Failure Evacuation Plan provides the basic framework for response to an actual or potential failure of the Lake Isabella Dam. A portion of Segment 1 could cross Edison Highway and SR 58, which are designated evacuation routes for the Central Zone of the Isabella Dam Failure Evacuation Plan (Kern County Fire Department, 2009).

Kern County Emergency Operations Plan
Kern County Fire Department maintains and implements the Kern County EOP, which provides a framework for performing emergency functions in preparation for as well as during and after and emergency event. The EOP complies with state and federal emergency management systems, including the Standardized Emergency Management System (SEMS) and the National Incident Management Systems (NIMS). The EOP is comprised of four sections: (1) Basic Plan; (2) General Procedures; (3) Emergency Operations Center Procedures and Annexes; and (4) Contingency Plans. The Fire, Rescue, and Hazardous Materials Branch in the Emergency Operations Center Operations Section coordinates the activities of all personnel engaged in fire, rescue, and hazardous materials response (Kern County Fire Department, 2008).

Kern County Fire Department Unit Strategic Fire Plan

The Kern County Fire Department Unit Strategic Fire Plan documents the assessment of the wildland fire situation throughout the SRA within the county. It includes stakeholder contributions and priorities and identifies strategic target s for pre-fire solutions as defined by the people who live and work with the local fire problem. The goal of the plan is to reduce costs and losses from wildfire by protecting assets at risk through focused pre-fire management prescriptions and increasing initial attack success (Kern County Fire Department, 2018).

Los Angeles All-hazards Mitigation Plan

The Los Angeles All-hazards Mitigation Plan assesses risks from natural hazards and develops a mitigation plan for reducing the risks. The plan meets the requirements of the Disaster Management Act (DMA) and is guided by FEMA's Local Mitigation Plan Review Tool, which demonstrates how local hazard mitigation plans meet DMA regulations. The plan identifies wildfire risk for Los Angeles County and establishes mitigation strategies and actions that could be utilized to minimize wildfire risk (Los Angeles County, 2020).

Kern County General Plan

The Kern County General Plan Safety Element provides goals and policies for providing adequate public safety for Kern County (Kern County, 2009). The Safety Element contains a number of goals and policies relevant to the analysis of hazards and hazardous materials for the Proposed Project, as listed below.

General Plan Safety Goals

- Ensure that adequate emergency services and facilities are available to the residents of Kern County through the coordination of planning and development of emergency facilities and services.
- Reduce the public's exposure to fire, explosion, blowout, and other hazards associated with the accidental release of crude oil, natural gas, and hydrogen sulfide gas.

General Plan Safety Policies

- The County shall encourage extra precautions to be taken for the design of significant lifeline installations, such as highways, utilities, and petrochemical pipelines.
- The adopted Kern County, California, Multi-hazard Mitigation Plan is incorporated by reference. This multi-jurisdictional plan, approved in compliance with the Disaster Mitigation Act of 2000, provides long-term planning to reduce the impacts of future disasters.
- Innovative technologies to manage hazardous waste streams generated in Kern County will be encouraged.

General Plan Safety Implementation Measures

- Facilities used to manufacture, store and use of hazardous materials shall comply with the Uniform Fire Code, with requirements for siting or design to prevent on-site hazards from affecting surrounding communities in the event of inundation.

The Metropolitan Bakersfield General Plan

The Metropolitan Bakersfield General Plan includes the Safety Element, which provides goals and policies for providing adequate public safety for the City of Bakersfield (City of Bakersfield, 2002). The Safety Element contains a number of goals and policies relevant to the analysis of hazards and hazardous materials for the Proposed Project, as listed below.

General Plan Safety Goals

- To develop sustainable communities to preserve life, protect property, the environment, and the economy from natural hazards.
- Assure that fire, hazardous substance regulation and emergency medical service problems are continuously identified and addressed in a proactive way, in order to optimize safety and efficiency.

General Plan Safety Policies

- The adopted Kern County, California Multi-Hazard Mitigation Plan is incorporated by reference. This multi-jurisdictional plan, approved in compliance with the Disaster Mitigation Act of 2000, provides long-term planning to reduce the impacts of future disasters.
- Enforce ordinances regulating the use/manufactures/sale/transport/disposal of hazardous substances and require compliance with state and federal laws regulating such substances.
- The Kern County and Incorporated Cities Hazardous Waste Management Plan and Final Environmental Impact Report serves as the policy document guiding all facets of hazardous waste.

General Plan Safety Implementation

- The adopted multi-jurisdictional Kern County, California Multi-Hazard Mitigation Plan, as approved by FEMA, shall be used as a source document for preparation of environmental documents pursuant to CEQA, evaluation of project proposals, formulation of potential mitigation and identification of specific actions that could, if implemented, mitigate impacts from future disasters and other threats to public safety.
- Coordinate City and County efforts during review of proposed hazardous waste facilities, transportation rates, household and small business collection programs and public education programs

3.9.3 Applicant Proposed Measures

SCE has proposed measures to reduce environmental impacts. The significance of the impact is first considered prior to application of APMs, and a significance determination is made. The implementation of the APMs is then considered as part of the Proposed Project when determining whether impacts would be significant and would thus require mitigation. These APMs would be incorporated as part of any CPUC project approval, and SCE would be required to adhere to the APMs as well as to any identified mitigation measures. The APMs are included in the MMRP for the Proposed Project, and the implementation of the measures would

be monitored and documented in the same manner as mitigation measures. The APMs that are applicable to the hazards and hazardous materials analysis are provided in Table 3.9-2.

Table 3.9-2 Applicant Proposed Measures for Hazardous Material Impacts

APM Number	Requirements
HAZ-1	**Prepare a Hazardous Materials Management Plan.** SCE will prepare and implement a Hazardous Materials Management Plan (HMMP)/Hazardous Materials Business Plan (HMBP) during project construction. The plan will outline proper hazardous materials handling, use, storage and disposal requirements, as well as hazardous waste management procedures. This plan will be developed to ensure that all hazardous materials and wastes will be handled and disposed of according to applicable rules and regulations. The HMMP will address the types of hazardous materials to be used during the project, hazardous materials storage, employee training requirements, hazard recognition, fire safety, first aid/emergency medical procedures, hazardous materials release containment/control procedures, hazard communication training, PPE training, and release reporting requirements. It will also include fueling and maintenance procedures for helicopters and construction equipment. If on site refueling is necessary, BMPs shall be implemented in accordance with the project SWPPP. Refueling stations and fuel tanks will be located, maintained, and operated during construction in accordance with applicable laws and regulations pertaining to hazardous materials. If more than 1,320 gallons of petroleum products in containers greater than 55-gallons, a SPCC plan must be created prior to products being brought on-site. All construction personnel, including environmental monitors, will be made aware of local, state and federal emergency response reporting guidelines for accidental spills.
HAZ-2	**Prepare a Soil Management Plan**. A Soil Management Plan will be developed and implemented for the proposed project. The Soil Management Plan will provide guidance for the proper handling, on-site management, and disposal of impacted soil that may be encountered during construction activities. The Soil Management Plan will direct that during grading or excavation work, the construction contractor shall observe the exposed soil for visual evidence of contamination. If visual contamination indicators are observed during construction, potentially contaminated soil will be segregated, sampled, and tested to determine appropriate treatment and disposal options. Work in the area of the potentially contaminated soil will be stopped until appropriate measures are determined based on the testing results and are taken to protect human health and the environment. If the soil is classified as hazardous, it will be properly managed on location and transported in accordance with the U.S. Department of Transportation regulations using a Uniform Hazardous Waste Manifest to a Class I Landfill or other appropriate soil treatment or recycling facility. If potentially-contaminated groundwater is encountered, then groundwater samples will be collected and tested to determine appropriate treatment and disposal. Hazardous materials will be transported and disposed of in accordance with applicable rules, regulations, and SCE standard protocols designed to protect the environment, workers, and the public.
HAZ-3	**Prepare and Implement a Project-Specific Fire Management Plan**. A Fire Prevention and Emergency Response Plan will be developed to ensure the health and safety of construction workers, SCE personnel, and the public during Project construction. The Plan shall cover: • The purpose and applicability of the plan • Responsibilities and duties • Project areas where the plan applies

APM Number	Requirements
	• Procedures for incorporating Red Flag Warnings, Fire Potential Index (FPI), Project Activity Level (PAL), and equivalent indicators in determining fire weather related work restrictions • Procedures for fire reporting, response, prevention, and evacuation routes • Coordination procedures with federal and local fire officials • Crew training, including fire safety practices and restrictions • Fire suppression and communication equipment required to be on hand during construction • Method for verification that Plan protocols and requirements are being followed • Post-construction fire prevention and response measures The Project-specific Fire Prevention and Emergency Response Plan for construction of the project will be prepared by SCE and submitted to CPUC, CALFIRE, Inyo, Kern and San Bernardino counties, and local municipal fire agencies for review at least 30 days prior to initiation of construction. SCE will address all comments received from reviewing agencies and provide the final Fire Prevention and Emergency Response Plan to reviewing agencies for approval prior to initiating construction activities.
BIO-RES-2	**Develop Invasive Plant Management Plan.** SCE shall prepare and implement an Invasive Plant Management Plan (IPMP). This plan shall include measures designed to avoid the introduction and spread of new nonnative invasive plant species (invasive plants) and minimize the spread of existing invasive plants resulting from project activities. The IPMP shall be submitted to the CPUC and for review and approval prior to the start of construction. For the purpose of the IPMP, invasive plants shall include plants that (1) are invasive and rated high or moderate for negative ecological impact in the California Invasive Plant Inventory Database (Cal-IPC, 2006), or (2) aid and promote the spread of wildfires (such as Bromus tectorum (cheatgrass), Brassica tournefortii (Sahara mustard), and Bromus madritensis spp. Rubens (red brome)) or (3) identified by USFS as special concern. The IPMP will be implemented throughout project pre-construction, construction, and restoration phases. **Invasive Plant Management Plan** The IPMP will include the information defined in the following sections: **Assessment.** An assessment of the GKR Project's potential to cause spread or introduction of invasive plants into new areas, or to introduce new invasive plants into the ROW. This section will list known and potential invasive plants occurring on the ROW and in the project region and identify threat rankings and potential for project-related occurrence or spread for each species. This section will identify control goals (e.g., eradication, suppression, or containment) for invasive plants of concern with potential to occur on the ROW. **Pre-construction invasive plant inventory.** SCE shall inventory of all invasive plants of concern in areas (both within and outside the ROW) subject to project-related vegetation removal/disturbance, overland travel (drive and crush), and ground-disturbing activity. The invasive plants inventory area shall also include vehicle and equipment access routes within the ROW and all project staging and storage yards. Invasive plants of concern shall be mapped by area of occurrence and percent cover. The map will be updated with new occurrences at least once a year. **Pre-construction invasive plants treatment.** Invasive plant infestations identified in the pre-construction invasive plants inventory shall be evaluated to identify potential for project-related spread and potential benefits (if any) of pre-construction treatment. Pre-construction treatment will consider the specific invasive plants, potential seed banks, or other issues. The IPMP will identify any infestations to be controlled or eradicated prior to project construction. Control and follow-up monitoring of pre-construction invasive plants treatment sites will follow methods identified in appropriate sections of the IPMP.

APM Number	Requirements
	Prevention. The IPMP will specify methods to minimize potential transport of new invasive plant seeds onto the ROW, or from one section of the ROW to another. The ROW may be divided into "weed zones," based on invasive plants of concern in the ROW. The IPMP will specify inspection procedures for construction equipment entering the GKR Project area. Vehicles and equipment may be inspected and cleaned at entry points to specified sections of the ROW, and before leaving work sites where invasive plants of concern must be contained locally. Construction equipment shall be inspected to ensure it is free of any dirt or mud that could contain invasive plant seeds, roots, or rhizomes, and the tracks, outriggers, tires, and undercarriage will be carefully washed, with special attention being paid to axles, frame, cross members, motor mounts, underneath steps, running boards, and front bumper/brush guard assemblies. Other construction vehicles (e.g., pick-up trucks) that will be frequently entering and exiting the site will be inspected and washed on an as-needed basis. Tools such as chainsaws, hand clippers, pruners, etc., shall be cleaned of dirt and mud before entering project work areas. All vehicles will be washed off-site when possible. If off-site washing is infeasible, on-site cleaning stations (including air washing) will be set up at specified locations to clean equipment before it enters the work area. Wash stations will be located away from native habitat or special-status species occurrences. Wastewater from cleaning stations will not be allowed to run off the cleaning station site. When vehicles and equipment are washed, a daily log must be kept stating the location, date and time, types of equipment, methods used, and personnel present. The log shall contain the signature of the responsible crewmember. Written or electronic logs shall be available to CPUC monitors on request. Erosion control materials (e.g., straw bales) must be certified free of invasive plant seed ("weed-free") before they are brought onto the site. The IPMP must prohibit on-site storage or disposal of mulch or green waste that may contain invasive plant material. Mulch or green waste will be removed from the site in a covered vehicle to prevent seed dispersal and transported to a licensed landfill or composting facility. The IPMP will specify guidelines for any soil, gravel, mulch, or fill material to be imported into the GKR Project area, transported from site to site within the GKR Project area, or transported from the GKR Project area to an off-site location, to prevent the introduction or spread of invasive plants to or from the GKR Project area. **Monitoring.** The IPMP shall specify methods to survey for invasive plants of concern during pre-construction, construction, and restoration phases; and shall specify qualifications of specialists responsible for invasive plant monitoring and identification. It must include a monitoring schedule to ensure timely detection and immediate control of new invasive plant infestations to prevent further spread. Surveying and monitoring for invasive plant infestations shall occur at least two times per year, to coincide with the early detection period for early season and late season invasive plants. The monitoring section shall also describe methods for post-eradication monitoring to evaluate success of control efforts and any need for follow-up control. **Control.** The IPMP must specify manual and chemical invasive plant control methods to be employed. The IPMP shall include only invasive plant control measures with a demonstrated record of success for target invasive plants, based on the best available information. The plan shall describe proposed methods for promptly scheduling and implementing control activity when any project-related invasive plant infestation is located (e.g., located on a project disturbance site), to ensure effective and timely invasive plant control. Invasive plant infestations must be controlled or eradicated as soon as possible upon discovery, and before they go to seed, or when appropriate with the goal to prevent further spread. All proposed invasive plant control methods must minimize disturbance to native vegetation, limit ingress and egress to defined routes, and avoid damage to any environmentally sensitive areas

APM Number	Requirements
	(ESAs) identified within or adjacent to the ROW. New infestations by invasive plants of concern will be treated at a minimum of once annually until eradication, suppression, or containment goals are met. Invasive plant occurrences can be considered eradicated when no new seedlings or resprouts are observed for three consecutive years, or a single season where new seedlings or resprouts are observed in reference populations but not at the control site. Invasive plant control efforts may cease when eradication is complete. Manual control shall specify well-timed removal of invasive plants or their seed heads with hand tools; seed heads and plants must be disposed of in accordance with guidelines from the relevant County Agricultural Commissioners, if such guidelines are available. The focus of weed abatement will be manual control. Chemical controls will be avoided. If chemical controls are indicated for specific invasive species, the following guidelines shall be followed. The chemical control section must include specific and detailed plans for any herbicide use. It must indicate where herbicides will be used, which herbicides will be used, and specify techniques to be used to avoid drift or residual toxicity to native vegetation or special-status plants, consistent with the National Invasive Species Management Plan (NISC, 2008). All herbicide applications will follow U.S. Environmental Protection Agency label instructions and will be in accordance with federal, state, and local laws and regulations. Only state-approved herbicides may be used. Herbicide treatment will be implemented by a Licensed Qualified Applicator. Herbicides shall be applied in accordance with product labels and applicator licenses. Herbicides shall not be applied during or within 24 hours of high confidence predicted rain. Only water-safe herbicides shall be used in riparian areas or within channels (engineered or not) where they could run off into downstream areas. Herbicides shall not be applied in high wind conditions. **Reporting schedule and contents.** The IPMP shall specify reporting schedule and contents of each report.
TRA-1	SCE will implement traffic control measures consistent with those published in the Manual on Uniform Traffic Control Devices, as written and amended by Caltrans for the state of California (CA MUTCD) and using standard templates from the California Temporary Traffic Control Handbook (CATTCH) (California Inter-Utility Coordinating Committee 2018). These measures will be implemented as and where necessary as described in the CA MUTCD and/or CATTCH, or in ministerial permits.

CPUC Environmental Measures

The CPUC has developed additional standard measures to reduce potential impacts from wildfires. The CPUC standard measures are included in the MMRP for the Proposed Project and would be implemented during Proposed Project construction. The CPUC measure applicable for wildfire is listed in Table 3.9-3.

Table 3.9-3 CPUC Environmental Measures

CPUC Draft Environmental Measure	Requirement
Construction Fire Prevention Plan	A project-specific Construction Fire Prevention Plan for both construction and operation of the project shall be submitted for review prior to initiation of construction. A draft copy of the Plan shall be provided to the CPUC and state and local fire agencies at least 90 days before the start of any construction activities in areas designated as Very High or High Fire Hazard

CPUC Draft Environmental Measure	Requirement
	Severity Zones. Plan reviewers shall also include federal, state, or local agencies with jurisdiction over areas where the project is located. The final Plan shall be approved by the CPUC at least 30 days prior to the initiation of construction activities. The Plan shall be fully implemented throughout the construction period and include the following at a minimum: • The purpose and applicability of the Plan • Responsibilities and duties • Preparedness training and drills • Procedures for fire reporting, response, and prevention that include: – Identification of daily site-specific risk conditions – The tools and equipment needed on vehicles to be on hand at sites – Reiteration of fire prevention and safety considerations during tailboard meetings. – Daily monitoring of the red-flag warning system with appropriate restrictions on types and levels of permissible activity. • Coordination procedures with federal and local fire officials. • Crew training, including fire safety practices and restrictions • Method(s) for verifying that all Plan protocols and requirements are being followed A project Fire Marshal or similar qualified position shall be established to enforce all provisions of the Construction Fire Prevention Plan as well as perform other duties related to fire detection, prevention, and suppression for the project. Construction activities shall be monitored to ensure implementation and effectiveness of the Plan.
Fire Prevention Practices (Construction and Maintenance)	The Applicant shall implement ongoing fire patrols during the fire season as defined each year by local, state, and federal fire agencies. These dates vary from year to year, generally occurring from late spring through dry winter periods. During Red Flag Warning events, as issued daily by the National Weather Service, all construction/maintenance activities shall cease, with an exception for transmission line testing, repairs, unfinished work, or other specific activities which may be allowed if the facility/equipment poses a greater fire risk if left in its current state. All construction/maintenance crews and inspectors shall be provided with radio and cellular telephone access that is operational in all work areas and access routes to allow for immediate reporting of fires. Communication pathways and equipment shall be tested and confirmed operational each day prior to initiating construction/maintenance activities at each work site. All fires shall be reported to the fire agencies with jurisdiction in the area immediately upon discovery of the ignition. All construction/maintenance personnel shall be trained in fire-safe actions, initial attack firefighting, and fire reporting. All construction/maintenance personnel shall be trained and equipped to extinguish small fires in order to prevent them from growing into more serious threats. All construction/maintenance personnel shall carry at all times a laminated card and be provided a hard hat sticker that list pertinent telephone numbers for reporting fires and defining immediate steps to take if a fire starts. Information on laminated contact cards and hard hat stickers shall be updated and redistributed to all construction/maintenance personnel and outdated cards and hard hat stickers shall be destroyed prior to the initiation of construction/maintenance activities on the day the information change goes into effect. Construction/maintenance personnel shall have fire suppression equipment on all construction vehicles. Construction/maintenance personnel shall be required to park vehicles

CPUC Draft Environmental Measure	Requirement
	away from dry vegetation. Water tanks and/or water trucks shall be sited or available at active project sites for fire protection during construction. The Applicant shall coordinate with applicable local fire departments prior to construction/maintenance activities to determine the appropriate amounts of fire equipment to be carried on vehicles and, should a fire occur, to coordinate fire suppression activities.
Notify Utilities with Facilities Above and Below Ground	The Applicant shall notify all utility companies with utilities located within or crossing the project ROW to locate and mark existing underground utilities along the entire length of the project at least 14 days prior to construction. No subsurface work shall be conducted that would conflict with (i.e., directly impact or compromise the integrity of) a buried utility. In the event of a conflict, areas of subsurface excavation or pole installation shall be realigned vertically and/or horizontally, as appropriate, to avoid other utilities and provide adequate operational and safety buffering. In instances where separation between third-party utilities and underground excavations is less than 5 feet, the Applicant shall submit the intended construction methodology to the owner of the third-party utility for review and approval at least 30 days prior to construction. Construction methods shall be adjusted as necessary to assure that the integrity of existing utility lines is not compromised.

3.9.4 Environmental Analysis

Summary of Impacts

Table 3.9-4 presents a summary of the CEQA significance criteria and hazards and hazardous impacts that would occur during construction, operation and maintenance (O&M) of the Proposed Project.

Table 3.9-4 Summary of Proposed Project Impacts to Hazards and Hazardous Material

Would the Proposed Project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b) 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?	☐	☐	☒	☐
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐

Would the Proposed Project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☒	☐
e) Be located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, and result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
g) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☒	☐

Impact Discussion

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

Construction

Use of Hazardous Materials

Construction of the Proposed Project would require the use of gasoline, diesel fuel, oil, solvents, and lubricants for operation of construction vehicles and equipment. Helicopter and equipment refueling would also require transport of hazardous materials. The fuel truck for the helicopter and vehicle refueling would be used for limited periods of time during the construction period. A list of hazardous materials that would be used during construction is presented in Table 2-7 of Chapter 2: Project Description. These materials are considered hazardous because they are flammable and/or contain toxic compounds. Construction vehicles and equipment contain materials such as gasoline, diesel, antifreeze, and lubricants that, if accidentally released to the environment, could be hazardous to humans and the environment.

SCE would implement APM-HAZ 1, which requires implementation of an HMMP/HMBP for storing, use, and transport of hazardous materials to ensure that all hazardous materials and

wastes will be handled and disposed of according to applicable rules and regulations. APM HAZ-1 also requires BMPs to prevent accidental spills. Because SCE would implement APM HAZ-1, the impact from routine use of hazardous materials would be less than significant.

Treated Wood Poles and Asbestos Containing Materials

Existing wood poles to be removed were likely chemically treated with creosote, pentachlorophenol (penta), or other wood preservatives. Depending on the type, condition, and original chemical treatment, any wood poles removed for the Proposed Project would be returned to a staging area and either reused by SCE, returned to the manufacturer, or disposed of in a Class I hazardous waste landfill or RWQCB-approved Class III landfill or equivalent facility. These treated wood poles are considered hazardous and can be harmful if not properly stored off the ground, protected from precipitation, and disposed of properly in a specialized facility.

Pole foundations have the potential to contain asbestos-containing materials. Asbestos fibers can be released into the air by the disturbance of asbestos-containing material during the demolition of the pole foundations. As part of the Proposed Project, the pole foundations would be sampled in accordance with American Society for Testing Methods (ASTM) standard E2356-09, Standard Practice for Comprehensive Building Surveys, for the presence of asbestos prior to the start of removal activities. If asbestos-containing materials are identified, response actions would be performed in compliance with 8 CCR section 1529 and overseen and monitored per ASTM standards E1368-05, Standard Practice for Visual Inspection of Asbestos Abatement Projects, and D7201-06, Standard Practice for Sampling and Counting Airborne Fibers, Including Asbestos Fibers, in the Workplace, by Phase Contrast Microscopy (with an Option of Transmission Electron Microscopy). If a foundation is found to be an asbestos-containing material, it would be properly abated and disposed of in a California Department of Toxic Substances Control (DTSC)-approved landfill that accepts asbestos-containing wastes. The asbestos fibers are hazardous if airborne during demolition and can be harmful to the workers during demolition and removal of the foundations if proper PPE training is not provided to the workers.

The implementation of APM HAZ-1 would require that SCE prepare and implement a Hazardous Materials Management Plan (HMMP)/Hazardous Materials Business Plan (HMBP) during Project construction. The plan will outline proper hazardous materials handling, use, storage, and disposal requirements as well as hazardous waste management procedures. This plan will be developed to ensure that all hazardous materials and wastes will be handled and disposed of according to applicable rules and regulations. The pole-foundation sampling results would also inform the HMMP/HMBP required by APM HAZ-1. The HMMP/HMBP would also address the types of hazardous materials, hazardous materials storage, employee training requirements, hazard recognition, hazardous materials release containment/control procedures, hazard communication training, and PPE training. Because SCE would implement APM HAZ-1, the impact from routine use, transport and disposal of treated wood poles and asbestos containing material would be less than significant.

Operation and Maintenance
Operation and maintenance activities would be similar in scope to current operation and maintenance activities for the existing infrastructure. The hazardous materials used during operation and maintenance would consist of the fuel contained within vehicles that would be accessing the transmission corridor during inspections and maintenance activities.

Herbicides may be used to maintain vegetation clearance zones and control invasive weeds within the right-of-way. Because the Proposed Project involves replacement of the existing subtransmission line, the use and application rates of herbicides to maintain vegetation clearance is not expected to increase during operation and maintenance. The current protocols for use, transport, and disposal of hazardous materials, including herbicides, during Project operation and maintenance would continue to be implemented. Impacts from use of herbicides would be less than significant. In addition, SCE would implement APM BIO-RES-2, which would focus weed abatement with manual control to avoid use of herbicide application. Should herbicide be determined necessary, then all applications would follow U.S. Environmental Protection Agency label instructions and will be in accordance with federal, state, and local laws and regulations, and only state-approved herbicides shall be used. Because SCE would continue to follow the existing protocols for use, transport, and disposal of herbicides during Project operation and maintenance, along with the implementation of APM BIO-RES-2, the impact from routine use of hazardous materials would be less than significant.

Required APMs and MMs: APM HAZ-1 and APM BIO-RES-2

b) 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?

Construction
As discussed in part a) above, hazardous materials used during construction of the Proposed Project could result in an accidental spill, which could pose a significant hazard to the public or environment. However, as described under in part a) above, implementation of APM HAZ-1 and compliance with applicable regulations would reduce the potential hazardous material impacts resulting from the reasonably foreseeable upset or accident conditions to a less than significant level.

In addition to the hazardous materials used during construction of the Proposed Project, there is also the potential for construction to cause a release of hazardous materials due to the presence of gas and hydrocarbon pipelines within the Proposed Project area. Gas and hydrocarbon pipelines are located within the Proposed Project corridor and cross the Proposed Project line at eleven different locations (Figure 3.9-1). Pipeline damage or rupture could be caused by heavy equipment or vehicles traveling over the line or by ground-disturbing activities (e.g., grading, trenching, or augering foundation holes) that would occur during construction, which could result in the uncontrolled release of natural gas from a pipeline and/or cause a fire or explosion. Damage to pipelines, if it occurred, would be a significant impact. SCE would implement the CPUC Environmental Measure for utilities and services,

which requires SCE to notify and mark utilities at least 14 days prior to construction and to realign the poles or work areas in the event of a utility conflict. Because SCE would comply with the CPUC Environmental Measure for utilities, the impact from upset and accident conditions causing a release of hazardous materials as a result of damage to a gas or hydrocarbon pipeline would be less than significant.

Shock Hazards

Shock hazards are also present on the Proposed Project work site. Construction activities would involve relocating, reconductoring, burying, and transpositioning existing energized lines. However, the transmission, power, and distribution lines would not be electrified during construction; therefore, the potential for shock hazards from induced current would be low. Voltage impacts could occur during construction due to the incorrect closure of switches or circuit breakers at associated substations, or during accident scenarios such as existing energized overhead lines falling or coming in contact with a de-energized line. Atmospheric conditions such as lightning could also potentially induce current during construction; however, these situations rarely occur. In addition, the Proposed Project construction would meet or exceed IEEE, CPUC GO 95 and GO 166 safety standards, and OSHA and Cal/OSHA safety regulations; therefore, impacts resulting from induced current and voltage during construction of the Proposed Project would be less than significant.

Operation and Maintenance

Operation and maintenance activities would be similar in scope to current operation and maintenance activities for the existing subtransmission line. Use of hazardous materials such as fuels, lubricants, and herbicides for maintenance activities would be similar to that for the existing subtransmission line as the Proposed Project would be located adjacent the existing line and would have similar hardware and components. The Proposed Project would not require increased use of hazardous materials during operation and maintenance and would not result in increased risk of upset or accident conditions causing a release of hazardous materials. Therefore, the impact would be less than significant.

Similar to construction, the operation and maintenance of the Proposed Project would pose a risk of shock hazards. However, during operation and maintenance, the Proposed Project would meet or exceed IEEE, ANSI, CPUC GO 95 and GO 128 safety standards, and OSHA and Cal/OSHA safety regulations; therefore, impacts resulting from induced current and voltage during construction of the Proposed Project would be less than significant.

Required APMs and MMs: APM HAZ-1; CPUC EPM: Notify Utilities with Facilities Above and Below Ground

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

Construction

One school—El Tejon School in Lebec—is located within one-quarter mile of the Proposed Project and the proposed Lebec staging yard. The emissions generated during construction and handing of hazardous materials within proximity to the school are discussed below.

Emissions

Project construction equipment would generate emissions including diesel particulate matter ($PM_{2.5}$), a toxic air contaminant (TAC). Construction work would occur for only a few days at each of the Proposed Project work areas, substantially limiting the emissions exposure at El Tejon school from the subtransmission line construction; however, SCE would use the staging area for up to 6 months. The South Coast Air Quality Management District (SCAQMD) Tier 2 screening risk assessment was used to determine Maximum Individual Cancer Risk (MICR) and non-cancer Acute and Chronic Hazard Index (HIA and HIC, respectively). See Section 3.3 Air Quality for Health Risk Assessment (HRA) analysis. SCAQMD HRA significance thresholds is 10 in one million for MICR and 1.0 for the maximally exposed individual for (SCE, 2023). The emission from diesel-fueled construction equipment and vehicles used at the staging area with concentrations that exceed air quality SCAQMD Tier 2 HRA standards would be a significant impact.

The Proposed Project emissions of diesel $PM_{2.5}$ would not exceed the SCAQMD TAC concentration exposure thresholds near the sensitive receptors. The calculated MICR and HIC for each staging area is well below the SCAQMD significance thresholds of 10 in one million MICR and 1.0 HIC (See Section 3.3 Air Quality for Health Risk Assessment [HRA] analysis), indicating that the health risk impacts from activities occurring at the staging areas next to El Tejon School in Lebec is less than significant. The impact would be less than significant (refer to Section 3.3: Air Quality).

Hazardous Materials

Project construction would require the use of motorized heavy equipment, including vehicles that use gasoline, diesel, antifreeze, and lubricants. The materials listed in Table 2-7 in Chapter 2 Project Description, would be used throughout the Proposed Project area and would be temporarily stored during construction at the Lebec Staging Yard located 1,300 feet from El Tejon School. Helicopter refueling would also occur at the proposed Lebec staging yard.

With the exception of helicopter and other equipment fuel, which would be contained in storage tanks at individual staging yards or transferred to the helicopter or equipment by a large-capacity fuel truck, the quantities of hazardous materials that could be spilled would be small, which would limit their ability to be transported to a school site because small quantities would be absorbed into the soil immediately surrounding the spill, thereby limiting the extent of any hazardous effect. However, large-quantity hazardous materials spills (e.g., resulting from fuel truck or storage tank fuel transfer incidents) and subsequent transport of spilled materials by wind or water to a school would constitute a significant impact.

SCE would implement APM HAZ-1 during construction to address potential spills or leaks of hazardous materials. APM HAZ-1 requires that a HMMP be developed and implemented, which in part would also provide training for Project workers on hazardous materials protocols and BMPs to implement during refueling operations. APM HAZ-1 also requires an SPCC plan if more than 1,320 gallons of petroleum products in containers larger than 55 gallons are brought on site. Because APM HAZ-1 defines procedures for safe handling, transport, and storage of hazardous materials including procedures for refueling operations, implementation of APM HAZ-1 would prevent the exposure of the school to hazardous materials and, therefore, the impacts would be less than significant.

Operation and Maintenance

During operation, the subtransmission line would be unattended and operated remotely. Aerial and ground inspections of the subtransmission line would be similar to the existing inspections and would not increase the release of hazardous emissions or involve handling of hazardous or acutely hazardous materials, substances, or wastes in the Proposed Project area. Impacts would be less than significant.

Maintenance activities have the potential to use some of the hazardous materials identified in Table 2-7 in Chapter 2 Project Description. In the unlikely event that a leak or spill occurs, it would be minimal in volume and would affect a very limited area because only a small amount of hazardous material would be present in any one vehicle or piece of equipment.

Herbicides may be used to prevent vegetation from reestablishing following construction during the operational life of the transmission line and to control invasive weeds in the transmission corridor. Herbicide application currently occurs for the existing subtransmission line. The proposed replacement structures and associated relocation of the vegetation clearance zone would not increase the rate of herbicide application or change the types of herbicides used. The current protocols for use, transport, and disposal of hazardous materials, including herbicides, during Project operation and maintenance would continue to be implemented. While the impact would be less than significant, implementation of APM BIO-RES-2 would further reduce the potential impact of herbicide use by ensuring that herbicide applications follow U.S. Environmental Protection Agency label instructions and are conducted in accordance with federal, state, and local laws and regulations and that only state-approved herbicides are used. Herbicide treatment would be implemented by a Licensed Qualified Applicator and would not be applied during or within 24 hours of high confidence predicted rain. Because it is unlikely that a small amount of hazardous material would be present in any one vehicle during operation and maintenance activities and, additionally, APM BIO-RES-2 would be implemented, the impact would be less than significant.

Required APMs and MMs: APM HAZ-1, APM BIO RES-2

d) Be located on a site which is included on a list of hazardous materials sites compiled , pg 28pursuant to Government Code § 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

Construction

The Proposed Project area would not be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code section 65962.5. As discussed in Section 3.9.1, one listed open case of a hazardous material site is within 0.25 mile of the Proposed Project. The one open site in proximity to the Proposed Project is an Emergency Truck Escape Ramp located approximately 900 feet west of Segment 2. The potential contaminants of concern at the open site include benzene, diesel, gasoline, toluene, and total petroleum hydrocarbons, and the media of concern is still under investigation. The closest area of excavation for the Proposed Project is a proposed LWS transmission pole location approximately 900 feet east and situated uphill from the area of contamination. Given the distance from the site and the topographic conditions, there is no potential to encounter hazardous materials associated with the open site. While the Proposed Project is not located on an open hazardous materials site, SCE as part of their standard protocols would implement APM HAZ-2, which requires a Soil Management Plan to address disposal of any contaminated soil or groundwater that may be encountered during construction activities including dewatering. In the unlikely event that potentially contaminated groundwater is encountered during construction activities at this location, then groundwater samples would be collected and tested to determine appropriate treatment and disposal. Impacts would be less than significant.

Operation and Maintenance

Operation and maintenance activities would not involve excavation activities near or on an open hazardous site. The structures installed for the Proposed Project would be maintained in their existing locations. Impacts would be less than significant. No mitigation is required.

Required APMs and MMs: APM HAZ-2

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?

The Proposed Project is neither within an adopted airport land use plan nor within 2 miles of a public airport. There would be no impact associated with safety hazard or noise associated with an airport land use plan or proximity to a public use airport.

Required APMs and MMs: None.

f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

Construction

Temporary road or lane closures may be necessary during Proposed Project construction, including installation of temporary guard structures during the conductor installation, which would take less than one day at any one location. The temporary guard structures would be installed at road crossings to maintain vehicle access on roadways along the alignment, which may require temporary lane closures for workers and vehicle safety during the installation. Because the Proposed Project crosses roads and highways that are part of an emergency evacuation plan, temporary closure of a roadway or travel lane could impact an emergency evacuation plan.

There are several designated evacuation routes that are crossed by the Proposed Project along Segment 1. These evacuation routes include SR 178, Edison Highway, SR 58, East Panama Lane, Panama Road, Buena Vista Road, and SR 223 (SCE, 2022; Robert Olson Associates, 2009). The Proposed Project alignment also crosses Interstate 5, which is identified by Los Angeles County as a disaster route (Los Angeles County, n.d.). The following public roadways crossed by the Proposed Project alignment lack a secondary point of access or exit: Badger Court, Quail Drive, Jacks Hill Road, Elkhorn Place, Longhorn Lane, Angus Court along Segment 4, and Birkdale Court in Segment 5. Construction would also involve the movement of oversize vehicles that could affect emergency vehicle access to and through construction areas, which also has the potential to impact emergency response. Temporary road or lane closures could impair implementation of an emergency response plan or evacuation plan or disrupt emergency vehicle traffic and access, resulting in a significant impact.

During Proposed Project construction, SCE would coordinate with local jurisdictions and Caltrans to obtain encroachment permits for lane or roadway closures. All work on or over Caltrans facilities would require coordination with the Caltrans District 6 (Kern County) and District 7 (Los Angeles County) office, issuance of an encroachment permit, and approval of traffic control plans based on the 2014 (or latest) California Manual on Uniform Traffic Control Devices. In addition to the required coordination with Caltrans for temporary encroachment for lane or roadway closures, SCE would implement APM TRA-1, which requires the implementation of traffic control measures as written and amended by Caltrans for the state of California (CA MUTCD) and using standard templates from the California Temporary Traffic Control Handbook (CATTCH) (California Inter-Utility Coordinating Committee 2018). The coordination with Caltrans and the implementation of the traffic control measures would prepare SCE in responding accordingly avoid impairing or interfering with an adopted emergency response plan or emergency evacuation plan such as situating construction equipment to facilitate adequate emergency vehicle access in the case of an emergency. In the event of an emergency, construction would halt, and access would be restored for emergency responders. Additionally, MM TRA-3 requires SCE to notify local emergency personnel at least 1 week prior to lane or road closures. With implementation of Caltrans coordination, APM

TRA-1 and MM Traffic-3, construction of the Proposed Project would not interfere with emergency response or evacuation plans, and the impact would be less than significant.

Operation and Maintenance
Routine operation and maintenance of the Proposed Project would not involve lane or road closures. After construction, emergency access would be restored to baseline conditions. Impacts to emergency access would not occur. No impact would occur.

Required APMs and MMs: APM TRA-1, MM TRA-3

g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

Construction
As discussed in Section 3.20 Wildfire, the northern portion of Segment 1, the southern portion of Segment 2, and the entire length of Segment 3 are located within a Tier 2 (elevated fire risk) HTFD. The western portion of Segment 4 is located in a Tier 2 HFTD, and the eastern third of Segment 4 is located within a Tier 3 (extreme fire risk) HFTD. The entirety of Segment 5 is located in a Tier 3 HTFD (Figure 3.20-2 in Section 3.20 Wildfire).

Heat or sparks from vehicles or equipment have the potential to ignite dry vegetation and cause wildfires. Construction activities would primarily be confined to areas that have been cleared of vegetation, including access roads and work areas. Vehicles and equipment would access pole work areas via existing paved, dirt, and/or gravel access roads and overland travel routes, which would be cleared of brush to reduce fire potential; however, construction of the Proposed Project has the potential to spark or ignite a wildfire from vehicles and equipment, construction personnel smoking and improperly disposing of cigarettes, falling conductors or breaking of a transmission line during installation, and parking vehicles on dry vegetation. The impact on people and structures due to the increased risk of wildfire ignition is potentially significant. The Proposed Project would implement APM HAZ-3 to reduce wildfire risk to ensure the health and safety of construction workers, SCE personnel, and the public during construction. APM HAZ-3 specifies procedures for incorporating Red Flag Warnings, Fire Potential Index (FPI), Project Activity Level (PAL), and equivalent indicators in determining fire-weather-related work restrictions and requires and procedures for fire reporting, response, prevention, and evacuation routes. Construction of the Proposed Project would not directly or indirectly expose people or structures to significant risk of loss, injury, or death resulting from wildfires with implementation of APM HAZ-3 and standard fire prevention protocols. The impact would be less than significant.

Operation and Maintenance
The Proposed Project facilities would be unattended and operated remotely during operation. Maintenance and inspection of the subtransmission line would be conducted in the same manner as maintenance of the existing line. Current protocols for fire prevention would continue to be implemented during operation and maintenance. The area surrounding poles (approximately 10 feet) would be cleared of shrubs and other obstructions for inspection and

maintenance purposes, consistent with current maintenance practices. Vehicles used to access project components for maintenance activities would use existing access roads, which would reduce the potential for ignition of dry vegetation during vehicle trips. The replacement of the existing conductor and wood poles with steel poles would further reduce fire risks associated with the age and wear as well as potential breakage of the subtransmission line. The new steel poles would not be flammable and would provide greater durability and strength compared to the existing wood poles. The new line and poles would be constructed in accordance with current safety standards and the CPUC Fire Prevention Practices as part of the CPUC Environmental Measures. The Fire Prevention Practices require that SCE implement ongoing fire patrols during the fire season as defined each year by local, state, and federal fire agencies; cease maintenance activities during a Reg Flag Warning event; coordinate with applicable local fire departments prior to maintenance activities to determine the appropriate amounts of fire equipment to be carried on vehicles; and, should a fire occur, coordinate fire suppression activities. Impacts associated with wildfires would be less than significant.

Required APMs and MMs: APM HAZ-3

3.9.5 References

CalEPA. (2022). Cortese List: Section 65962.5(a). Retrieved from https://calepa.ca.gov/sitecleanup/corteselist/section-65962-5a.

CalEPA. (2022). History of the California Environmental Protection Agency. Retrieved from https://calepa.ca.gov/about/history01/

City of Bakersfield. (2002, December). Metropolitan Bakersfield General Plan. Retrieved from https://content.civicplus.com/api/assets/37a2e20d-e610-431f-a222-9f4f2ecd2ddd

CPUC. (2021). CPUC General Orders. Retrieved from https://www.cpuc.ca.gov/Home/Proceedings-and-Rulemaking/CPUC-general-orders

CPUC. (2023, May 30). *Fire-Threat Maps and Fire-Safety Rulemaking*. Retrieved from https://www.cpuc.ca.gov/industries-and-topics/wildfires/fire-threat-maps-and-fire-safety-rulemaking

Department, K. C. (2012). *Airport Land Use Compatibility Plan. .*

DTSC. (2023). EnviroStor. Retrieved from https://www.envirostor.dtsc.ca.gov/public/

FAA. (2022, April 4). Notification of Proposed Construction or Alteration on Airport Part 77. Retrieved from https://www.faa.gov/airports/central/engineering/part77

IEEE. (2020). IEEE Guide for Safety in AC Substantion Grounding. Retrieved from https://standards.ieee.org/ieee/80/225/.

Kern County. (2009). Isabella Dam Failure Evacuation Plan. Retrieved from https://kerncountyfire.org/wp-content/uploads/Isabella-Dam-Failure-Plan.pdf.

Kern County. (2009, September 22). Kern County General Plan. Retrieved from https://psbweb.co.kern.ca.us/planning/pdfs/kcgp/KCGP_Complete.pdf

Kern County. (2012, November 13). Airport Land Use Compatibility Plan.

Kern County. (2012, November 13). Airport Landuse Compatibility Plan. Retrieved from https://content.civicplus.com/api/assets/80f886a4-6789-4248-a3cb-1e267dd7c634

Kern County Department of Public Works. (2018, December 10). Isabella Failure Inundation. Kern County Department of Public Works. Retrieved from https://www.kernpublicworks.com/services/development/floodplain-management/lake-isabella-flood-area.

Kern County Fire Department. (2008). *Emergency Operations Plan.* Retrieved from https://kerncountyfire.org/education-safety/emergency-plans/

Kern County Fire Department. (2009, December). Isabella Dam Failure Evacuation Plan. Retrieved from https://kerncountyfire.org/education-safety/emergency-plans/

Kern County Fire Department. (2018, March). Unit Strategic Fire Plan.

Kern County Fire Department Office of Emergency Services. (2021). County of Kern Multi-Jurisdictional Hazard Mitigation Plan. Retrieved from https://mitigatehazards.com/county-of-kern/kern-hmp-docs/

Los Angeles County. (2004). Los Angeles County Airport Land Use Plan. Retrieved from https://planning.lacounty.gov/wp-content/uploads/2022/10/Los-Angeles-County-Airport-Land-Use-Plan.pdf

Los Angeles County. (2020). 2020 County of Los Angeles All Hazards Mitigation Plan.

Los Angeles County. (n.d.). *Disaster Routes with Road Districts.* Retrieved September 8, 2023, from https://pw.lacounty.gov/dsg/disasterroutes/

Oregon Department of Energey. (2013). *Induced Voltage and Current Report, A Review of Public Hazards Associated with High Voltage Transmission Lines.* Prepared By Godler Associates, Inc. Project Numer 07399810-029 and 031. Retrieved from https://digital.osl.state.or.us/islandora/object/osl%3A13023

OSHA. (2022). Regulations (Standards - 29 CFR). Retrieved July 14, 2022, from https://www.osha.gov/laws-regs/regulations/standardnumber

Robert Olson Associates. (2009, December). *Lake Isabella Dam Failure Evacuation Plan.* Retrieved September 8, 2023, from https://kerncountyfire.org/wp-content/uploads/Isabella-Dam-Failure-Plan.pdf

SCE. (2022). Proponents Enivironmental Assessment .

SCE. (2022). Proponent's Environmental Assessment for Southern California Edison Company's TLRR Gorman Kern River 66 kV Project.

SCE. (2023). *SCE HRA* .

SoCal Edison. (2022, September 21). Pipelines. SoCal Edison.

State Water Resources Control Board. (2023). Geotracker. *EMERGENCY TRUCK ESCAPE RAMP (L10001698895)*. Retrieved January 2023, from https://geotracker.waterboards.ca.gov/profile_report.asp?global_id=L10001698895

State Water Resources Control Board. (2023, January 4). GeoTracker Database. California. Retrieved from https://geotracker.waterboards.ca.gov/

SWRCB. (2023). Geotracker. Retrieved from https://geotracker.waterboards.ca.gov/

U.S. Department of Transportation. (2020, July 16). Airports. *National Transportation Atlas Database (NTAD)*. Bureau of Transportation Statistics (BTS).

U.S. Department of Transportation, Federal Aviation Administration-Aeronautical Information Services. (2023, June 15). Airports. *National Transportation Atlas Database (NTAD)*. Bureau of Transportation Statistics (BTS). Retrieved from https://geodata.bts.gov/.

US Code. (2011). Title 49 Subtitle III Chapter 51 - Transportation of Hazardous Material. Retrieved from https://www.govinfo.gov/app/details/USCODE-2011-title49/USCODE-2011-title49-subtitleIII-chap51

USACE. (2023). The Formerly Used Defense Sites (FUDS) Geographic Information System (GIS). Retrieved January 2023, from https://www.usace.army.mil/Missions/Environmental/Formerly-Used-Defense-Sites/FUDS-GIS/

USEPA. (2021, September 28). Summary of the Comprehensive Environmental Response, Compensation, and Liability Act (Superfund). Retrieved from https://www.epa.gov/laws-regulations/summary-comprehensive-environmental-response-compensation-and-liability-act

USEPA. (2021, October 22). Summary of the Toxic Substances Control Act. Retrieved from https://www.epa.gov/laws-regulations/summary-toxic-substances-control-act.

USEPA. (2022, March 28). Federal Insecticide, Fungicide and Rodenticide Act (FIFRA) and Federal Factilities. Retrieved from https://www.epa.gov/enforcement/federal-insecticide-fungicide-and-rodenticide-act-fifra-and-federal-facilities

USEPA. (2022, December 22). National Priorities List (NPL) Sites - by State. Retrieved January 2023, from https://www.epa.gov/superfund/national-priorities-list-npl-sites-state.

USEPA. (2022, June 29). Resource Conservation and Recovery Act (RCRA) Overview. Retrieved from https://www.epa.gov/rcra/resource-conservation-and-recovery-act-rcra-overview

3.10 Hydrology and Water Quality

This section presents the environmental setting and impact analysis for hydrology and water quality for the Proposed Project. This section addresses the existing hydrological and water quality conditions in the Proposed Project area, applicable regulations, environmental impacts, and mitigation measures to reduce and avoid significant effects.

3.10.1 Environmental Setting

Regional Setting

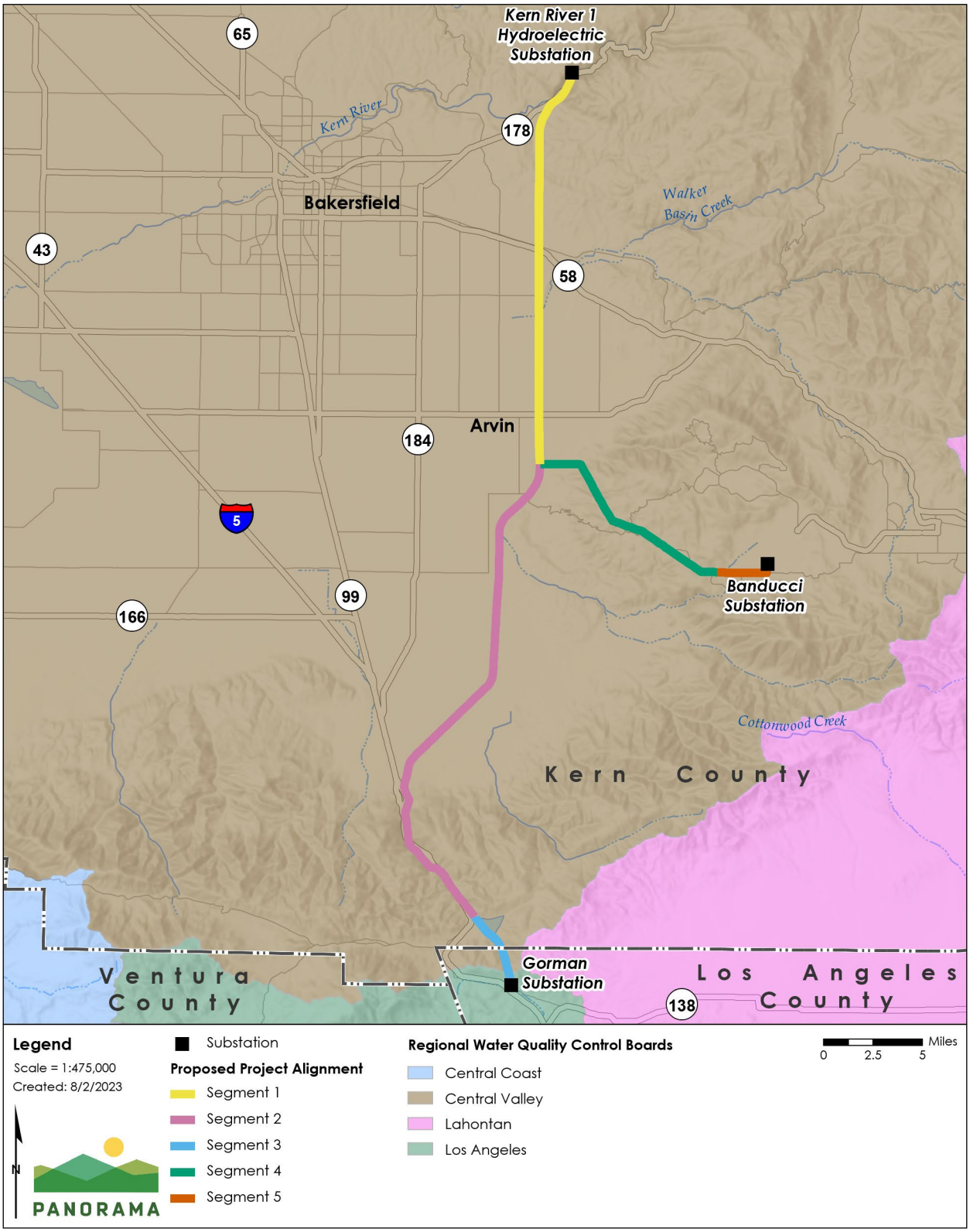
The Proposed Project area is mostly located within the jurisdiction of the Central Valley RWQCB (CVRWQCB); the southern portion of the Proposed Project area (including the Gorman Substation) is located within the jurisdiction of the Los Angeles RWQCB (LARWQC), as shown in Figure 3.10-1.

The CVRWQCB, comprising approximately 40 percent of the state of California, stretches from the Oregon border to the Kern–Los Angeles county line and is divided into three basins. The Proposed Project area is within Tulare Lake Basin, at the southern end of the Central Valley, which includes the drainage area of the San Joaquin Valley, south of the San Joaquin River (CVRWQB 2018). Th closed Tulare Lake Basin is topographically bound by the Diablo and Temblor Ranges on the west, the San Emigdio and Tehachapi Mountains on the south, and the Sierra Nevada Mountains on the east. Surface water from the Tulare Lake Basin drains north into the San Joaquin River in years of extreme rainfall. This area is covered under the Central Valley Region Water Quality Control Plan for the Tulare Lake Basin (CVRWQB 2018).

The LARWQCB covers all coastal watersheds and drainages flowing to the Pacific Ocean between Rincon Point (on the coast of western Ventura County) and eastern Los Angeles County. The LARWQCB is covered under the LARWQCB Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties (LARWQCB 2014).

The topography within the Proposed Project region consists of relatively flat agricultural fields in the valley bottoms and upland areas consisting of alluvial fans, canyons, and mountainous terrain. Natural drainage patterns within the region have been modified by urban development (e.g., residential, commercial, road, and highway developments) and large areas of agricultural use. The Tulare Lake Basin has been developed extensively for agriculture and petroleum extraction and is one of the most productive agricultural regions within the United States.

Figure 3.10-1 Regional Water Quality Control Boards



Source: (DWR 2021)

Surface Waterbodies

Drainages, Creeks, and Streams

The watersheds within the Proposed Project area are shown in Figure 3.10-2. The majority of the Proposed Project area is located within the Middle Kern–Upper Tehachapi–Grapevine watershed, which drains approximately 2,617 square miles of the southern San Joaquin Valley (USGS 2015). The Middle Kern–Upper Tehachapi–Grapevine watershed consists of a series of drainage systems that convey runoff from the surrounding mountain ranges to terminal lakebeds, such as Buena Vista Lake, Kern Lake, and Tulare Lake. Although these lakes historically held water, most flows from contributing streams are diverted for irrigation or percolate before reaching the valley floor. The major drainage features include the Kern River, Caliente Creek, Walker Basin Creek, Tejon Creek, El Paso Creek, Tunis Creek, and Grapevine Creek. The Kern River flows along the northern areas of the watershed and has the largest drainage basin of all the major Tulare Lake Basin rivers (Central Valley Regional Water Quality Control Board (CVRWQB) 2018). The waters of the upper Kern River are held back by Isabella Dam, at the junction of the south fork and the main stem of the river. Below the dam, the Kern River flows are almost entirely diverted into a series of canals before the river reaches Kern Lake and Buena Vista Lake (EPA 2007).

Surface water features in the watershed are shown in Table 3.10-3 and include streams draining the Tehachapi Mountains, the California Aqueduct, and a network of irrigation canals and ditches. There are 23,407 linear feet of streams and other surface water drainage features in the Proposed Project area. Table 3.10-1 lists the major waterbodies crossed by the Proposed Project alignment. Most of the streams have perennial and ephemeral segments due to the seasonal nature of rainfall and the relatively low amount of yearly rainfall, or due to effects of diversions for agricultural or industrial use. A significant portion of surface water flow is also diverted and used for groundwater recharge in the region. Under normal conditions, most water in creeks and streams percolates into the alluvial sediments and minimal surface water reaches the valley floor; however, during extreme flood events, it is possible that waters could enter the Kern River through historical channels and former wetlands that have long since been drained (CVRWQB 2018).

The southernmost portion of Segment 3 is located in the Santa Clara River watershed (USGS 2015). The Santa Clara River is the major drainage feature that originates on the northern slope of the San Gabriel Mountains in Los Angeles County, traverses Ventura County, and flows into the Pacific Ocean. At approximately 100 miles in length within a 1,200-square-mile watershed, it is the largest river system in southern California that remains in a relatively natural state (LARWQCB 2014).

Table 3.10-1 Creeks and Canals within the Proposed Project Area

Project segment(s)	Creek/canal
1	Kern River
1	Cottonwood Creek
1	Caliente Creek
1, 2, 4	Arvin-Edison Canal
2	Tejon Creek
2	El Paso Creek
2	Wheeler Ridge-Maricopa 850 Canal
2	California Aqueduct
2	Grapevine Creek
4	Comanche Creek
5	Chanac Creek

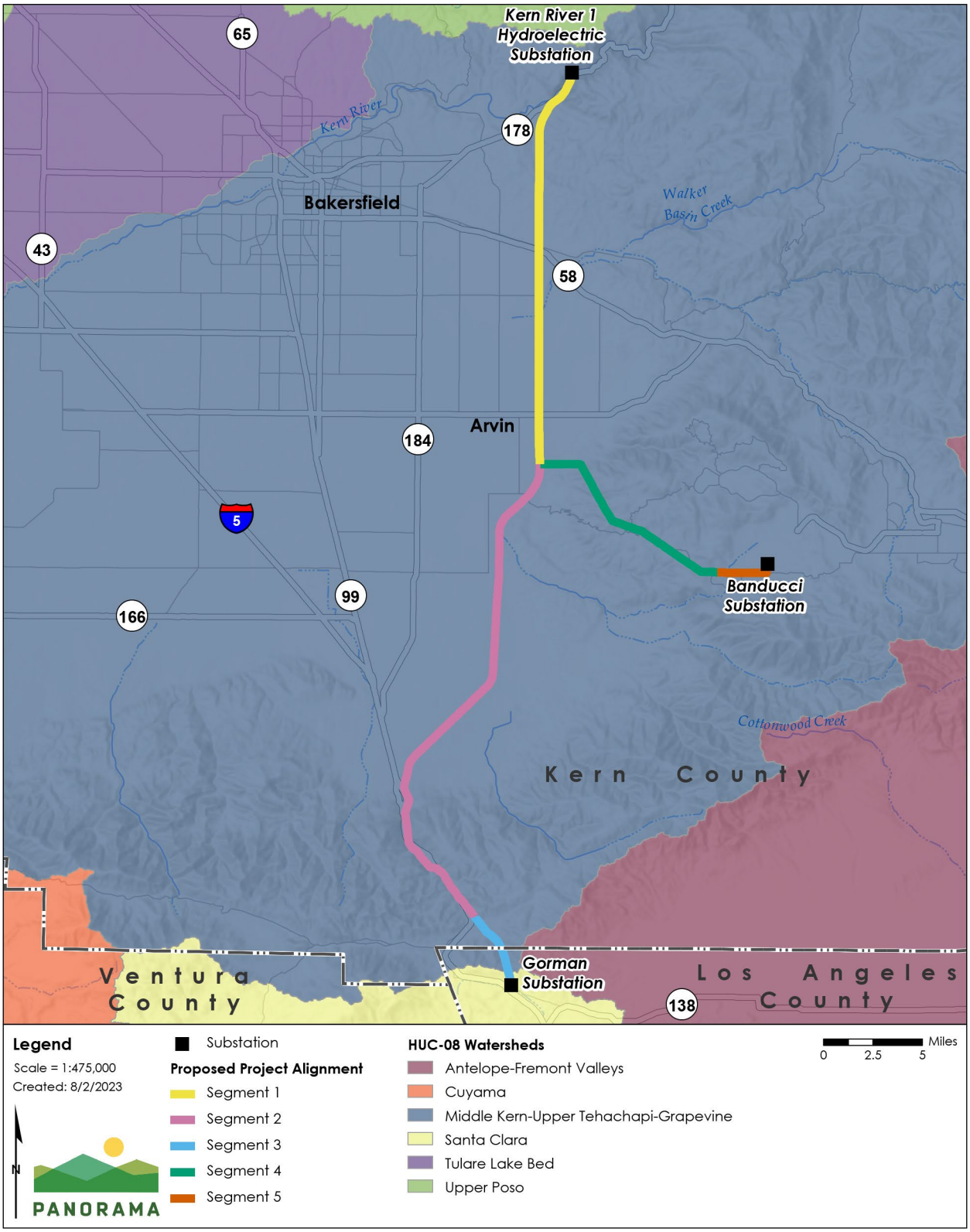
Source: (USGS 2022)

Reservoirs, Ponds, and Lakes

A portion of Segment 3 runs closely along the southwestern shoreline of Castac Lake, a natural saline sink at the eastern end of the Castac Valley formed along the Garlock Fault (DWR 2004). The main inflows to Castac Lake are Cuddy Creek and small intermittent streams originating in Bear and Crane Canyons, draining a total of 56 square miles into the lake.

The Proposed Project area also crosses or is adjacent a variety of agricultural-related reservoirs, including stock ponds and retention basins. No other reservoirs, ponds, or lakes are located within the Proposed Project area. Reservoirs and lakes in the vicinity of the Proposed Project are shown on Figure 3.10-3

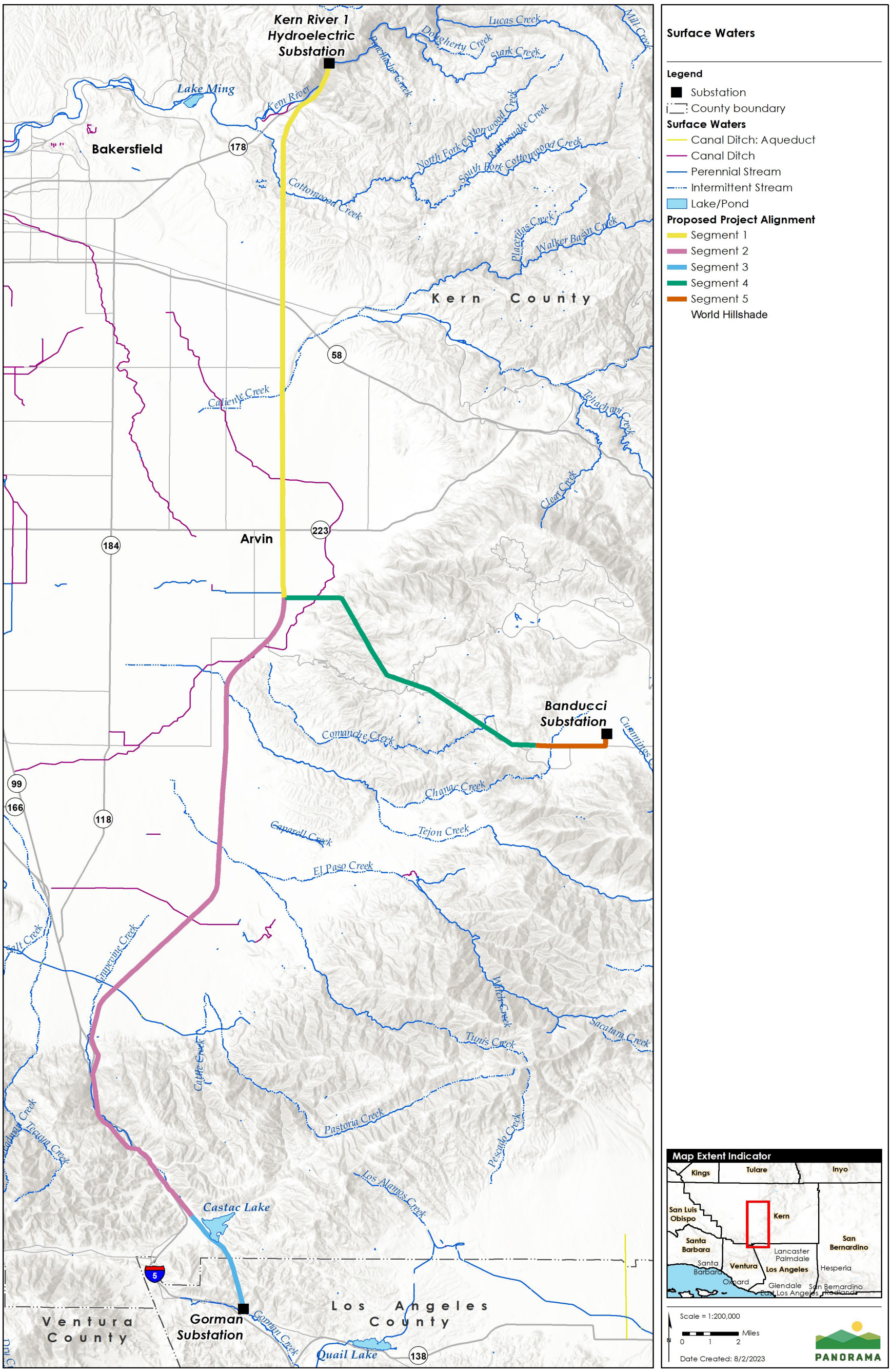
Figure 3.10-2 Watersheds within the Proposed Project Area



Source: (USGS 2015)

This page is intentionally left blank.

Figure 3.10-3 Surface Waters in the Proposed Project Area



Source: (USGS 2022)

This page is intentionally left blank.

Wetlands

Aquatic resource delineations were conducted for the entire Proposed Project area, the results of which are discussed in Section 4.4 Biological Resources. A total of 1.718 acres of wetlands were delineated within the wetland delineation survey area, which included a 75-foot buffer from the Proposed Project alignment and 100-foot buffer from each existing tower (Arcadis 2022). Wetlands generally occur in drainage bottoms within mountainous terrain, such as within Segment 1 through the southern Sierra Nevada and Segments 2 and 3 through the Tehachapi Mountains, and primarily consist of freshwater emergent and forested wetlands along with riparian woodlands. Wetlands are shown in Appendix D.

Tsunamis and Seiches

A *tsunamis* is a seismically induced waves generated by sudden movements of the ocean bottom during earthquakes, landslides, or volcanic activity. Los Angeles County is bordered by the Pacific Ocean to the west, and several active and potentially active earthquake faults are located within the Proposed Project area. An earthquake occurring off shore or as far away as Asia could result in tsunami generation that could impact areas within the county. However, the Proposed Project area is located approximately 45 miles from the coastline and is not located in a tsunami inundation area.

A *seiche* is a wind or earthquake-induced "standing wave" within an enclosed water body such as a bay, lake, or reservoir. The nearest closed waterbody to the Proposed Project area is Castac Lake, which is adjacent Segment 3 (USGS 2022). Movement on any of the active or potentially active faults located in the Proposed Project area or its vicinity could create a seiche on this standing waterbody; however, the lake is relatively shallow and the effects, if any, would be restricted to the immediate vicinity of the shorelines. Therefore, the Proposed Project would not be located in an area susceptible to seiches.

Flooding Potential and Dam Failure Inundation Areas

A Special Flood Hazard Area (SFHA), as defined by the Federal Emergency Management Agency (FEMA), is an area of land that has a 1-percent chance of being inundated by a flood during any given year. An SFHA is also referred to as a 100-year flood zone. Figure 3.10-4 shows the flooding potential within the Proposed Project area. Portions of Segments 1 and 2 are located within a SFHA (FEMA 2022). Segment 3 also crosses a regulatory floodway in the Castac Valley. A *regulatory floodway* is the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height (FEMA 2020).

There are no dams or levees located within the Proposed Project area. The nearest dams are listed in Table 3.10-2 and shown in Figure 3.10-5. Upstream dams where floodwaters could affect the Proposed Project area include Isabella Dam and Democrat Diversion Dam, on the Kern River, and J.C. Jacobsen Dam on a tributary to Chanac Creek (USACE 2022). Isabella Dam is owned and operated by USACE and is located downstream of the confluence of the north and south forks of the Kern River, approximately 31 miles upstream of the Proposed Project area,

and has a storage capacity of 568,000 acre-feet of water (USACE 2022). Democrat Diversion Dam was constructed for operation of SCE Kern River 1 Hydroelectric Powerhouse and only has a maximum storage of 247 acre-feet (USACE 2022). J.C. Jacobsen Dam is owned by Tehachapi-Cummings County Water District and provides 1,820 acre-feet of storage within Brite Valley Reservoir.

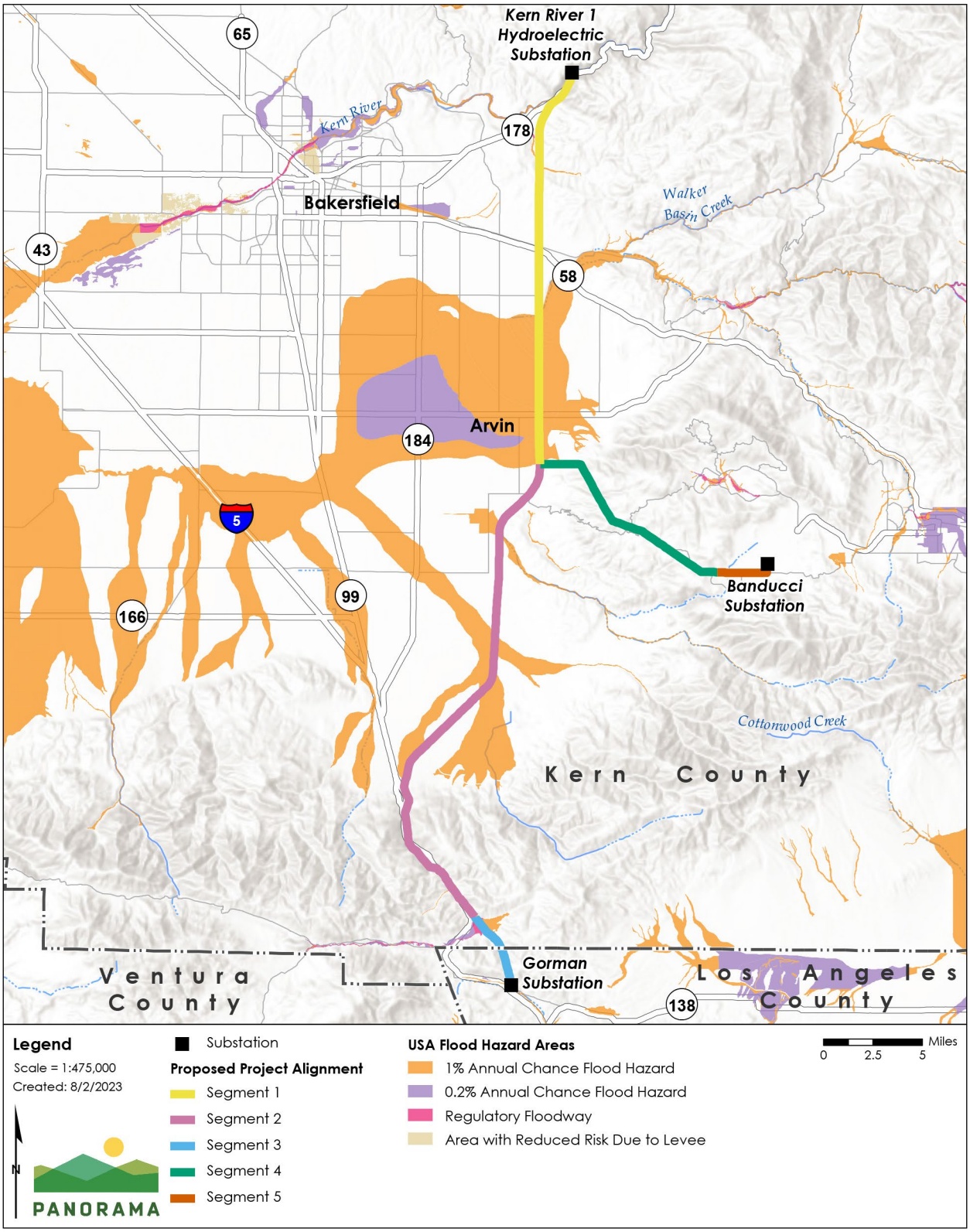
Isabella and J.C. Jacobsen dams are classified as high hazard potential, a rating indicating that failure or mis-operation would likely result in loss of human life (U.S.Department Homeland Security 2013). The Proposed Project area is located within the dam failure inundation areas for both Isabella and J.C. Jacobson dams, as shown in Figure 3.10-5. The northern portion of Segment 1 and the Kern River 1 substation are located within the 1-hour flood time zone for Isabella Dam failure and within the 1.1-hour flood time zone for J.C. Jacobsen failure (Kern County GIS 2018).

Table 3.10-2 Dams in the Proposed Project Vicinity

Dam	Owner/operator	Distance to Project feature (river miles)	Project downstream?
Isabella Dam	USACE	31.06	Yes
Democrat Diversion Dam	SCE	10.63	Yes
Rio Bravo Diversion	Olcese Water District	1.32	No
Kern River County Park Dam (Lake Ming)	Kern County Parks and Recreation	6.54	No
J.C. Jacobsen Dam	Tehachapi-Cummings County Water District	8.15	Yes

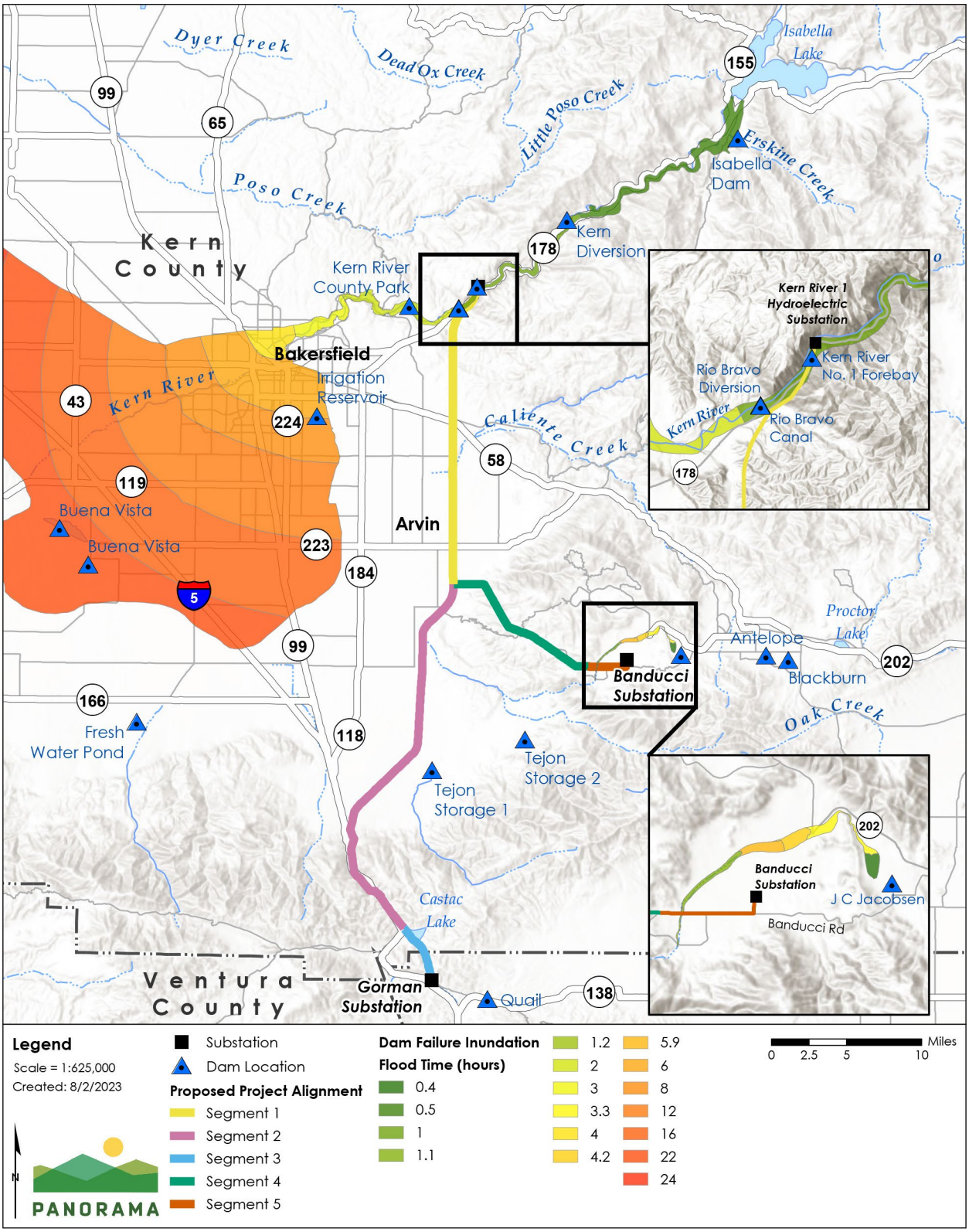
Source: (USACE 2022)

Figure 3.10-4 FEMA Flood Hazard Zones



Source: (FEMA 2022)

Figure 3.10-5 Dam Failure Inundation Areas



Source: (USACE 2022; Kern County Department of Public Works 2018)

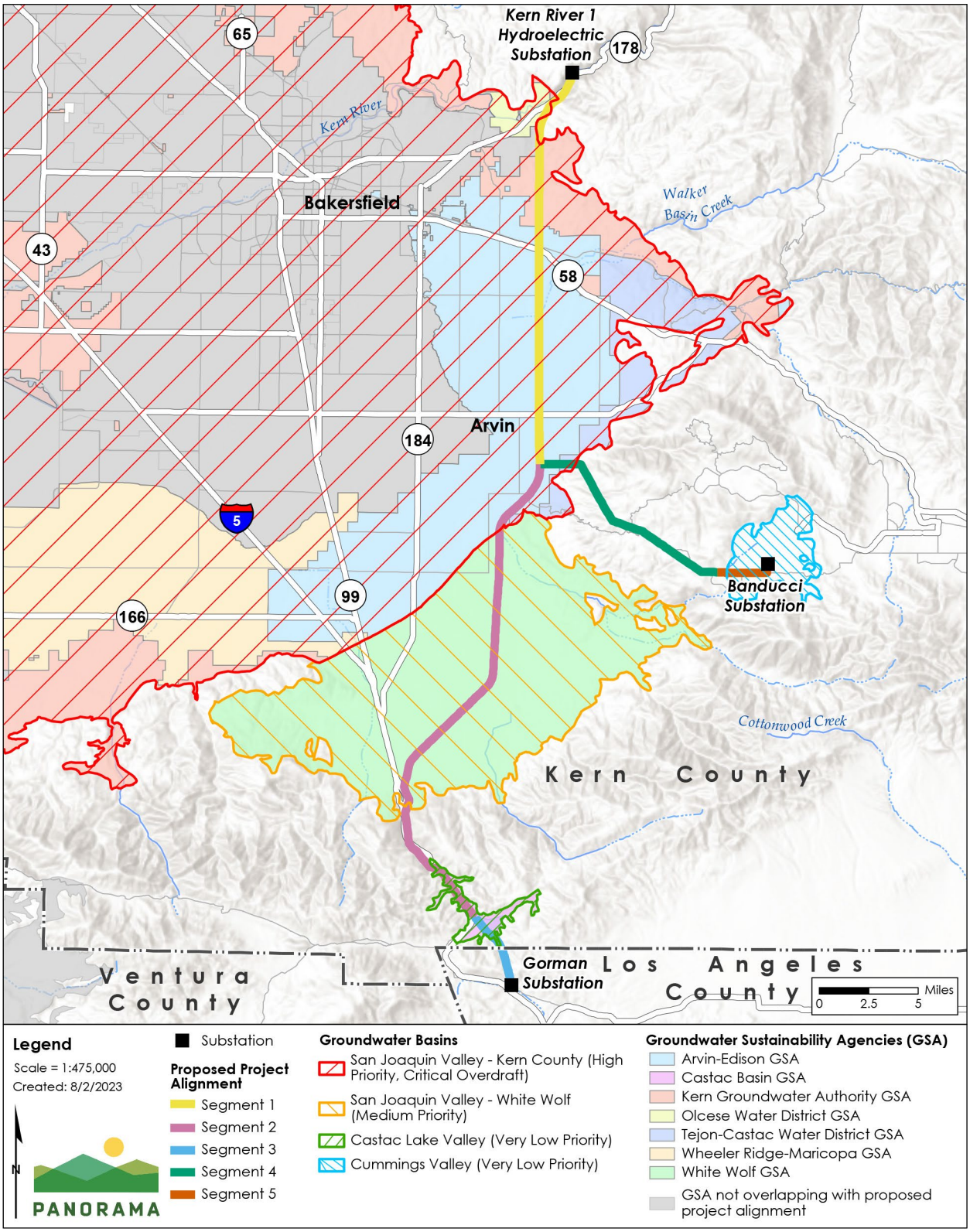
Groundwater

The groundwater basins within the Proposed Project area include the San Joaquin Valley–Kern County Basin (also referred to as Kern County Subbasin), San Joaquin Valley–White Wolf Basin, Castac Lake Valley Basin, and Cummings Valley Basin (DWR 2021), as shown in Figure 3.10-6. In many areas, usable groundwater occurs outside of these identified basins (CVRWQB 2018). No EPA-designated sole source aquifers for drinking water occur within any portion of the Proposed Project area (EPA 2022). However, portions of Segments 1, 2, and 4 overlie the Central Valley aquifer system.

Groundwater levels vary seasonally across the Proposed Project area. Groundwater levels are higher during the wet season and lower during the dry season and can be influenced by groundwater pumping or other local conditions. Generally, depth to groundwater in the Proposed Project area is 100 feet or more, with some monitoring wells registering depths of 500 feet or more (DWR n.d.). During the field investigation for the Preliminary Geotechnical Investigation Report, shallow groundwater was observed and measured at only four locations, at depths ranging from 13 to 33 feet below ground surface (Arcadis 2022). This shallow groundwater occurs near surface water features in valleys in the southern parts of the Proposed Project area, including Castac Valley along Grapevine Creek, Castac Lake, and Gorman Creek. While shallow groundwater may be found near other drainages and aquatic features, such as the Kern River and Tejon Creek, the depth to groundwater across the Proposed Project area generally exceeds 100 feet.

Groundwater in the region is used primarily for agricultural irrigation purposes, and groundwater levels are trending lower than historical levels in much of the Tulare Lake Basin. Between 1998 and 2018, about 78 percent of monitoring wells in the region experienced a declining trend (DWR 2021a). Lowering groundwater levels can be attributed to increased groundwater pumping, reduced imported water supplies (notably from the State Water Project), reduced groundwater inflows from adjacent areas, and more frequent and extreme droughts and dry periods driven by climate change (Kern Groundwater Authority 2020; NOAA and NIDIS 2023). The Kern County Subbasin is designated as a high priority basin with critical overdraft conditions due to a combination of high reliance on groundwater use, increasing populations, and declining groundwater levels (DWR 2020). The White Wolf Subbasin is classified as a medium-priority basin due to reliance on groundwater and declining groundwater levels; however, it is not subject to critical overdraft conditions (DWR 2019). The Sustainable Groundwater Management Act (SGMA), effective January 1, 2015, required Groundwater Sustainability Agencies (GSAs) to form in the state's medium- and high-priority basins (as shown in Figure 3.10-6). Both Castac Lake Valley and Cummings Valley basins are classified as very low priority basins due to more limited groundwater use and no declines in groundwater levels having been detected (California Department Water Resources (DWR) 2019).

Figure 3.10-6 Groundwater Basins and GSAs in the Proposed Project Area



Source: (DWR 2021b)

Water Quality

Surface Water Quality

Surface water quality in the Tulare Lake Basin is generally good, with excellent quality exhibited by most streams on the eastern portion of the basin (CVRWQB 2018). Urban, rural, industrial, commercial, and agricultural runoff impacts water quality in the Proposed Project area. The major pollutants of concern are sediment, nutrients, and pathogens (e.g., *E. coli*) (California State Water Resources Control Board 2021). None of the waterbodies within the Proposed Project area or within the drainage area of the Proposed Project area are listed as impaired for beneficial uses under by the State Water Resources Control Board (California State Water Resources Control Board 2021).

Groundwater Quality

Because of the closed nature of the Tulare Lake Basin, there is little subsurface outflow. Thus, salts accumulate within the basin due to importation and evaporative use of the water. The paramount groundwater quality problem in the area is the accumulation of salts. This problem is compounded by the overdrafting of groundwater for municipal, agricultural, and industrial purposes and the use of water from deeper formations and outside the basin, which further concentrates salts within remaining ground water. Elevated arsenic concentrations exist in some areas associated with lakebed deposits. Nitrate, dibromochropropane, and ethylene dibromide concentrations exceed the Maximum Contaminant Level (MCL) in various areas of the San Joaquin Valley subbasin (DWR 2006).

3.10.2 Applicable Regulations, Policies and Standards

Federal, state, and local regulations were reviewed for applicability to the Proposed Project; applicable regulations are described below.

Federal

Clean Water Act

The Clean Water Act (CWA) was enacted in 1972 to regulate the discharge of pollutants to waters of the United States (WOTUS). The CWA requires a permit to discharge from any point source to WOTUS. Water resources, including wetlands, occurring within the Proposed Project area are potentially subject to federal jurisdiction under Sections 401 and 404 of the CWA. Amendments to the CWA in 1987 added Section 402(p), which established a framework to regulate non-point source stormwater discharges under the National Pollution Discharge Elimination System (NPDES) stormwater program (EPA 2015).

Section 401

Section 401 of the CWA requires that any activity, including river or stream crossings during road, pipeline, or transmission line construction that may result in a discharge into a State waterbody must be certified by the State Water Resources Control Board (SWRCB) (EPA 2023).

Section 404
Section 404 of the CWA authorizes USACE to regulate the discharge of dredged or fill material to WOTUS and adjacent wetlands. The USACE issues individual site-specific or general (Nationwide) permits for such discharges (EPA 2023a).

Drinking Water Standards
The National Primary Drinking Water Regulations *maximum contaminant levels* (MCLs) are derived from regulations set forth by the EPA. The regulations are enforceable federal standards for public water systems. Secondary MCLs (SMCLs) are derived from the National Secondary Drinking Water Regulations and are not enforceable, but the EPA recommends that public water systems test for SMCLs as they can affect aesthetic considerations including taste, color, and odor that impact public perception of water quality (EPA 2023a).

National Flood Insurance Act
The National Flood Insurance Act (1968) makes available federally subsidized flood insurance to owners of flood-prone properties. To facilitate identifying areas with flood potential, FEMA has developed Flood Insurance Rate Maps that can be used for planning purposes. Federal regulations governing development in a 100-year floodplain are set forth in Title 44 part 60 of the Code of Federal Regulations, enabling FEMA to require municipalities that participate in the National Flood Insurance Program to adopt certain flood hazard reduction standards for construction and development in 100-year floodplains (FEMA 2005).

State

Porter-Cologne Water Quality Control Act
State Water Resources Control Board (SWRCB) administers the Porter-Cologne Water Quality Control Act and Section 401 of the CWA through its RWQCBs. The Porter-Cologne Water Quality Control Act, Water Code section 13260, requires that "any person discharging waste, or proposing to discharge waste, within any region that could affect the 'waters of the State' file a report of discharge" with the appropriate RWQCB. Waters of the State, as defined in the Porter-Cologne Act (Water Code section 13050 (e)), are "any surface water or groundwater, including saline waters, within the boundaries of the state" (SWRCB 2023).

Section 401 of the Clean Water Act
Pursuant to CWA Section 401, SWRCB considers waters of the State to include, but not be limited to, rivers, streams, lakes, bays, marshes, mudflats, unvegetated seasonally ponded areas, drainage swales, sloughs, wet meadows, natural ponds, vernal pools, diked bay lands, seasonal wetlands, and riparian woodlands (SWRCB 2021). SWRCB has also claimed jurisdiction and exercised discretionary authority over "isolated waters" (SWRCB and CalEPA 2003). Certification under Section 401 is issued through the appropriate RWQCB and ensures that a proposed activity does not violate State and/or federal water quality standards (SWRCB 2023b).

Section 303(d) of the Clean Water Act
CWA Section 303(d) requires states to identify water bodies that do not meet water quality objectives and are not supporting their beneficial uses. Each state must submit an updated list,

called the 303(d) list, to the EPA every 2 years. In addition to identifying the water bodies that are not supporting beneficial uses, the list also identifies the pollutant or stressor causing impairment and establishes a schedule for developing a control plan to address the impairment. States are required to prioritize 303(d) water bodies for development of TMDLs (EPA 2023b).

National Pollutant Discharge Elimination System Program
Runoff water quality is regulated by the NPDES program (established through the CWA, as described above). The objective of the NPDES program is to control and reduce pollutant discharge to water bodies. Projects disturbing more than 1 acre of land during construction are required to file a Notice of Intent and other permit registration documents with SWRCB to be covered under the state NPDES Construction General Permit for discharges of stormwater associated with construction. A SWPPP must be developed, submitted, and implemented for the Proposed Project area covered by the Construction General Permit and include BMPs that would reduce impacts to surface water quality(EPA 2015).

Sustainable Groundwater Management Act
The Sustainable Groundwater Management Act (SGMA) was passed in 2014 and provides a statewide framework for management of groundwater resources to sustain long-term reliability. The SGMA requires local agencies to form groundwater sustainability agencies (GSAs) for each groundwater basin that the California Department of Water Resources (DWR) designates as high or medium priority. GSAs develop and implement groundwater sustainability plans (GSPs) to avoid undesirable results and mitigate overdraft within 20 years.

DWR serves two roles to support local SGMA implementation:

1. Regulatory oversight through the evaluation and assessment of GSPs
2. Providing ongoing assistance to locals through the development of:
    a. Best management practices and guidance;
    b. Planning assistance;
    c. Technical assistance; and
    d. Financial assistance

Sustainability indicators for groundwater conditions defined under SGMA include the following and are addressed in the development of GSPs (USGS California Water Science Center n.d.):

- Chronic lowering of groundwater levels
- Reduction in groundwater storage
- Seawater intrusion
- Degraded water quality
- Land subsidence
- Depletion of interconnected surface water

California Department of Fish and Wildlife, Section 1602 of the State Fish and Game Code
Section 1602 of the state Fish and Game Code requires any person, governmental agency, or public utility proposing any activity that will divert or obstruct the natural flow or change the

bed, channel, or bank of any river, stream, or lake or proposing to use any material from a streambed to first notify CDFW of such activity. The notification requirement generally applies to any work undertaken within the annual high-water mark of a wash, stream, or lake that contains or once contained fish and wildlife or supports riparian vegetation.

Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties

The LARWQC Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties (Basin Plan) is designed to preserve and enhance water quality and protect the beneficial uses of all regional waters (LARWQCB 2014). Specifically, the Basin Plan designates beneficial uses for surface and ground waters, sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's antidegradation policy, and describes implementation programs to protect all waters in the Region. In addition, the Basin Plan incorporates (by reference) all applicable State and Regional Board plans and policies and other pertinent water quality policies and regulations. Those of other agencies are referenced in appropriate sections throughout the Basin Plan.

Water Quality Control Plan for the Tulare Lake Basin

Water quality in streams and aquifers of the region is regulated by the CVRWQCB Tulare Lake Basin Plan (Basin Plan) (CVRWQB 2018). State policy for water quality control is directed at achieving the highest water quality consistent with the maximum benefit to the people of the state. To develop water quality standards consistent with the uses of a water body, the CVRWQCB classifies historical, present, and potential future beneficial uses as part of its basin plan. The Basin Plan identifies the beneficial uses of the Tulare Lake Basin as well as water quality objectives for inland surface water and groundwater (e.g., dissolved oxygen, salinity, bacteria, pesticides). A detailed discussion of beneficial uses and water quality objectives can be found in the Tulare Lake Basin Plan.

Disturbance of soil, vegetation, organic debris, and other materials that control runoff should be minimized. The Regional Water Board's policies on soil disturbance activities are as follows:

- Operations and activities should be planned and conducted in a manner that will not disturb extensive areas of soil or that will disrupt local drainage.
- Areas where soil is disturbed should be promptly reseeded or stabilized to prevent erosion.
- Strict regulation of activities in water protection zones, as described above in the "Silviculture" section, should be established.
- The stream flow regimen should be stabilized and maintained, and soil control measures should be applied in a timely manner.
- Neither organic nor earthen material should be discharged into any streams nor should such materials be placed at locations where they can pass into streams in quantities that could impair any beneficial use of the water.
- Operations and activities that cause increased turbidity levels in local streams must be regulated so that streams are not affected for extended periods or for more than

ten percent of the time and operations and activities shall not violate water quality objectives.

Erosion control guidelines are included in the erosion/sedimentation action plan, which is Appendix 30 and is incorporated by reference into this plan.

Local and Regional

The CPUC has sole and exclusive State jurisdiction over the siting and design of the Proposed Project because it authorizes the construction, operation, and maintenance of investor-owned public utility facilities. Pursuant to GO 131-D section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters." Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the counties' and cities' regulations are not applicable as the counties and cities do not have jurisdiction over the Proposed Project. Accordingly, the following discussion of local land use laws, regulations, and policies is provided for informational purposes only.

Kern County General Plan

The Kern County General Plan Land Use, Open Space, and Conservation Element guides the long-term conservation of natural resources and preservation of available open space areas. The Conservation and Open Space Element contains a number of goals and policies relevant to the analysis of hydrology and water quality for the Proposed Project, including the following:

- Designated flood channels and water courses, such as creeks, gullies, and riverbeds, will be preserved as resource management areas or in the case of urban areas, as linear parks whenever practical.
- Compliance with the Floodplain Management Ordinance prior to grading or improvement of land for development or the construction, expansion, conversion or substantial improvements of a structure is required.
- Applicants for new discretionary development should consult with the appropriate Resource Conservation District and the California Regional Water Quality Control Board regarding soil disturbances issues.
- Discretionary projects shall analyze watershed impacts and mitigate for construction-related and urban pollutants, as well as alterations of flow patterns and introduction of impervious surfaces as required by the California Environmental Quality Act (CEQA), to prevent the degradation of the watershed to the extent practical.
- Designated flood channels and water courses, such as creeks, gullies, and riverbeds, will be preserved as resource management areas or in the case of urban areas, as linear parks whenever practical.

Kern County Public Works Development Standards Division IV: Standards for Drainage

Los Angeles County General Plan

The Los Angeles County General Plan Conservation and Natural Resources Element guides the management and preservation of local water resources (Los Angeles County Department of Regional Planning 2015). The Conservation and Natural Resources Element contains a number of goals and policies relevant to the analysis of hydrology and water quality for the Proposed Project, including the following:

- Policy C/NR 5.2: Require compliance by all County departments with adopted Municipal Separate Storm Sewer System (MS4), General Construction, and point source NPDES permits.
- Policy C/NR 5.6: Minimize point and non-point source water pollution.
- Policy C/NR 6.5: Prevent stormwater infiltration where inappropriate and unsafe, such as in areas with high seasonal groundwater, on hazardous slopes, within 100 feet of drinking water wells, and in contaminated soils.

Kern Groundwater Authority Groundwater Sustainability Plan

The Kern Groundwater Authority GSA covers approximately 1.2 million acres of the San Joaquin Valley—Kern County Subbasin's approximate 1.8 million acres, which has been identified by California DWR as critically overdrafted (Kern Groundwater Authority 2020; DWR 2020). The Kern Groundwater Authority includes 16 member entities made up of water districts/agencies, groundwater banking projects, and organized non-districted lands (Kern Groundwater Authority 2022). The Subbasin includes 11 organized GSAs, three of which overlap the Proposed Project area and have developed additional GSPs (see below: Kern River GSA, South of Kern River GSAs, and Olcese GSA).

The Kern Groundwater Authority GSP defines four Sustainability Goals:

- Achieve sustainable groundwater management in the Kern County Subbasin through the implementation of projects and management actions at the member agency level of each GSA.
- Maintain its groundwater use within the sustainable yield of the basin as demonstrated by monitoring and reporting groundwater conditions.
- Operate within the established sustainable management criteria, which are based on the collective technical information presented in the GSPs in the Subbasin.
- Collectively bring the Subbasin into sustainability and to maintain sustainability over the implementation and planning horizon.

The GSP also defines measurable objectives and minimum thresholds that, if exceeded, would trigger an "undesirable result". The measurable objectives and minimum thresholds are identified for each sustainability indicator (as defined under the SGMA; see above) for the entire subbasin in the GSP. The GSP also includes monitoring networks, projects, and management actions to achieve sustainability goals over the 20-year life of the plan.

Kern River Groundwater Sustainability Agency

The Kern River GSA area covers 361 square miles, about 13 percent of the 2,834-mile Kern County Subbasin, and is cooperatively managed by Kern River GSA member agencies (Kern River Groundwater Sustainability Agency 2022). Numerous agencies and entities with jurisdictional boundaries within the Kern River GSA area share responsibilities for water management and land use. As the sole municipality in the Kern River GSA, the City of Bakersfield has significant water management and land use responsibilities within the GSA area.

The Kern River GSA submitted a final amended GSP in July 2022 that incorporates the Kern County Subbasin-wide sustainability goals as well as additional goals for the Kern River GSA. The Sustainability Goal of the Kern River GSA GSP is to manage groundwater sustainably in the KRGSA Plan Area to:

- Support current and future beneficial uses of groundwater, including municipal, agricultural, industrial, public supply, domestic, and environmental;
- Optimize conjunctive use of surface water, imported water, and groundwater; and
- Avoid or eliminate undesirable results throughout the planning horizon.

Similar to the Kern Groundwater Authority GSP, the Kern River GSP defines measurable objectives and minimum thresholds that, if exceeded, would trigger an "undesirable result". GSP regulations provide a framework for sustainable management criteria that are identified for each sustainability indicator (as under the SGMA; see above), which include defining undesirable results, minimum thresholds, measurable objectives, and interim milestones. Surface and groundwater budgets have been developed for the Kern River GSA area to quantify historical changes in the amount of groundwater in storage and to identify the amount of sustainable groundwater available for future use. Project and management actions (e.g., groundwater recharge, water imports, banking projects) and adaptive monitoring have been identified in the plan in order to reduce the deficit in the GSA area.

South of Kern River Groundwater Sustainability Agencies

The South of Kern River (SOKR) GSAs, comprising the Arvin GSA, Wheeler Ridge-Maricopa GSA, and Tejon–Castac Water District GSA, in coordination with Arvin Community Services District, have formed a joint GSP (E.K.I. Environment Water, Inc. 2022). The plan area is divided into three management areas that coincide with the portions of the Kern County Subbasin that underlie each SOKR GSA. These management areas, which together cover the entire SOKR GSP area, include the Arvin-Edison Management Area, Wheeler Ridge-Maricopa Management Area, and Tejon-Castac Management Area. The Arvin-Edison Management Area includes the city of Arvin and is located in the south-southeastern portion of the Kern County Subbasin and encompasses 105,630 acres of the Arvin-Edison Water Storage District service area. The Wheeler Ridge-Maricopa Management Area is in the southwestern portion of the Kern Subbasin and encompasses 91,430 acres of the Wheeler Ridge–Maricopa Water Storage District service area. The Tejon-Castac Management Area is located in the southeastern portion of the Kern Subbasin and encompasses approximately 19,280 acres of the Tejon-Castac Water District service area.

The SOKR GSAs submitted a final amended GSP in July 2022 that incorporates the Kern County Subbasin-wide sustainability goals. In addition, each SOKR GSA has developed a local Sustainability Goal to support SGMA implementation within their respective Management Areas. This goal is generally similar for all three GSAs and includes maintaining an economically viable groundwater resource that supports the current and future beneficial uses of groundwater (including municipal, agricultural, industrial, public supply, domestic, and environmental) by utilizing the area's groundwater resources within the local sustainable yield.

Similar to the Kern River GSP, the SOKR GSP includes sustainable management criteria for each sustainability indicator defined in the SGMA, including undesirable conditions, minimum thresholds, interim milestones, and measurable objectives. Surface and groundwater budgets have been developed for the SOKR GSP area to quantify historical changes in the amount of groundwater in storage and to identify the amount of sustainable groundwater available for future use. Project and management actions (e.g., groundwater recharge, water imports, banking projects) and adaptive monitoring have been identified in the plan in order to reduce the deficit in the GSA Plan area.

Olcese Groundwater Sustainability Agency

The Olcese GSA area is located approximately 10 miles northeast of Bakersfield along Kern Canyon Road (California Highway 178). The Olcese GSA area covers the portion of the Olcese District service area that is contained within the current Kern County Subbasin boundaries and is approximately 3,200 acres in size (Olcese Water District, n.d.). The GSA area is bounded on the northern and eastern sides by the existing Kern County Subbasin boundary and on the southern and western sides by the district's administrative boundaries.

The Olcese GSA prepared a GSP in 2020 that incorporates the Kern County Subbasin-wide sustainability goals as well as additional goals for the Olcese GSA. The Sustainability Goal for the Olcese GSA area is to maintain an economically viable groundwater resource that supports the current and future beneficial uses of groundwater by utilizing the area's groundwater resources within the local sustainable yield. The Olcese GSP area has shown sustainable groundwater resources and is modeled to have an annual surplus. Nonetheless, the GSP addresses sustainable groundwater management in order to act cooperatively with the other GSAs in the Kern County Subbasin to reduce the overall deficit. Similar to the Kern River and SOKR GSPs, the Olcese GSP includes sustainable management criteria for the sustainability indicators defined in the SGMA, including undesirable conditions, minimum thresholds, interim milestones, and measurable objectives. Surface and groundwater budgets have been developed for the Olcese GSA area to quantify historical changes in the amount of groundwater in storage and to identify the amount of sustainable groundwater available for future use.

White Wolf Subbasin Groundwater Sustainability Agency

The White Wolf GSA comprises the Arvin-Edison Water Storage District, Tejon-Castac Water District, and Wheeler Ridge Maricopa Water Storage District along with Kern County as an "additional entity" (E.K.I. Environment Water, Inc. 2021). A GSP has been developed that covers the entire San Joaquin Valley–White Wolf Subbasin (DWR 2020).

The White Wolf GSA prepared a GSP in 2020 that incorporates the Kern County Subbasin-wide sustainability goals as well as additional goals for the White Wolf GSA. The Sustainability Goal for the White Wolf GSA area is to cooperatively maintain an economically viable groundwater resource within the White Wolf Subbasin that supports the current and future beneficial uses of groundwater by utilizing the area's groundwater resources within the local sustainable yield and avoiding undesirable results. Similar to the Kern Groundwater Authority GSP, the White Wolf GSP includes sustainable management criteria (including undesirable conditions, minimum thresholds, interim milestones, and measurable objectives), monitoring, projects, and management actions for the 20-year duration of the plan. Surface and groundwater budgets have been developed for the White Wolf GSP Area to quantify historical changes in the amount of groundwater in storage and to identify the amount of sustainable groundwater available for future use.

Castac Basin Groundwater Sustainability Agency

The Castac Basin GSA was formed in April 2018 by Tejon-Castac Water District (TCWD), Lebec County Water District (LCWD), and Kern County with the objective to monitor and assess groundwater conditions on a voluntary basis. Because this basin is a very low priority basin under the SGMA, it is not currently required to develop or implement a GSP. However, one has been developed proactively for the Castac Basin (E.K.I. Environment Water, Inc. 2020). The goal of Castac Basin GSP projects and management actions will be to maintain groundwater storage in the Basin to the extent possible in order to supply beneficial uses and users of groundwater.

3.10.3 Applicant Proposed Measures

SCE has proposed measures to reduce environmental impacts. The significance of the impact is first considered prior to application of the applicant proposed measures (APMs) and a significance determination is made. The implementation of the APMs is then considered as part of the Proposed Project when determining whether impacts would be significant and thus would require mitigation. These APMs would be incorporated as part of any CPUC project approval, and SCE would be required to adhere to the APMs as well as any identified mitigation measures. The APMs are included in the MMRP for the Proposed Project, and the implementation of the measures would be monitored and documented in the same manner as mitigation measures. The APMs that are applicable to the hydrology and water quality analysis are provided in Table 3.10-3.

Table 3.10-3 Applicant Proposed Measures for Hydrology and Water Quality

APM Number	Requirements
HAZ-1	**Prepare a Hazardous Materials Management Plan.** SCE will prepare and implement a Hazardous Materials Management Plan (HMMP)/Hazardous Materials Business Plan (HMBP) during project construction. The plan will outline proper hazardous materials handling, use, storage and disposal requirements, as well as hazardous waste management procedures. This plan will be developed to ensure that all hazardous materials and wastes will be handled and disposed of according to applicable rules and regulations.

APM Number	Requirements
	The HMMP will address the types of hazardous materials to be used during the project, hazardous materials storage, employee training requirements, hazard recognition, fire safety, first aid/emergency medical procedures, hazardous materials release containment/control procedures, hazard communication training, PPE training, and release reporting requirements. It will also include fueling and maintenance procedures for helicopters and construction equipment. If on site refueling is necessary, BMPs shall be implemented in accordance with the project SWPPP. Refueling stations and fuel tanks will be located, maintained, and operated during construction in accordance with applicable laws and regulations pertaining to hazardous materials. If more than 1,320 gallons of petroleum products in containers greater than 55-gallons, a SPCC plan must be created prior to products being brought on-site. All construction personnel, including environmental monitors, will be made aware of local, state and federal emergency response reporting guidelines for accidental spills.
HAZ-2	Prepare a Soil Management Plan. A Soil Management Plan will be developed and implemented for the proposed project. The Soil Management Plan will provide guidance for the proper handling, on-site management, and disposal of impacted soil that may be encountered during construction activities. The Soil Management Plan will direct that during grading or excavation work, the construction contractor shall observe the exposed soil for visual evidence of contamination. If visual contamination indicators are observed during construction, potentially contaminated soil will be segregated, sampled, and tested to determine appropriate treatment and disposal options. Work in the area of the potentially contaminated soil will be stopped until appropriate measures are determined based on the testing results and are taken to protect human health and the environment. If the soil is classified as hazardous, it will be properly managed on location and transported in accordance with the U.S. Department of Transportation regulations using a Uniform Hazardous Waste Manifest to a Class I Landfill or other appropriate soil treatment or recycling facility. If potentially-contaminated groundwater is encountered, then groundwater samples will be collected and tested to determine appropriate treatment and disposal. Hazardous materials will be transported and disposed of in accordance with applicable rules, regulations, and SCE standard protocols designed to protect the environment, workers, and the public.
BIO-RES-2	**Develop Invasive Plant Management Plan.** SCE shall prepare and implement an Invasive Plant Management Plan (IPMP). This plan shall include measures designed to avoid the introduction and spread of new nonnative invasive plant species (invasive plants) and minimize the spread of existing invasive plants resulting from project activities. The IPMP shall be submitted to the CPUC and for review and approval prior to the start of construction. For the purpose of the IPMP, invasive plants shall include plants that (1) are invasive and rated high or moderate for negative ecological impact in the California Invasive Plant Inventory Database (Cal-IPC, 2006), or (2) aid and promote the spread of wildfires (such as Bromus tectorum (cheatgrass), Brassica tournefortii (Sahara mustard), and Bromus madritensis spp. Rubens (red brome)) or (3) identified by USFS as special concern. The IPMP will be implemented throughout project pre-construction, construction, and restoration phases. **Invasive Plant Management Plan** The IPMP will include the information defined in the following sections: **Assessment.** An assessment of the GKR Project's potential to cause spread or introduction of invasive plants into new areas, or to introduce new invasive plants into the ROW. This section will list known and potential invasive plants occurring on the ROW and in the project region and identify threat rankings and potential for project-related occurrence or spread for each species.

APM Number	Requirements
	This section will identify control goals (e.g., eradication, suppression, or containment) for invasive plants of concern with potential to occur on the ROW. **Pre-construction invasive plant inventory.** SCE shall inventory of all invasive plants of concern in areas (both within and outside the ROW) subject to project-related vegetation removal/disturbance, overland travel (drive and crush), and ground-disturbing activity. The invasive plants inventory area shall also include vehicle and equipment access routes within the ROW and all project staging and storage yards. Invasive plants of concern shall be mapped by area of occurrence and percent cover. The map will be updated with new occurrences at least once a year. **Pre-construction invasive plants treatment.** Invasive plant infestations identified in the pre-construction invasive plants inventory shall be evaluated to identify potential for project-related spread and potential benefits (if any) of pre-construction treatment. Pre-construction treatment will consider the specific invasive plants, potential seed banks, or other issues. The IPMP will identify any infestations to be controlled or eradicated prior to project construction. Control and follow-up monitoring of pre-construction invasive plants treatment sites will follow methods identified in appropriate sections of the IPMP. **Prevention.** The IPMP will specify methods to minimize potential transport of new invasive plant seeds onto the ROW, or from one section of the ROW to another. The ROW may be divided into "weed zones," based on invasive plants of concern in the ROW. The IPMP will specify inspection procedures for construction equipment entering the GKR Project area. Vehicles and equipment may be inspected and cleaned at entry points to specified sections of the ROW, and before leaving work sites where invasive plants of concern must be contained locally. Construction equipment shall be inspected to ensure it is free of any dirt or mud that could contain invasive plant seeds, roots, or rhizomes, and the tracks, outriggers, tires, and undercarriage will be carefully washed, with special attention being paid to axles, frame, cross members, motor mounts, underneath steps, running boards, and front bumper/brush guard assemblies. Other construction vehicles (e.g., pick-up trucks) that will be frequently entering and exiting the site will be inspected and washed on an as-needed basis. Tools such as chainsaws, hand clippers, pruners, etc., shall be cleaned of dirt and mud before entering project work areas. All vehicles will be washed off-site when possible. If off-site washing is infeasible, on-site cleaning stations (including air washing) will be set up at specified locations to clean equipment before it enters the work area. Wash stations will be located away from native habitat or special-status species occurrences. Wastewater from cleaning stations will not be allowed to run off the cleaning station site. When vehicles and equipment are washed, a daily log must be kept stating the location, date and time, types of equipment, methods used, and personnel present. The log shall contain the signature of the responsible crewmember. Written or electronic logs shall be available to CPUC monitors on request. Erosion control materials (e.g., straw bales) must be certified free of invasive plant seed ("weed-free") before they are brought onto the site. The IPMP must prohibit on-site storage or disposal of mulch or green waste that may contain invasive plant material. Mulch or green waste will be removed from the site in a covered vehicle to prevent seed dispersal and transported to a licensed landfill or composting facility. The IPMP will specify guidelines for any soil, gravel, mulch, or fill material to be imported into the GKR Project area, transported from site to site within the GKR Project area, or transported from the GKR Project area to an off-site location, to prevent the introduction or spread of invasive plants to or from the GKR Project area.

APM Number	Requirements
	Monitoring. The IPMP shall specify methods to survey for invasive plants of concern during pre-construction, construction, and restoration phases; and shall specify qualifications of specialists responsible for invasive plant monitoring and identification. It must include a monitoring schedule to ensure timely detection and immediate control of new invasive plant infestations to prevent further spread. Surveying and monitoring for invasive plant infestations shall occur at least two times per year, to coincide with the early detection period for early season and late season invasive plants. The monitoring section shall also describe methods for post-eradication monitoring to evaluate success of control efforts and any need for follow-up control. **Control.** The IPMP must specify manual and chemical invasive plant control methods to be employed. The IPMP shall include only invasive plant control measures with a demonstrated record of success for target invasive plants, based on the best available information. The plan shall describe proposed methods for promptly scheduling and implementing control activity when any project-related invasive plant infestation is located (e.g., located on a project disturbance site), to ensure effective and timely invasive plant control. Invasive plant infestations must be controlled or eradicated as soon as possible upon discovery, and before they go to seed, or when appropriate with the goal to prevent further spread. All proposed invasive plant control methods must minimize disturbance to native vegetation, limit ingress and egress to defined routes, and avoid damage to any environmentally sensitive areas (ESAs) identified within or adjacent to the ROW. New infestations by invasive plants of concern will be treated at a minimum of once annually until eradication, suppression, or containment goals are met. Invasive plant occurrences can be considered eradicated when no new seedlings or resprouts are observed for three consecutive years, or a single season where new seedlings or resprouts are observed in reference populations but not at the control site. Invasive plant control efforts may cease when eradication is complete. Manual control shall specify well-timed removal of invasive plants or their seed heads with hand tools; seed heads and plants must be disposed of in accordance with guidelines from the relevant County Agricultural Commissioners, if such guidelines are available. The focus of weed abatement will be manual control. Chemical controls will be avoided. If chemical controls are indicated for specific invasive species, the following guidelines shall be followed. The chemical control section must include specific and detailed plans for any herbicide use. It must indicate where herbicides will be used, which herbicides will be used, and specify techniques to be used to avoid drift or residual toxicity to native vegetation or special-status plants, consistent with the National Invasive Species Management Plan (NISC, 2008). All herbicide applications will follow U.S. Environmental Protection Agency label instructions and will be in accordance with federal, state, and local laws and regulations. Only state-approved herbicides may be used. Herbicide treatment will be implemented by a Licensed Qualified Applicator. Herbicides shall be applied in accordance with product labels and applicator licenses. Herbicides shall not be applied during or within 24 hours of high confidence predicted rain. Only water-safe herbicides shall be used in riparian areas or within channels (engineered or not) where they could run off into downstream areas. Herbicides shall not be applied in high wind conditions. **Reporting schedule and contents.** The IPMP shall specify reporting schedule and contents of each report.

3.10.4 Environmental Analysis

Summary of Impacts

Table 3.10-4 presents a summary of the CEQA significance criteria and impacts to hydrology and water quality that would occur during construction, operation, and maintenance of the Proposed Project.

Table 3.10-4 Summary of Proposed Project Impacts to Hydrology and Water Quality

Would the proposed project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	☐	☐	☒	☐
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	☐	☐	☒	☐
c) 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: 3.10 pg 29 i) result in a 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 off-site; 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; or iv) impede or redirect flood flows?	☐	☒	☐	☐
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	☐	☒	☐	☐
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	☐	☐	☒	☐

Impact Discussion

a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?

Construction

Water Quality Standards

Construction would involve excavation at structure work areas, grading and vegetation clearing at construction work areas, and grading of existing unpaved access routes where necessary to establish access. Ground disturbance and vegetation removal have the potential to loosen and expose the soil and increase the risk of erosion and sedimentation to nearby waters. Beneficial uses for surface water could be adversely affected through violation of CVRWQCB or LARWQCB water quality standards for sediment, suspended solids, total dissolved solids, and turbidity. Construction equipment would require the use of fuels and other hazardous materials, and invasive species management would likely require the use of herbicides, which could result in the accidental release of pollutants into waterbodies.

The State of California NPDES program would require SCE to obtain coverage under the SWRCB Construction General Permit and prepare a SWPPP prior to construction because the Project would disturb more the 1 acre of land. The SWPPP developed for the Proposed Project would address risk factors and BMPs to reduce erosion, sediment/siltation, and release of other pollutants during stormwater runoff events. While implementation of the SWPPP provisions would avoid significant sediment impacts to water quality, the Proposed Project could significantly violate water quality standard if there were a release of hazardous materials or herbicide spray into a water body, which would be a significant impact. APM HAZ-1 would require SCE to prepare a HMMP/HMBP that would include procedures or containment and cleanup for hazardous materials. APM BIO-RES-2 requires SCE to only use water-safe herbicides and restricts use of herbicides within 24 hours of rain and during high wind conditions. With implementation of SCE APMs, the impact on water quality would be less than significant.

Waste Discharge Requirements

Groundwater may be removed and discharged during excavations if perched or shallow groundwater is encountered during excavation. Groundwater extracted from holes during construction could be polluted if the excavation work is in an area with contaminated groundwater. Access routes identified for the Proposed Project would cross wetlands and waters. Establishing access over crossing locations may involve grading and vegetation clearing and installing new or repairing existing drainage structures such as wet crossings, water bars, over-side drains, and culverts. In some locations, crushed rock, temporary plating, and/or matting may be placed within the existing road to compensate for soft soils and prevent erosion and would be removed at the end of construction.

Discharging groundwater or placing fill materials into waters of the state requires applicable permits from the CVRWQCB or LARWQCB to comply with the Porter-Cologne Water Quality

Control Act and CWA Section 401. The Proposed Project could violate waste discharge requirements and cause a significant impact if groundwater or sediment was discharged, or fill materials were placed, into waters of the state without obtaining required permits, which would be a significant impact.

Mitigation Measure Biology-16 requires SCE to obtain all necessary permits and authorizations from USACE, RWQCB, and CDFW prior to construction. Because SCE would obtain any necessary permits and would comply with waste discharge requirements, the impact from construction would be less than significant.

Operation and Maintenance

Operation and maintenance activities for the Proposed Project would be approximately the same as the operation and maintenance activities for the existing lines and substations. SCE would continue to regularly inspect, maintain, and repair conductor, transmission structures, and substation facilities as well as maintain vegetation clearances from all facilities in the Proposed Project alignment. Existing access roads and overland access routes would be used to provide ground access, and aerial access would be provided via helicopter to steep and remote areas. No new access roads would be required, and there would be no grading or other earthwork that could discharge groundwater or sediment into waterbodies. There would be minimal use of hazardous materials during operation and maintenance, which would primarily be limited to vehicle use for inspections and some herbicide use for invasive species management. The levels of toxic substances used within the Project area for operation and maintenance would not exceed those currently utilized for operation and maintenance of the transmission line and facilities. In addition, SCE would implement APM BIO-RES-2 for invasive weed management, which includes restrictions on herbicide use near waterbodies. The Proposed Project would not create any new water quality impacts, and the overall impacts from operation and maintenance would be less than significant.

Required APMs and MMs: MM Biology-16, APM HAZ-1, APM BIO-RES-2

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

Construction

The Proposed Project would use water for dust control, restoration activities, and in the construction of TSP concrete foundations. Project construction is estimated to require approximately 350 acre-feet of water, which would be consumed over the 2-year construction duration. SCE would use recycled or reclaimed water if available; however, the volume of recycled or reclaimed water that would be available for purchase is unknown at this time. If recycled or reclaimed water is not available in sufficient quantities to supply the entirety of the Proposed Project water demand, SCE would purchase water from commercial purveyors to supplement water needs. Because of the nature of water resources in the Proposed Project area, water purchased from commercial purveyors could be sourced either from surface water or groundwater resources. The Kern County Subbasin is in a state of critical overdraft, and

sourcing water for construction from local groundwater sources could contribute to these conditions. It is unknown at this time which GSA area water may be sourced from. However, according to the Kern Groundwater Authority GSP, implementation and completion of the identified projects and management actions identified in the GSPs from the other GSAs in the Kern County Subbasin (including Kern River GSA, SOKR GSAs, and Olcese GSA) is expected to result in an average surplus per year over baseline conditions by the end of the plan implementation period in 2040 (Kern Groundwater Authority 2022). The Proposed Project would not substantially deplete local groundwater even if all the water used for construction came from groundwater supplies because water use during construction would be minimal considering the overall groundwater usage in the basins and the short-term nature of use. While water used for the Proposed Project could contribute to the current deficit, its impact would be minimal and temporary and would not interfere with GSP sustainability goals. Impacts from groundwater use during construction would be less than significant. The consumptive use of an estimated 350 acre-feet over the 2-year construction period would not substantially deplete groundwater supplies: the Kern County Subbasin groundwater sustainability agency-level water budget identifies a total groundwater supply of 1.96 million acre-feet per year (Kern Groundwater Authority 2022). The Proposed Project's approximate 175 acre-feet of annual water consumption represents approximately 0.009 percent of the annual groundwater supply and thus would not substantially decrease groundwater supplies. Further, the short-term withdrawals of groundwater for the Proposed Project would not impede the inherently long-term sustainable management of the basin.

Groundwater may be removed from excavation areas if perched or shallow groundwater is encountered during excavation within the foundation work area. Dewatering for the foundation would only occur if needed during structure installation and would be limited to a few days at each location. Groundwater levels at the excavation locations would rebound after dewatering ceases, and any groundwater declines from dewatering would be localized to a few feet from the hole due to the limited duration and total volume of potential dewatering activities. Only a few locations in the Proposed Project area are known to have shallow groundwater, such as near the Kern River, Castac Valley and Grapevine Creek, Castac Lake, and Gorman Creek. All other construction areas would not likely encounter groundwater because depths have been measured at 100 feet or more. The short-term and localized dewatering of shallow groundwater would not affect sustainable groundwater management in the basin. The impact would be less than significant.

Operation and Maintenance

The Proposed Project would involve replacing existing TSP and LST structures along the alignment with similar or smaller areas of impervious surfaces due to the structure foundations. Concrete foundations and/or micropile foundations would be used for TSPs that are similar in diameter to existing structures, and most LWS structures would be direct-bury, as similar to the existing wood structures. The Proposed Project would also involve grading and compacting existing access and spur roads to support construction equipment. However, no new roads are proposed, and the existing roads consist of compacted gravel or other hard surfaces with

limited vegetation. The proposed regrading and leveling of the existing unpaved roads would not affect groundwater infiltration rates. The Proposed Project would therefore not affect groundwater recharge during operation because the small areas of impervious surfaces at the new structures would be offset by removal of the existing structures.

Because operation and maintenance of the Proposed Project would not require the use of water and would not interfere with infiltration and groundwater recharge, the impact on groundwater supply from operation and maintenance of the Proposed Project would be less than significant.

Required APMs and MMs: None required.

c) 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 a 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 off-site;

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; or

iv. impede or redirect flood flows??

Construction

The Proposed Project would not substantially alter the existing drainage patterns throughout the Project area or individual work sites. Grading at work areas and existing unpaved access routes would not substantially change the drainage pattern of each site or area because grading would be limited to the area required to create a flat pad at each structure and would not occur within road drainage crossings. The Proposed Project would not require any diversions or modifications to the course of any stream, river, or wash that would alter local hydrology. As discussed under Impact Response "a", above, SCE is required to comply with the SWRCB Construction General Permit and implement a SWPPP and stormwater BMPs. The SWPPP and associated BMPs would reduce potential erosion or siltation on or off site and would specify requirements for the stabilization of disturbed areas during construction, such as regular inspection and repair or replacement of drainage structures as necessary throughout the construction period and until final stabilization has been achieved. The impact would be less than significant.

Construction of the Proposed Project would not substantially contribute to increase surface runoff. Water used for dust control would be applied to moisten soils but would not be applied in a manner that would contribute to substantial runoff. The Proposed Project would involve the replacement of existing power poles with new power pole structures that would be similar

in size to the existing poles and would not increase impervious surfaces in the area. Construction would involve some grading at work areas and access roads but would be stabilized in accordance with the SWPPP and associated BMPs and would not substantially increase the rate or amount of surface water runoff and, therefore, would not result in flooding on or off site. The impact would be less than significant.

The Proposed Project would manage stormwater in accordance with the SWPPP requirements and would not contribute runoff that would exceed the capacity of stormwater drainage systems. As discussed under Impact Response "a" above, implementation of the Proposed Project could result in the accidental release of hazardous materials from construction vehicle and equipment leaks or spills from refueling. The SWPPP would require BMPs to reduce the potential for polluted runoff from entering waterbodies. Even with the SWPPP, if hazardous material leaks or spills were not properly contained and cleaned up, the hazardous materials could be transported to nearby waterways during a rain event and create a substantial additional source of polluted runoff, which may result in a significant impact. APM HAZ-1 requires preparation and implementation of a Hazardous Materials Management Plan. This plan would include the proper handling, storage, and refueling procedures to prevent spills and release of pollutants into waterbodies. The impact would be less than significant.

The Proposed Project would not redirect flood flows. If necessary, existing culverts may be repaired or replaced where access roads cross drainage channels or small creeks to accommodate the weight or size of construction equipment. Culvert replacement work would be conducted during the dry season, and diversion of water would therefore not be required. Localized flooding could occur at culvert locations if the flood flows were impeded due to reduced flow capacity, which may result in a significant impact. MM Hydrology-1 would require repaired or replaced culverts to meet the design standards outlined in the Kern County Development Standards for Drainage to maintain adequate capacity for large flood events. The impact would be less than significant with mitigation.

Operation and Maintenance

Operation and maintenance activities would not alter drainage patterns in the Proposed Project area or alter the course of a stream or river in a way that would result in substantial erosion or siltation in the vicinity of the Proposed Project area. Inspection, maintenance, and repair of new power lines would continue to be performed at the same frequency as inspection and maintenance of the existing lines, and the SWPPP would require that disturbed areas are rehabilitated until they are full stabilized. Operation and maintenance would not require any new ground disturbance that could result in erosion. The impact on drainage and erosion would be less than significant.

Operation and maintenance of the Proposed Project would not create excessive sources of runoff. Following construction, permanent BMPs would be installed in compliance with the SWPPP. Operation and maintenance would not require any new ground disturbance or dust suppression or create additional impervious surfaces that would increase the rate or volume of surface water runoff. The reconductored power lines and maintenance activities would not

contribute to surface water runoff that would exceed the capacity of existing or planned stormwater drainage systems or cause flooding on or off site and would not contribute additional sources of pollutants. The impact on the rate, volume, and contamination of surface water runoff would be less than significant.

The proposed structures would replace existing subtransmission structures and would not introduce any increased volume of structures within a floodplain. The Proposed Project would therefore not impede or redirect flood flows. No impact would occur.

Required APMs and MMs: APM HAZ-1, MM Hydrology-1

Mitigation Measure

Mitigation Measure Hydrology-1: Culvert and Bridge Design
SCE shall design any repaired or replaced culverts and bridges to meet the standards outlined in the Kern County Development Standards for Drainage (Kern County Public Works, Division Four). At a minimum, all culverts shall be a minimum of 18 inches in diameter and designed to avoid any increase in flooding or erosion on adjacent stream banks or slopes. Design features for both culverts and bridges shall include those that prevent impediment of flood waters, including both 10-year and 100-year events. The culvert and/or bridge designs shall be provided to Kern County for review, and any approvals shall be obtained prior to construction. Any Kern County comments or approvals for the culvert or bridge design shall be submitted to the CPUC for record keeping.
Applicable Locations: Any repaired or replaced culverts or bridges.
Performance Standards and Timing: **Before construction**: N/A **During construction**: SCE designs culverts and bridges needing installation or repair to meet Kern County Development Standards for Drainage **After construction**: N/A

d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

The Proposed Project would not be located within a tsunami inundation zone or an area that could be subject to a seiche (i.e., adjacent a lake).

The Proposed Project would include minor substation modifications at the Kern River 1 substation and replacement of structures in Segment 1, which are both within the dam failure inundation zone for Lake Isabella Dam. In addition, a small portion of Segment 5 is within the dam failure inundation zone for J.C. Jacobsen Dam, which is located east of the Banducci substation. Portions of Segments 1 and 2 are also located within a FEMA 100-year flood zone. There is also a small portion of Segment 3 that crosses the outlet area of Castac Lake, which could be subject to flooding during overflow events.

There are no replacements proposed for substation facilities at the Kern River substation. Only minor modifications would be required that would not increase any risks associated with flooding or the release of pollutants within the substation in the event of flooding. Replacement of transmission structures in a dam failure inundation zone or a 100-year flood zone could

increase the risk of release of sediments or other pollutants if flood events were to occur during construction. Because construction work areas would be limited in size and duration within potential flood hazard zones, it is unlikely that a major flood event or dam failure would occur during the short time frame that work would occur in those areas (a few weeks). In addition, implementation of APM HAZ-1 would ensure that any hazardous materials were properly stored, which includes keeping these materials out of areas that could be prone to flooding. During operation of the transmission line, channelized surface water during flooding that contacts structure foundations may have the potential for causing scour, which could undermine the foundation and lead to erosion and associated release of pollutants. The impact from scour in the event of flood inundation is potentially significant. MM Hydrology-2 would require SCE to adhere to recommendations outlined in the Preliminary Geotechnical Investigation Report (Arcadis 2022) to ensure structures in flood-prone areas are designed to prevent scouring. Because the geotechnical recommendations would address potential for scour in the event of inundation, the impact of the Proposed Project would be less than significant with mitigation.

Required APMs and MMs: APM HAZ-1, MM Hydrology-2

Mitigation Measure Hydrology-2: Structures within Flood Hazard Zones
SCE shall adhere to recommendations outlined in the Geotechnical Investigation Report to prevent damage to structures from flooding. A detailed scour analysis should be performed during design for each structure to be placed in a location with a potential for contact with surface water – inside or outside of the floodplain. The ground surface should be sloped away from each proposed structure to the extent practical. Structure foundations that will be exposed to channelized surface water may need: To be supported on a deep foundation that extends beyond the depth of potential scour; or Armoring or other soil reinforcement at the ground surface to lower the potential for foundation undermining.
Applicable Locations: Structures within flood hazard zones.
Performance Standards and Timing: **Before construction:** SCE performs a detailed scour analysis for structures that may come into contact with floodwater **During construction:** SCE designs structures in accordance with recommendations in the Geotechnical Investigation Report **After construction:** : N/A

Mitigation Measure

e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

Construction would include ground-disturbing activities and the use of hazardous materials that could violate water quality standards through release of sediment or other pollutants to waterbodies. The CVRWQCB Water Quality Control Plan for the Tulare Lake Basin and the LARWQCB Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties both have water quality objectives for turbidity, sediment and suspended solids, oil/petroleum, pesticides, and other pollutants that could result from the Proposed Project. The SWPPP

developed for the Proposed Project would address risk factors and dictate BMPs to reduce erosion, sediment/siltation, and release of other pollutants during stormwater runoff events so as to reduce the potential for violation of water quality objectives. The SWPPP would require monitoring and maintenance of BMPs until all ground-disturbing activities have ended and disturbed areas are sufficiently stabilized. Mitigation Measures Biology - 16 would also require SCE to work with applicable agencies to obtain permitting for any potential impacts to regulated waters, which would include a CWA Section 401 water quality certification from either the SWRCB or applicable RWQCBs. Receipt of this certification and compliance with any conditions of approval would ensure that the Proposed Project does not conflict with either applicable water quality plan. The impact would be less than significant.

The Proposed Project is located within the Kern County Subbasin, which is a critically over-drafted basin covered by the Kern Groundwater Authority GSP. Under this Subbasin-wide GSP, there are individual GSAs that have developed GSPs that cover areas within the Proposed Project area: Kern River GSA, SOKR GSAs, and Olcese GSA. Outside this Subbasin, the Proposed Project area is also located in areas covered by the White Wolf GSP and the Castac Basin GSP. In accordance with the SGMA, all of these GSPs have defined sustainable management criteria for the six sustainability indicators defined in the SGMA. The Proposed Project would conflict with these GSPs and result in a significant impact if it were to result in any of the following:

- Undesirable results from chronic lowering of groundwater levels
- Undesirable results for reduction of groundwater storage
- Undesirable results for degraded water quality
- Undesirable results for land subsidence
- Seawater intrusion
- Depletion of interconnected surface water

Project construction is estimated to require approximately 350 acre-feet of water over the 2-year construction duration, and SCE would use recycled or reclaimed water if available. The Proposed Project's small-volume, temporary use of water during construction, in comparison to other usage across the GSA areas, would not contribute substantially to unsustainable groundwater management. The Proposed Project would not conflict with or obstruct implementation of the GSPs because it would cause undesirable results for the chronic lowering of groundwater levels, the reduction of groundwater storage, the degradation of water quality, land subsidence, seawater intrusion, or the depletion of interconnected surface water. No impact would occur.

Required APMs and MMs: MM Biology-16

3.10.5 References

Arcadis. 2022. "Preliminary Geotechnical Investigation Report." Southern California Edison.

California Department of Water Resources (DWR). 2006. "San Joaquin Valley Groundwater Basin Kern County Subbasin (Basin Number: 5-22.14)." Available: https://data.cnra.ca.gov/dataset/bulletin-118-update-2003-basin-reports.

———. 2021a. "California's Groundwater (Bulletin 118)." Available: https://water.ca.gov/Programs/Groundwater-Management/Bulletin-118#.

———. 2021b. "i08_B118_CA_GroundwaterBasins." Feature layer. Using ArcGIS [web application]. https://gis.water.ca.gov/arcgis/rest/services/Geoscientific/i08_B118_CA_GroundwaterBasins/FeatureServer.

———. n.d. "California's Groundwater Live: Groundwater Levels." ArcGIS StoryMap. Accessed August 1, 2023. https://storymaps.arcgis.com/stories/b3886b33b49c4fa8adf2ae8bdd8f16c3.

California Department Water Resources (DWR). 2004. "Castac Lake Valley Groundwater Basin. Basin Number 5-29. Bulletin 118 Basin Descriptions." Available: https://data.cnra.ca.gov/dataset/bulletin-118-update-2003-basin-reports.

———. 2019. "SGMA Basin Prioritization." ESRI geodatabase. Feature Layer. Using SGMA PrioritizatioDashboard (https://gis.water.ca.gov/app/bp-dashboard/final/). https://gis.water.ca.gov/arcgis/rest/services/Geoscientific/i08_B118_SGMA_2019_Basin_Prioritization/FeatureServer/0.

———. 2020. "Sustainable Groundwater Management Act 2019 Basin Prioritization and Results." State of California, California Natural Resources Agency, Department of Water Resources, Groundwater Management Program. Available: https://water.ca.gov/programs/groundwater-management/basin-prioritization.

California State Water Resources Control Board. 2021. "2018 California Integrated Report (Clean Water Act Section 303(d) List and 305(b) Report)." Available: https://www.waterboards.ca.gov/water_issues/programs/water_quality_assessment/2018_integrated_report.html.

California State Water Resources Control Board (SWRCB). 2021. "State Policy for Water Quality Control: State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State." Staff Report SCH#: 2011012009. Available: https://www.waterboards.ca.gov/water_issues/programs/cwa401/wrapp.html.

———. 2023a. "Porter-Cologne Water Quality Control Act." Water Code Division 7 and Related Sections (As amended, including Statutes 2022). Compiled by the Office of Chief Counsel. https://www.waterboards.ca.gov/laws_regulations/docs/portercologne.pdf.

———. 2023b. "401 Water Quality Certification and Wetlands Program | California State Water Resources Control Board." CA.Gov. October 9, 2023. https://www.waterboards.ca.gov/water_issues/programs/cwa401/.

California State Water Resources Control Board (SWRCB) and California Environmental Protection Agency (CalEPA). 2003. "Regulatory Steps Needed to Protect and Conserve Wetlands Not Subject to the Clean Water Act." Report to the Legislature Supplemental Report of the 2002 Budget Act Item 3940-001-0001.

https://www.waterboards.ca.gov/publications_forms/publications/legislative/docs/2003/wetlands_02supprpt.pdf.

Central Valley Regional Water Quality Control Board (CVRWQB). 2018. "Water Quality Control Plan for the Tulare Lake Basin." Third. Available: https://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/.

E.K.I. Environment Water, Inc. 2020. "Groundwater Sustainability Plan, Castac Lake Valley Groundwater Basin." Burlingame, CA.

———. 2021. "Groundwater Sustainability Plan, White Wolf Subbasin." White Wolf Grounwater Sustainability Agency. Available: http://whitewolfgsa.org/gsp/.

———. 2022. "South of Kern River Groundwater Sustainability Plan for the Kern County Subbasin." Available: http://www.kernrivergsa.org/.

Federal Emergency Management Agency (FEMA). 2005. "NFIP Floodplain Management Requirements: A Study Guide and Desk Reference for Local Officials." FEMA 480.

———. 2020. "Floodway." FEMA.Gov. July 8, 2020. https://www.fema.gov/glossary/floodway.

———. 2022. "USA Flood Hazard Areas." Using ArcGIS Online [web application] (https://landscape11.arcgis.com/arcgis/rest/services/USA_Flood_Hazard_Areas/ImageServer). https://www.arcgis.com/home/item.html?id=11955f1b47ec41a3af86650824e0c634.

Kern County GIS. 2018. "Isabella Failure Inundation." Feature Layer. "Kern TLRR Isablella Failure Inundation Map" Created by Panorama Environmental, Inc. (9/23/2023): Using ArcGIS Online (. https://maps.co.kern.ca.us/arcgis/rest/services/Isabella_Failure_Innundation/MapServer.

Kern Groundwater Authority. 2022. "Groundwater Sustainability Plan." https://www.kwb.org/wp-content/uploads/2021/07/179.pdf.

Kern River Groundwater Sustainability Agency. 2022. "Final Amended Groundwater Sustainability Plan." Available: http://www.kernrivergsa.org/?page_id=966.

Los Angeles County Department of Regional Planning. 2015. "Los Angeles County 2035 General Plan." Available: https://planning.lacounty.gov/long-range-planning/general-plan/.

Los Angeles Regional Water Quality Control Board (LARWQCB). 2014. "Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties." Available: https://www.waterboards.ca.gov/losangeles/water_issues/programs/basin_plan/basin_plan_documentation.html.

National Oceanic and Atmospheric Administration (NOAA) and National Integrated Drought Information System (NIDIS). 2023. "National Integrated Drought Information System." California. August 1, 2023. https://www.drought.gov/states/california.

Olcese Water District. n.d. "Sustainable Groundwater Management Act." https://olcesewaterdistrict.org/sgma/.

U.S. Army Corps of Engineers (USACE). 2022. "National Inventory of Dams." Feature layer. "Kern TLRR Damns" Created by Panorama Environmental (9/25/2023): Using ArcGIS [web application]. https://services2.arcgis.com/FiaPA4ga0iQKduv3/arcgis/rest/services/NID_v1/FeatureServer/0.

U.S. Environmental Protection Agency (EPA). 2007. *Tulare Lake Basin Hydrology and Hydrography: A Summary of the Movement of Water and Aquatic Species*. Washington, D.C: Office of Water.

———. 2015. "Clean Water Act, Section 402: National Pollutant Discharge Elimination System." Other Policies and Guidance. November 25, 2015. https://www.epa.gov/cwa-404/clean-water-act-section-402-national-pollutant-discharge-elimination-system.

———. 2022. "EPA Sole Source Aquifers." Available: https://www.epa.gov/dwssa/map-sole-source-aquifer-locations.

———. 2023a. "Secondary Drinking Water Standards: Guidance for Nuisance Chemicals." Overviews and Factsheets. February 14, 2023. https://www.epa.gov/sdwa/secondary-drinking-water-standards-guidance-nuisance-chemicals.

———. 2023b. "Overview of Identifying and Restoring Impaired Waters under Section 303(d) of the CWA." Overviews and Factsheets. August 11, 2023. https://www.epa.gov/tmdl/overview-identifying-and-restoring-impaired-waters-under-section-303d-cwa.

———. 2023c. "Overview of CWA Section 401 Certification." Overviews and Factsheets. September 27, 2023. https://www.epa.gov/cwa-401/overview-cwa-section-401-certification.

———. n.d. "Overview of Clean Water Act Section 404." Other Policies and Guidance. https://www.epa.gov/cwa-404/overview-clean-water-act-section-404.

U.S. Geological Survey (USGS). 2015. "National Watershed Boundary Dataset (WBD)." https://www.usgs.gov/national-hydrography/watershed-boundary-dataset.

———. 2022. "National Hydrogrophy Dataset (NHD)." Reston, Virginia, USA. https://www.usgs.gov/national-hydrography/national-hydrography-dataset.

U.S.Department Homeland Security. 2013. "Federal Guidelines for Dam Safety: Hazard Potential Classification System for Dams." *Federal Emergency Management Agency (FEMA)*.

USGS California Water Science Center. n.d. "Sustainable Groundwater in California." USGS.Gov. Accessed October 10, 2023. https://ca.water.usgs.gov/sustainable-groundwater-management/.

3.11 Land Use and Planning

This section presents the environmental setting and analysis of impacts to land use and planning resulting from the Proposed Project. This section includes existing land use and planning information for the Proposed Project, applicable regulations, environmental impacts, and mitigation measures to reduce or avoid significant effects.

3.11.1 Environmental Setting

Regional Environmental Setting

The Proposed Project traverses Kern County and Los Angeles County, including the cities of Bakersfield and Arvin, and a portion of the Proposed Project is located on lands managed by USDA's Forest Service (Forest Service). Table 3.11-1 lists the length for which each segment of the Proposed Project alignment traverses each jurisdiction. The study area the Proposed Project comprises a 1-mile buffer on either side of the proposed alignment. Specific land uses were combined into categories to represent the major land uses that are present within the study area, and not all land uses are listed. Acreages for each land use category within the study area are listed by segment in Table 3.11-2.

Table 3.11-1 Local Jurisdictions and Management Agencies in the Proposed Project Area

Local jurisdiction/management agency	Length of Proposed Project (miles)
Segment 1 (38.7 miles)	
Forest Service (Sequoia National Forest)	0.4
Kern County (unincorporated)	31.5
City of Bakersfield	4.8
City of Arvin	2.0
Segment 2 (26.9 miles)	
Kern County (unincorporated)	26.8
Forest Service (Los Padres National Forest)	0.1
Segment 3 (4.0 miles)	
Kern County (unincorporated)	2.1
Los Angeles County (unincorporated)	1.9
Segment 4 (11.3 miles)	
Kern County (unincorporated)	11.3
Segment 5 (3 miles)	
Kern County (unincorporated)	3.0

Source: (Kern County Planning and Natural Resources Department, 2022)

Table 3.11-2 Land Use Categories by Segment in the Proposed Project Study Area (acres)

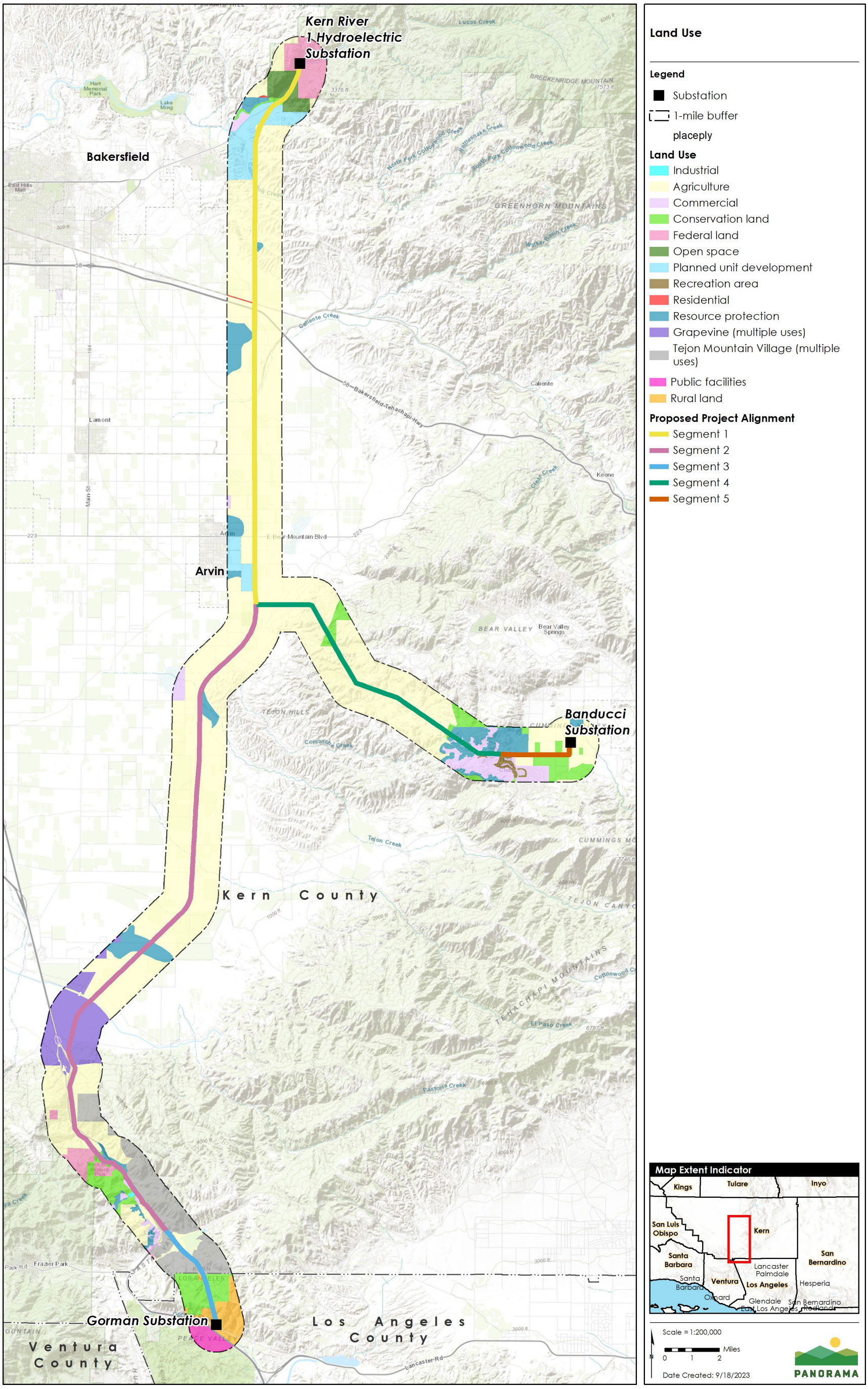
Land use	County	Segment 1	Segment 2	Segment 3	Segment 4	Segment 5
Agriculture	Kern	19,891	24,267	500	10,073	2,096
Commercial	Kern	200	548	55	1,116	634
Commercial	Los Angeles	0	0	0.7	0	0
Conservation land	Kern	140	946	0	884	1,071
Conservation land	Los Angeles	0	0	1,448	0	0
Federal land	Kern	1,610	791	22	0	0
Grapevine (multiple uses)	Kern	0	3,584	0	0	0
Industrial	Kern	0	25	0	0	0
Open space	Kern	1,025	0	0	0	0
Planned unit development	Kern	2,798	0	0	0	0
Public facilities	Los Angeles	0	0	682	0	0
Recreation area	Kern	0	50	0	53	158
Residential	Kern	42	0	0	0	0
Resource protection	Kern	1,338	1,573	22	1,130	732
Rural land	Los Angeles	0	0	1,249	0	0
Tejon Mountain Village (multiple uses)	Kern	0	2,600	2,083	0	0

Source: (Kern County Planning and Natural Resources Department, 2022; County of Los Angeles, 2015)

Environmental Setting by Segment

Acreages of the Proposed Project study area within each local zoning designation are listed for each segment according to jurisdiction in Table 3.11-3 Local land uses within the study area are shown in Figure 3.11-1.

Figure 3.11-1 Land Use Categories within the Proposed Project Study Area



Source: (Kern County Planning and Natural Resources Department, 2022)

3.11 LAND USE AND PLANNING

This page is intentionally left blank.

Table 3.11-3 Local Zoning Designations by Segment in the Proposed Project Study Area (acres)

Zoning designation	Jurisdiction	Segment 1	Segment 2	Segment 3	Segment 4	Segment 5
Agricultural floodway	Kern	1.502	24	0	0	0
Agriculture	Kern	19,461	25,589	29	10,170	3,898
Agriculture	Los Angeles	0	0	1,250	0	0
Agriculture	Bakersfield	1,029	0	0	0	0
Agriculture	Arvin	59	0	0	0	0
Commercial	Kern	0	474	27	27	52
Commercial	Los Angeles	0	0	1	0	0
Commercial	Bakersfield	15	0	0	0	0
Floodway	Kern	21	8	0	0	0
Floodway	Bakersfield	71	0	0	0	0
Industrial	Kern	5	0	0	0	0
Manufacturing	Arvin	394	0	0	0	0
Office	Kern	0	0	0	0	1
Open space	Kern	0	14	0	414	0
Open space	Los Angeles	0	0	2,130	0	0
Open space	Bakersfield	503	0	0	0	0
Recreational forestry	Kern	2,488	935	70	0	41
Residential	Kern	32	541	427	2,469	590
Residential	Bakersfield	683	0	0	0	0
Residential	Arvin	266	0	0	0	0
Residential floodway	Kern	21	0	0	0	0
Special plan	Kern	0	6,144	2,083	0	0

Source: (Kern County Planning and Natural Resources Department, 2022; County of Los Angeles, 2015)

Segment 1

Segment 1 traverses Kern County, through land predominately used for agricultural production, as well as the cities of Arvin and Bakersfield. The northern terminus of Segment 1 is located on lands that are part of the Sequoia National Forest, managed by the Forest Service, and are designated as

part of the Lower Kern River. Commercial land uses proximate to the Proposed Project alignment in Segment 1 are largely concentrated in the City of Bakersfield.

As listed in Table 3.11-2, land uses in the vicinity of Segment 1 include agricultural production, open space, planned unit development, and resource protection along with commercial, conservation, and federal land uses. As listed in Table 3.11-3, the study area within the City of Arvin is zoned for manufacturing, residential, and agriculture, and the Segment 1 study area within the City of Bakersfield is zoned for agricultural, commercial, floodway, open space, and residential uses. The area of unincorporated Kern County that Segment 1 traverses is zoned for agricultural, floodway, industrial, residential, and recreational forestry uses.

Segment 2
The Segments 2 study area is located within Kern County and traverses the Los Padres National Forest. As listed in Table 3.11-2, land use within the Segment 2 study area is predominately agricultural production. Other land uses within the Segment 2 study area include commercial, conservation, resource protection, and industrial uses. Multiple land uses are contained within the unincorporated community of Grapevine and the planned Tejon Mountain Village community. Approximately 450 feet of Segment 2 is located in the Las Padres National Forest, north of Fort Tejon State Historic Park. As listed in Table 3.11-3, the Segment 2 study area is primarily zoned for agriculture, commercial, floodway, open space, residential, recreational forestry, and special plan uses.

Segment 3
The Segments 3 study area is located within Kern and Los Angeles counties. As listed in Table 3.11-2, land uses within the Kern County portion of the Segment 3 study area include agricultural, commercial, resource protection, and federal land uses. The portion of the Segment 3 study area within Los Angeles County contains predominately conservation and rural land uses. As listed in Table 3.11-3, the Segment 3 study area is zoned for agriculture, open space, residential, recreational forestry, and commercial use.

Segment 4
The Segments 4 study area is located within Kern County near Stallion Springs Census Designated Place. As listed in Table 3.11-2 and Table 3.11-3, land uses within Segment 4 primarily consist of agricultural production and commercial, conservation, recreational, and resource protection uses, and Segment 4 is zoned predominately for agriculture, open space, and residential uses.

Segment 5
Segment 5 traverses approximately 11.3 miles of land within Kern County. Land uses within the Segment 5 study area consist mostly of agricultural production, commercial uses, resource protection, conservation, and recreation. As listed in Table 3.11-3, Segment 4 is primarily zoned for agriculture and residential uses.

Significant Ecological Area
Segment 3 of the Proposed Project is located within a Los Angeles County designated Significant Ecological Area (SEA) (shown in Figure 3.11-2) (Los Angeles County Regional Planning, 2020).

SEAs are areas with important biological resources and biodiversity. The purpose of the SEA program is to conserve the biological diversity of Los Angeles County through goals and policies contained within the Los Angeles General Plan 2035 Conservation and Natural Resources Element and the SEA Ordinance within the Los Angeles County Zoning Code (Los Angeles County Regional Planning, 2020). The SEA Ordinance establishes permitting requirements, design standards, and review processes for development of privately held lands within SEAs.

Special Land Uses
The Proposed Project study area does not fall within any of the following special land uses:

- State lands with a special land use-designation
- Local government lands with a special land use designation
- Designated coastal zone management area
- Designated or proposed candidate National or State Wild and Scenic River
- National landmark.
- An area addressed under any habitat conservation plan

3.11.2 Applicable Regulations, Policies and Standards

Federal Regulations, Policies, and Standards

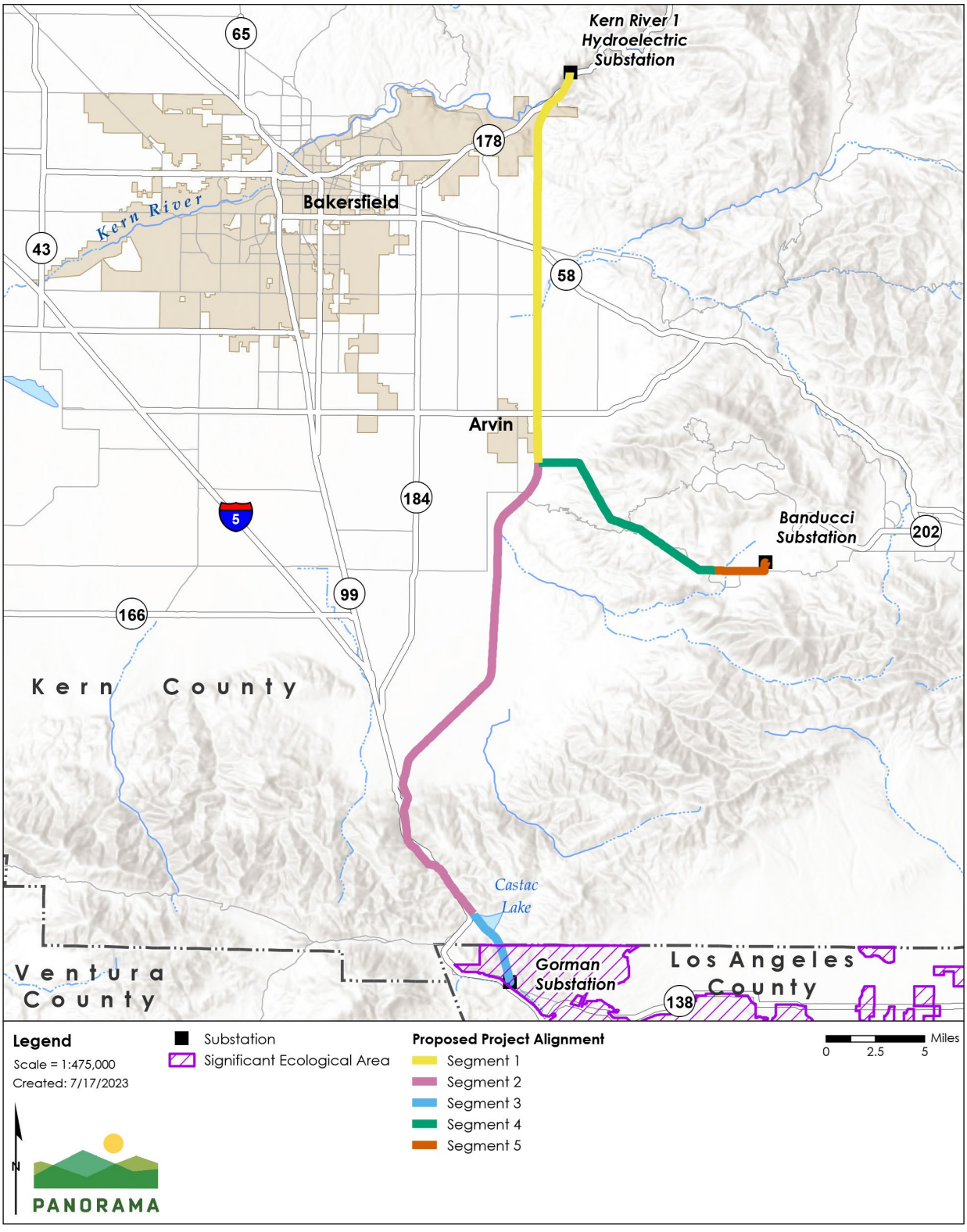
Land Management Plan for the Sequoia National Forest
The Proposed Project alignment traverses lands designated as part of the Lower Kern River conservation watershed under the Land Management Plan for the Sequoia National Forest. The Social and Economic Sustainability and Multiple Uses component of the Land Management Plan provides (USDA Forest Service, 2023). The following desired conditions and guideline under the Social and Economic Sustainability and Multiple Uses component of the 2023 Land Management Plan is relevant to the Proposed Project:

- **Desired condition 1:** Facility ownership and land access management support authorized activities and uses on National Forest System lands. Land exchanges promote improved management of National Forest System lands through consolidated ownership blocks.
- **Desired condition 2:** Coordination of land and resource planning efforts with other Federal, State, tribal, county and local governments, and adjacent private landowners, promotes compatible relationships between activities and uses on National Forest System lands and adjacent lands.
- **Guideline 1:** Minimize the creation of new rights-of-way where feasible by using existing public or private utility rights-of-way to reduce impacts on other resources

The following proposed and possible action from the Appendix B of the 2019 Land Management Plan not carried forward to the 2023 Land Management Plan is relevant to the Proposed Project:

- Cooperate with other entities such as Bureau of Land Management, public utility companies, California Department of Transportation, local governments, and commercial and private entities, to protect scenic character and meet scenic integrity objectives on and adjacent to the national forest.

Figure 3.11-2 Significant Ecological Area



Source: (Hoffman 2022)

Los Padres National Forest Strategy

The Los Padres National Forest Strategy (Part 2 of the Los Padres National Forest land and resource management plan) describes the strategic direction at the broad program level for managing the land and its resources. The management strategies are consistent with the concept of adaptive management and sustainable resource use. The Forest Strategy's program tiers from National Strategic Plan Goals. The desired condition designated by the Los Padres Land Management Plan for Mt. Pinos Place is that it be maintained as a naturally evolving and naturally appearing landscape that functions as a big tree (old growth) recreation environment. The program emphasis for Mt. Pinos Place is to focus on perpetuating healthy conifer forests (USDA, 2005). The Forest Strategy does not contain any strategies relevant to the Proposed Project.

State Regulations, Policies and Standards

There are no state regulations, policies, or standards that apply to the Proposed Project.

Local Regulations, Policies, and Standards

The CPUC has sole and exclusive State jurisdiction over the siting and design of the Proposed Project because it authorizes the construction, operation, and maintenance of investor-owned public utility facilities. Pursuant to GO 131-D section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters." Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the counties' and cities' regulations are not applicable as the counties and cities do not have jurisdiction over the Proposed Project. Accordingly, the following discussion of local land use laws, regulations, and policies is provided for informational purposes only.

Kern County General Plan, Conservation and Open Space Element

The Kern County General Plan Conservation and Open Space Element contains a number of policies and goals relevant to land use and planning for the Proposed Project, including the following (County of Kern , 2009):

- Oak woodlands and large oak trees shall be protected where possible and incorporated into project developments.
- Promote the conservation of oak tree woodlands for their environmental value and scenic beauty.

Kern County General Plan: Energy Element

Kern County is a major oil, natural gas, and electricity producer, which gives the County's future energy development statewide significance. The Kern County Energy Element is a comprehensive document that defines critical energy related issues facing the County and sets forth goals, policies, and implementation measures to protect the County's energy resources and encourage orderly energy development while affording the maximum protection for the public's health, safety, and the environment. The Energy Element of Kern County's General Plan has three primary objectives: resource management and protection; establishing development standards to provide for the

protection of the environment, public health, and safety; and promoting and facilitating energy development (County of Kern , 2009).

Section 5.4.7 Transmission Lines states a goal to "encourage the safe and orderly development of transmission lines to access Kern County's electrical resources along routes, which minimize potential adverse environmental effects." Achievement of this goal will be driven by a number of policies, including the following:

1. The County should encourage the development and upgrading of transmission lines and associated facilities (e.g., substations) as needed to serve Kern County's residents and access the County's generating resources, insofar as transmission lines do not create significant environmental or public health and safety hazards.
2. The County shall review all proposed transmission lines and their alignments for conformity with the Land Use, Conservation, and Open Space Element of this General Plan.
3. In reviewing proposals for new transmission lines and/or capacity, the County should assert ap reference for upgrade of existing lines and use of existing corridors where feasible.
4. The County should discourage the siting of above-ground transmission lines in visually sensitive areas.

Kern County: Zoning Ordinance

Per Section 19.08.090 of the Kern County Zoning Ordinance, the provisions of the Kern County Municipal Code do not apply to the construction, installation, operation, and maintenance of the types of facilities that would be replaced under the Proposed Project (County of Kern, 2021).

Los Angeles County General Plan

The Los Angeles County General Plan Conservation and Natural Resources Element contains goals and policies relevant to the Proposed Project (County of Los Angeles, 2015).

- Policy LU 3.1**:** Encourage the protection and conservation of areas with natural resources, and SEAs.
- Policy C/NR 3.9: Consider the following in the design of a project that is located within an SEA to the greatest extent feasible:
  - Preservation of biologically valuable habitats, species, wildlife corridors and linkages
  - Protection of sensitive resources on the site within open space
  - Protection of water resources form hydromodification in order to maintain the ecological function of riparian habitats
  - Placement of the development in the least biologically sensitive areas on the site (prioritize the preservation or avoidance of the most sensitive biological resources onsite)
  - Design requiring open spaces to retain contiguous undisturbed open space that preserve the most sensitive biological resources onsite and/or serves to maintain regional connectivity

- Maintenance of watershed connectivity by capturing, treating, retaining, and/or infiltrating storm water flows on site
- Consideration of the continuity of onsite open space with adjacent open space in project design

City of Arvin: General Plan

The City of Arvin's General Plan contains goals and policies relevant to the Proposed Project (City of Arvin , 2012).

- Policy CO-5.2: Implement the drainage improvement measures specified in the Master Drainage Plan for Arvin
- Policy CO-6.1: Protect sensitive and significant ecological areas of unique vegetation and wildlife.
- Policy CO-6.2: Protect from extinction the identified endangered species which recognize the Arvin area as part of their natural range.
- Goal 6: Preserve wildlife, endangered and/or rare species and natural habitats and eco-systems in the Arvin Planning area.

City of Bakersfield, General Plan

The City of Bakersfield General Plan includes goals and policies applicable to the Proposed Project (City of Bakersfield County of Kern, 2002).

- Policy 3: Require dust abatement measures during significant grading and construction operations.
- Goal 1: Ensure that residents of the Bakersfield Metropolitan Area are protected form excessive noise and existing moderate levels of noise are maintained.

3.11.3 Applicant Proposed Measures

SCE has proposed measures to reduce environmental impacts. The significance of the impact is first considered prior to application of APMs, and a significance determination is made. The implementation of the APMs is then considered as part of the Proposed Project when determining whether impacts would be significant and thus would require mitigation. These APMs would be incorporated as part of any CPUC project approval, and SCE would be required to adhere to the APMs as well as any identified mitigation measures. The APMs are included in the MMRP for the Proposed Project, and the implementation of the measures would be monitored and documented in the same manner as mitigation measures. There are no APMS that are applicable to the land use and planning analysis.

3.11.4 Environmental Analysis

Summary of Impacts

Table 3.11-4 presents a summary of the CEQA significance criteria and impacts on land use and planning that would occur during construction, operation, and maintenance of the Proposed Project.

Table 3.11-4 Summary of Proposed Project Impacts to Land Use and Planning

Would the proposed project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Physically divide an established community?	☐	☐	☐	☒
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐

Impact Discussion

a) Physically divide an established community?

The Proposed Project would involve replacing or rebuilding existing subtransmission lines and structures and modifying existing substations. The existing subtransmission lines included under the Proposed Project are currently located within and adjacent established communities. The Proposed Project would replace or rebuild the existing subtransmission line within, or adjacent, the existing alignment. Therefore, the Proposed Project subtransmission lines would not create any new physical divisions to a community. Substation modifications would be performed entirely within the existing substations owned by SCE and would not create any physical division to an established community. Because the Proposed Project would not physically divide an established community, no impact would occur.

Required APMs and MMs: None required.

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

Pursuant to CPUC GO 131-D, the CPUC has sole and exclusive jurisdiction over the siting and design of the Proposed Project; therefore, no local land use plans, policies, or regulations would apply to the Project. The Proposed Project would be located primarily within existing SCE ROW and easements. SCE would be required to obtain new easements or ROW for the approximately 7.4 miles of the Proposed Project alignment where SCE does not currently have sufficient ROW or easements to accommodate the Proposed Project. SCE would negotiate with landowners for new permanent easements over private lands. New permanent or modified ROWs would also be obtained from the public agency where the land is publicly owned (e.g., USFS land). Temporary construction areas would be required for staging areas and helicopter landing zones and would primarily be within the existing ROWs or easements. However, some construction work areas may require a temporary construction easement. All temporary construction areas would be returned to

their pre-Project land uses after construction in accordance with the CPUC Environmental Measures.

Segment 3 of the Proposed Project is located within the San Andreas SEA. The SEA Ordinance in the Los Angeles County Zoning Code requires development in SEAs to avoid impacts to biological resources. Segment 3 of the Proposed Project would include changes to the existing subtransmission line that would not expand the existing development footprint. Therefore, the Proposed Project would be exempt from the requirements of the SEA Ordinance, in accordance with section 22.102.040 (C) of the Los Angeles Zoning Code.

Surveys identified approximately 1,689 trees with a diameter of 8 inches at breast height or greater within Project work areas and access roads. The number of trees that would be removed would be quantified during construction. SCE would try to minimize the number of trees removed. As discussed in Section 3.11.2, the Kern County General Plan Conservation and Open Space Element contains several policies regarding the conservation of oak tree woodlands (County of Kern , 2009). The following policies are applicable to the Proposed Project:

- Oak woodlands and large oak trees shall be protected where possible and incorporated into project developments.
- Promote the conservation of oak tree woodlands for their environmental value and scenic beauty.

Implementation of Mitigation Measure Biology-17requires tree removal to be designed to minimize the number of trees removed, and a qualified arborist would be on site to provide recommendations on tree trimming and removal. Additionally, Mitigation Measure Biology-17 requires that the protection and replacement of trees impacted by Project activities be mitigated consistent with applicable jurisdiction and agency requirements. With implementation of Mitigation Measure Biology-17, the Proposed Project would be consistent with the Kern County General Plan's policies for the protection of oak woodlands.

A land use consistency analysis is provided in Table 3.11-5 for informational purposes only.

The Proposed Project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project. There would be no impact, and no mitigation is required.

Required APMs and MMs: MM Biology-17

Table 3.11-5 Land Use Plans, Policies, and Regulations Consistency Analysis

Objective, policy, or goal	Consistency analysis
Kern County General Plan: Energy Element	
The County should encourage the development and upgrading of transmission lines and associated facilities (e.g., substations) as needed to serve Kern County's residents and access the County's generating resources, insofar as transmission lines do not create significant environmental or public health and safety hazards.	The purpose of the Proposed Project is to remediate discrepancies and improve reliability by updating aging infrastructure. The Proposed Project would not create a significant environmental or public health and safety hazards. The Proposed Project is consistent with the policy.
The County should discourage the siting of above ground transmission lines in visually sensitive areas.	Aesthetic considerations adjacent the Proposed Project are addressed in Section 3.1 Aesthetics. The Proposed Project is not in a visually sensitive area.
The County should encourage new transmission lines to be sited/configured to avoid or minimize collision and electrocution hazards to raptors	The Proposed Project would replace or rebuild the existing subtransmission line within, or directly adjacent, the existing alignment. Mitigation measures would be implemented to minimize electrocution risk to birds and raptors as addressed in Section 3.4 Biological Resources. The Proposed Project is consistent with the policy.
Kern County General Plan, Land Use: Conservation, and Open Space Element	
Public Facilities and Services Policy 6: The County will ensure adequate fire protection to all Kern County residents	Adequate fire protection services are available for the Proposed Project, as discussed in Section 3.15 Public Services and Section 3.20 Wildfire. The Proposed Project is consistent with the policy.
Public Facilities and Services Implementation Measure N: Secure complete and accurate information on all hazardous wastes generated, handled, stored, treated, transported, and disposed of within or through Kern County.	The Proposed Project would be subject to state and local regulations regarding the storage and disposal of hazardous materials. These issues are addressed in Section 3.9 Hazards and Hazardous Materials. The Proposed Project is consistent with the policy.
Resource Policy 11: Minimize the alteration of natural drainage areas. Require development plans to include necessary mitigation to stabilize runoff and silt deposition through utilization of grading and flood protection ordinances.	The Proposed Project would implement a SWPPP to address erosion, sediment/siltation, and release of other pollutants during stormwater runoff events. These issues are addressed in 3.10 Hydrology and Water Quality. The Proposed Project is consistent with the policy.

Objective, policy, or goal	Consistency analysis
Air Quality Policy 21: The County shall support air districts' efforts to reduce PM10 and PM2.5 emissions.	The Proposed Project would implement CPUC's Dust Control During Construction measures to control fugitive dust during construction activities. The Proposed Project is consistent with the policy.
Archaeological, Paleontological, Cultural, and Historical Preservation Implementation Measure M: In areas of known paleontological resources, the County should address the preservation of these resources where feasible.	The Proposed Project may adversely impact paleontological resources. As discussed in Section 3.7 Geology and Soils, there are APMs and mitigation measures to address impacts on paleontological resources as a result of the Proposed Project. The Proposed Project is consistent with the policy.
Threatened and Endangered Species Policy 27: Threatened or endangered plant and wildlife species should be protected in accordance with state and federal laws.	The Proposed Project would be subject to state and federal regulations regarding threatened or endangered plant and wildlife species. These regulations are addressed in Section 3.4 Biological Resources. The Proposed Project is consistent with the policy.
Surface Water and Groundwater Policy 34: Ensure that water quality standards are met for existing users and future development.	The Proposed Project would be subject to state and local water quality standards. These issues are addressed in Section 3.10 Hydrology and Water Quality. The Proposed Project is consistent with the policy.
Surface Water and Groundwater Policy 43: Drainage shall conform to the Kern County Development Standards and the Grading Ordinance.	The Proposed Project would conform with all Kern County Development Standards and the Grading Ordinance. The Proposed Project is consistent with the policy.
Surface Water and Groundwater Implementation Measure Y: Promote efficient water use by utilizing measures such as: a. Requiring water-conserving design and equipment in new construction. b. Encouraging water-conserving landscaping and irrigation methods. c. Encouraging the retrofitting of existing development with water conserving devices. :	The Proposed Project would use recycled or reclaimed water during construction if sufficient quantities are available. The Proposed Project is consistent with the policy.
Light and Glare Policy 48: Encourage the use of low-glare lighting to minimize nighttime glare effects on neighboring properties.	Construction lighting would be temporary and limited to the necessary work areas. No new permanent lighting is proposed as part of the Proposed Project. The Proposed Project is consistent with the policy.

Objective, policy, or goal	Consistency analysis
Kern County General Plan, Noise Element	
Goal 1: Ensure that residents of Kern County are protected from excessive noise and that moderate levels of noise are maintained.	Noise-generating activities during construction would be temporary and would not create permanent noise. The Proposed Project would be subject to APM NOI-1 and mitigation measures outlined in Section 4.8 Noise. No significant noise would be generated during operation of the Proposed Project. The Proposed Project is consistent with the policy.
Policy 7: Employ the best available methods of noise control.	Noise-generating activities during construction of the Proposed Project would be minimized and subject to mitigation measures outlined in Section 4.8 Noise. No new noise would be generated during operation of the Proposed Project. The Proposed Project is consistent with the policy.
Implementation Measure I: Noise analyses shall include recommended mitigation, if required, and shall: a. Include representative noise level measurements with sufficient sampling periods and locations to adequately describe local conditions. b. Include estimated noise levels, in terms of CNEL, for existing and projected future (10 -20 years hence) conditions, with a comparison made to the adopted policies of the Noise Element. c. Include recommendations for appropriate mitigation to achieve compliance with the adopted policies and standards of the Noise Element. d. Include estimates of noise exposure after the prescribed mitigation measures have been implemented. If compliance with the adopted standards and policies of the Noise Element will not be achieved, a rationale for acceptance of the project must be provided.	The noise analysis contains mitigation measures and APMs to address impacts associated with noise generated from construction of the Proposed Project. The Proposed Project would comply with the CNEL standard since noise would be primarily generated during construction. The Proposed Project would not be a source of new permanent noise and would not result in a long-term increase in noise. The Proposed Project is consistent with the implementation measure.

Objective, policy, or goal	Consistency analysis
Kern County General Plan, Safety Element	
General Implementation Measure F: The adopted multi-jurisdictional Kern County, California Multi-Hazard Mitigation Plan, as approved by the Federal Emergency Management Agency (FEMA), shall be used as a source document for preparation of environmental documents pursuant to the California Environmental Quality Act (CEQA), evaluation of project proposals, formulation of potential mitigation, and identification of specific actions that could, if implemented, mitigate impacts from future disasters and other threats to public safety.	The Kern County, California, Multi-Hazard Mitigation Plan is used as a source document for the preparation of this IS/MND. The Proposed Project is consistent with the policy.
Los Angeles County General Plan	
Policy AQ 1.3: Reduce particulate inorganic and biological emissions from construction, grading, excavation, and demolition to the maximum extent feasible.	Impacts associated with emissions from construction of the Proposed Project and the mitigation measures implemented to reduce impacts are addressed in Section 3.3 Air Quality. The Proposed Project is consistent with the policy.
Policy C/NR 3.5: Ensure compatibility of development in the National Forests in conjunction with the U.S. Forest Service Land and Resource Management Plan.	The Proposed Project would be conducted in accordance with the Los Padres National Forest Strategy and the 2019 and 2023 Sequoia National Forest Land Management Plan[1]. The Proposed Project is consistent with the policy.
Policy C/NR 13.5: Encourage required grading to be compatible with the existing terrain.	Visual and erosion impacts associated with grading are addressed in Section 3.1 Aesthetics and Section 3.10 Hydrology and Water Quality. The Proposed Project is consistent with the policy.

[1] The 2019 Sequoia National Forest Land Management Plan contains policies that are relevant to the proposed project that are not contained within the 2023 Sequoia National Forest Land Management Plan and are therefore included in the analysis.

Objective, policy, or goal	Consistency analysis
Policy C/NR 14.1: Mitigate all impacts from new development on or adjacent to historic, cultural, and paleontological resources to the greatest extent feasible.	Compensatory mitigation will be required for the Proposed Project for impacts to historic, cultural, and paleontological resources. Further details and mitigation measures are outlined in Section 3.5 Cultural Resources. The Proposed Project is consistent with the policy.
Policy C/NR 14.6: Ensure proper notification and recovery processes are carried out for development on or near historic, cultural, and paleontological resources.	The Proposed Project would be conducted in accordance with all local and state regulations regarding historic, cultural, and paleontological resources. Further details and mitigation measures are outlined in Section 3.5 Cultural Resources. The Proposed Project is consistent with the policy.
Goal N 1: The reduction of excessive noise impacts	Noise-generating activities during construction of the Proposed Project would be minimized and subject to mitigation measures outlined in Section 4.8 Noise. No significant noise would be generated during operation of the Proposed Project. The Proposed Project is consistent with the goal.
Policy N 1.3: Minimize impacts to noise-sensitive land uses by ensuring adequate site design, acoustical construction, and use of barriers, berms, or additional engineering controls through Best Available Technologies (BAT).	The Proposed Project would implement noise-control techniques to minimize temporary construction noise impacts to noise-sensitive land uses. No long-term noise would be generated by the Proposed Project. The Proposed Project is consistent with the policy.
Policy N 1.9: Require construction of suitable noise attenuation barriers on noise sensitive uses that would be exposed to exterior noise levels of 65 dBA CNEL and above, when unavoidable impacts are identified.	The Proposed Project would not result in significant and unavoidable noise impacts, as discussed in Section 3.13 Noise. The Proposed Project would implement noise-control techniques to minimize impacts to noise-sensitive land uses. The Proposed Project is consistent with the policy.
Policy PS/F 5.7: Encourage the recycling of construction and demolition debris generated by public and private projects.	Approximately 35 percent of the construction materials generated by the Proposed Project would be hauled to a recycling facility for disposal. The Proposed Project is consistent with the policy.
Policy PS/F 6.4: Protect and enhance utility facilities to maintain the safety, reliability, integrity and security of utility services.	The purpose of the Proposed Project is replacing and modifying existing electric subtransmission infrastructure to maintain and enhance utility reliability. The Proposed Project is consistent with the policy.
Policy PS/F 6.7: Discourage above-ground electrical distribution and transmission lines in hazard areas.	The Proposed Project would involve the replacement of an existing aboveground subtransmission line. The Proposed Project would replace the existing wood poles with nonflammable materials to reduce future wildfire risks along the alignment. The Proposed Project is consistent with the policy.

Objective, policy, or goal	Consistency analysis
Policy LU 3.1: Encourage the protection and conservation of areas with natural resources, and SEAs.	The Proposed Project would involve the replacement of an existing aboveground subtransmission line within the existing footprint. Therefore, the Proposed Project would not result in new impacts to the San Andreas SEA. The Proposed Project is consistent with the policy.
Policy C/NR 3.9: Consider the following in the design of a project that is located within an SEA to the greatest extent feasible: • Preservation of biologically valuable habitats, species, wildlife corridors and linkages; • Protection of sensitive resources on the site within open space; • Protection of water resources form hydromodification in order to maintain the ecological function of riparian habitats • Placement of the development in the least biologically sensitive areas on the site (prioritize the preservation or avoidance of the most sensitive biological resources onsite) • Design requiring open spaces to retain contiguous undisturbed open space that preserve the most sensitive biological resources onsite and/or serves to maintain regional connectivity. • Maintenance of watershed connectivity by capturing, treating, retaining, and/or infiltrating storm water flows on site; and • Consideration of the continuity of onsite open space with adjacent open space in project design.	The Proposed Project would involve the replacement of an existing aboveground subtransmission line within the existing footprint. Therefore, the Proposed Project would not result in new impacts to the San Andreas SEA. The Proposed Project is consistent with the policy.
City of Bakersfield General Plan	
Policy 3 (Air Quality): Require dust abatement measures during significant grading and construction operations.	The Proposed Project would implement CPUC's Dust Control During Construction measures to control fugitive dust during construction activities. The Proposed Project is consistent with the policy.
Goal 1 (Noise Element): Ensure that residents of the Bakersfield Metropolitan Area are protected from excessive noise and existing moderate levels of noise are maintained.	Noise-generating activities during construction of the Proposed Project would be minimized and subject to mitigation measures outlined in Section 4.8 Noise. No significant noise would be generated during operation of the Proposed Project. The Proposed Project is consistent with the policy.

Objective, policy, or goal	Consistency analysis
City of Arvin General Plan	
Policy CO-5.2 Implement the drainage improvement measures specified in the Master Drainage Plan for Arvin.	The Proposed Project would not substantially alter existing drainage patterns that would require the need for drainage improvement measures. Further details and mitigation measures are outlined in Section 3.10 Hydrology and Water Quality. The Proposed Project is consistent with the policy.
Goal 6: Preserve wildlife, endangered and/or rare species and natural habitats and eco-systems in the Arvin Planning area.	The Proposed Project would be required to mitigate impacts to sensitive habitat and special-status species. Existing transmission corridors would be used so that intrusion into existing open space is minimized. The existing subtransmission structures would also be removed and, therefore, the area of permanent impact would not increase. Further details and mitigation measures are outlined in Section 3.4 Biological Resources. The Proposed Project is consistent with the policy.
Policy CO-6.1 Protect sensitive and significant ecological areas of unique vegetation and wildlife.	The Proposed Project would be required to mitigate impacts to sensitive habitat and special-status species. Existing transmission corridors would be used so that intrusion into existing open space is minimized. Further details and mitigation measures are outlined in Section 3.4 Biological Resources. The Proposed Project is consistent with the policy.
Policy CO-6.2 Protect from extinction the identified endangered species which recognize the Arvin area as part of their natural range.	The Proposed Project would be required to mitigate impacts to special-status species. Existing transmission corridors would be used so that intrusion into existing open space is minimized. Further details and mitigation measures are outlined in Section 3.4 Biological Resources. The Proposed Project is consistent with the policy.
City of Arvin: Noise Element	
Goal 1: Ensure that the residents of the City of Arvin are protected from excessive noise and harmful sound.	Noise-generating activities during construction of the Proposed Project would be minimized and subject to mitigation measures outlined in Section 4.8 Noise. No significant noise would be generated during operation of the Proposed Project. The Proposed Project is consistent with the policy.

Objective, policy, or goal	Consistency analysis
Sequoia National Forest Land Management Plan	
Minimize the creation of new rights-of-way where feasible by using existing public or private utility rights-of-way to reduce impacts on other resources	The Proposed Project would occur within the existing ROW in the SNF. The Proposed Project is consistent with this policy. .

3.11.5 References

BLM. (2016, September). The Federal Land Policy and Management Act of 1976 Amended. Retrieved from https://www.blm.gov/sites/blm.gov/files/AboutUs_LawsandRegs_FLPMA.pdf

City of Arvin . (2012, August 21). City of Arvin General Plan Update.

City of Bakersfield County of Kern. (2002, December). Metropolitan Bakersfield General Plan.

County of Kern . (2009, September 2009). Kern County General Plan.

County of Kern. (2021, April). Kern County Zoning Ordinance. Retrieved from https://kernplanning.com/planning/planning-documents/zoning-ordinance/

County of Los Angeles. (2015, March). Los Angles County General Plan Update.

Kern County Planning and Natural Resources Department. (2022, May 22). Kern County General Plan. Kern County. Retrieved from https://services5.arcgis.com/Y8jwjGUWbRjuqpG5/ArcGIS/rest/services/kc_general_plan/FeatureServer/0

Los Angeles County Regional Planning. (2020). *Significant Ecological Areas (SEA) Ordinance Implementation Guide.*

The County of Los Angeles. (2022, December 21). Land Use Policy - Community/Area Plan. The County of Los Angeles. Retrieved from https://arcgis.gis.lacounty.gov/arcgis/rest/services/DRP/Open_Data/MapServer/7

USDA. (2005, September). Executive Summary of the Final Environmental Impact Statement for Revised Land Management Plan. Retrieved from https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb5337802.pdf

USDA Forest Service. (2023, May). *Land Management Plan for the Sequoia National Forest.* Retrieved September 12, 2023, from https://www.fs.usda.gov/project/?project=3375

3.12 Mineral Resources

This section describes the environmental setting and impact analysis for mineral resources resulting from the Proposed Project. This section includes information for existing mineral resources in the Proposed Project area, applicable regulations, environmental impacts, and mitigation measures to reduce or avoid significant effects.

3.12.1 Environmental Setting

According to the United States Geological Survey (USGS), a *mineral resource* is defined as a concentration of naturally occurring solid, liquid, or gaseous material in or on the earth's crust in such a form and quantity, and of such a grade or quality, that it has reasonable prospects for economic extraction, either currently or in the future. Mineral resources include oil, natural gas, and metallic and non-metallic deposits. Information on mineral resources was obtained through a review of literature, maps, GIS data, and online sources published by USGS, California Geologic Energy Management Division (CalGEM), California Geological Survey (CGS), and general plans for Kern County, Los Angeles County, City of Arvin and the City of Bakersfield.

Regional Setting

Mineral Resource Classification and Designation

The Surface Mining and Reclamation Act of 1975 (SMARA) requires the California Geological Survey (CGS) to conduct Mineral Land Classification (MLC) studies and identify and map Mineral Resource Zones (MRZs). The State's MRZ classification categories are defined in Table 3.12-1. MRZ-2a and MRZ-2b are considered to have the highest economic importance because the resource significance has been identified and either determined or inferred through evidence. MRZ-3a and MRZ-3b are considered to have moderate economic importance based on the likelihood of the resource significance but undetermined presence. MRZ-1 and MRZ-4 are considered to have low economic importance because significant resources are unlikely or unknown.

Mineral Resource Recovery

The USGS Mineral Resources Data System indicates two active mining sites are located within 1 mile of the Proposed Project, as shown in Figure 3.12-1. The two mining sites in proximity to the Proposed Project consist of sand and gravel mining pits (U.S. Geological Survey, 2010; California Department of Conservation, Division of Mine Reclamation, 2020). The Proposed Project alignment does not cross either mineral extraction area. No mineral resource recovery sites have been identified in proximity to the Proposed Project in a General Plan, specific plan, or any other land use plan or by the State of California (California Department of Conservation, 2023).

A review of the CalGEM's Well Star database indicates the presence of active oil, gas, and geothermal wells within 1 mile of the Proposed Project (as shown in Figure 3.12-2). The nearest

well to the Proposed Project is an oil and gas well located approximately 300 feet from the Proposed Project alignment (CalGEM, 2022).

Table 3.12-1 Mineral Resource Zone Classification Categories

Classification	Definition
MRZ-1	Areas where available geologic information indicates there is little likelihood for the presence of mineral resources.
MRZ-2a	Areas that contain significant measured or indicated reserves.
MRZ-2b	Areas where geologic information indicates that significant inferred resources or demonstrated subeconomic resources are present.
MRZ-3a	Areas likely to contain undiscovered mineral deposits similar to known deposits in the same producing district or region (hypothetical resources).
MRZ-3b	Areas judged to be favorable geologic environments for mineral resource occurrence, but where mineral discoveries have not been made in the region (speculative resources).
MRZ-4	Areas where geologic information does not rule out either the presence or absence of mineral resources.
ARA-6	Areas with aggregate resources rated as highly significant.

Source: (California Department of Conservation, 2000)

Environmental Setting by Segment

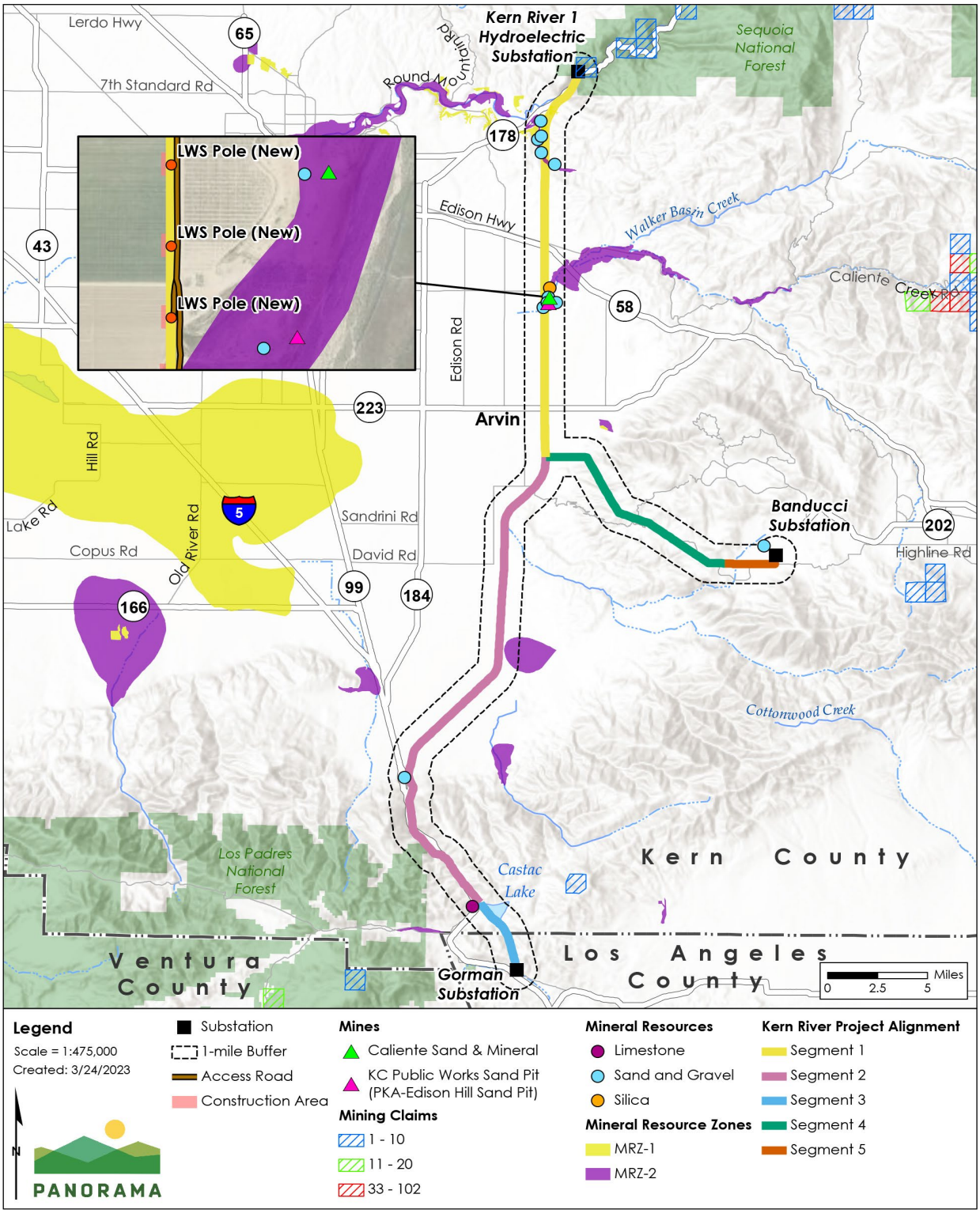
Table 3.12-2 provides a summary of State-classified mineral resource areas within 1 mile of the Proposed Project. Table 3.12-3 provides a summary of active mineral resource recovery sites within 1 mile of the Proposed Project; the locations are shown on Figure 3.12-1.

Segment 1

Non-State classified MRZs are present within Segment 1. Segment 1 is located within and adjacent areas that contain known mineral resources, including State-classified MRZ-2a (California Department of Conservation, 2009). A placer mining claim (Claim Name K ABLE #56789101112, Serial Number CAMC279457) is located in the same Public Land Survey System Section as the existing Kern River 1 Hydroelectric Substation at the northern terminus of Segment 1 (SCE 2022).

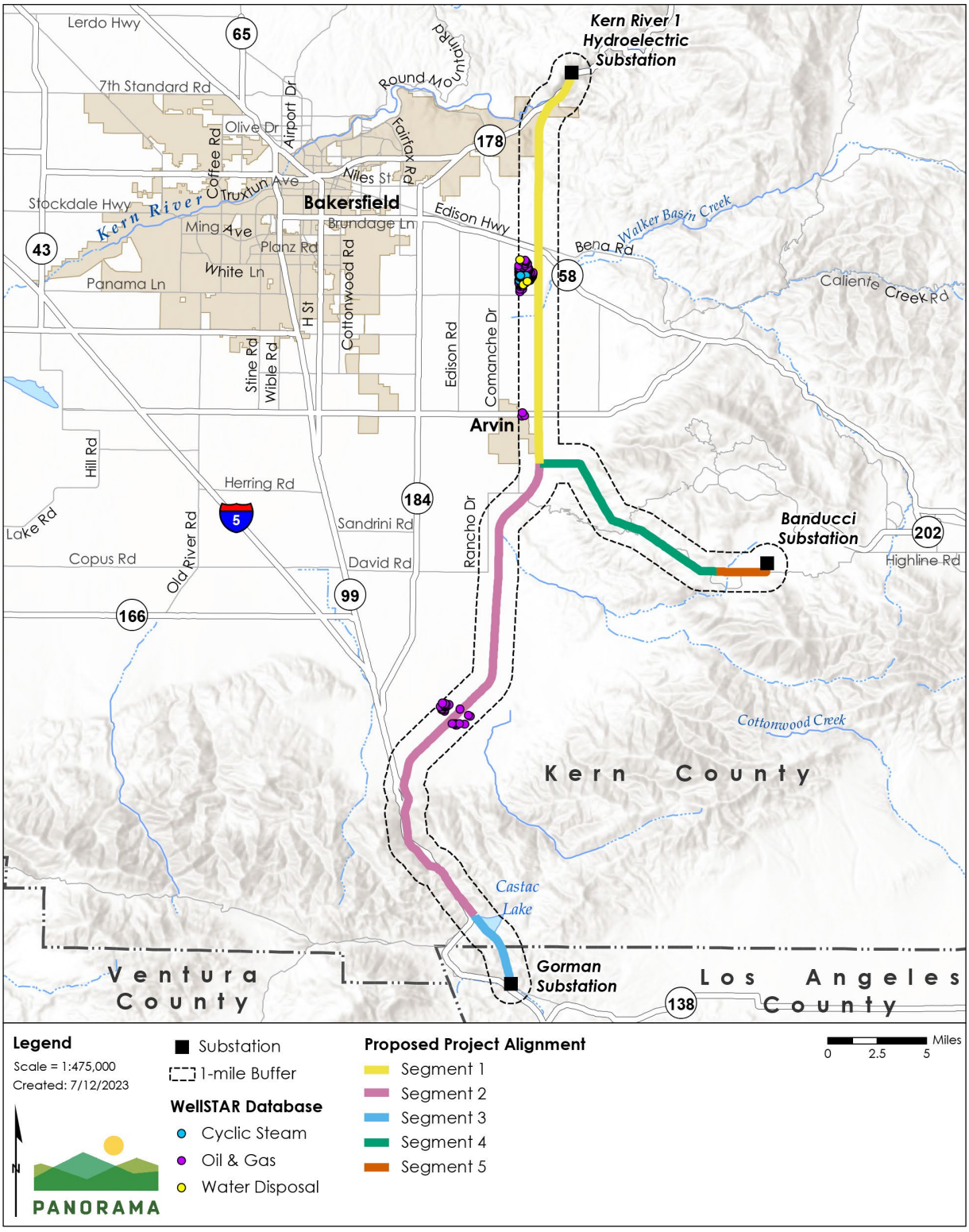
Mineral resources within the vicinity of the Proposed Project alignment include 10 sand and gravel resources and one silica resource, as shown in Figure 3.12-1 (U.S. Geological Survey, 2010). Two aggregate sites (i.e., mines and pits), the Caliente Sand and Mineral Quarry and KC Public Works Sand Pit (Table 3.12-3 and Figure 3.12-1), are located within 1 mile of Segment 1 but over 1,000 feet from the Proposed Project alignment. As shown in Table 3.12-3, 173 active oil and gas, cyclic steam, and water disposal wells are present within 1 mile of Segment 1 (as shown in Figure 3.12-2).

Figure 3.12-1 Mining and Mineral Resources in the Proposed Project Vicinity



Source: (U.S. Geological Survey, 2010), (California Department of Conservation, Division of Mine Reclamation, 2020), (California Department of Conservation, California Geological Survey, 2009)

Figure 3.12-2 Active Wells in the Project Vicinity



Source: (CalGEM, 2022)

Table 3.12-2 Mineral Resource Areas within 1 mile of the Proposed Project

Category	Description	Acres per segment					Total acres
		1	2	3	4	5	
MRZ-1	Areas where available geologic information indicates there is little likelihood for the presence of mineral resources	440	0	0	0	0	440
MRZ-2a	Areas that contain significant measured or indicated reserves	901	592	0	0	0	1,493

Source: (California Department of Conservation, 2009)

Table 3.12-3 Active Mineral Resource Recovery Sites within 1 mile of the Proposed Project

Category	Description	Active sites per segment					Total sites
		1	2	3	4	5	
Active mining operations	Aggregate pits: areas with minor to moderate mining activities, such as small to medium open borrow pits used for various sources of aggregate	2	0	0	0	0	2
Active wells	Gas, oil, or geothermal wells identified in DOC's Well Star database	173	23	0	0	0	196

Source: (California Department of Conservation, Division of Mine Reclamation, 2020)

Segment 2

Non-State classified MRZs are present within Segment 2. Segment 2 is located within and adjacent areas that contain known mineral resources, including State-classified MRZ-2a (California Department of Conservation, 2009). One sand and gravel resource and one limestone resource are within 1 mile of Segment 2. There are no other active mining claims and no active mineral recover sites within 1 mile of Segment 2. Approximately 23 oil and gas wells are within 1 mile of Segment 2.

Segments 3, 4, and 5

Segments 3, 4, and 5 are not located within and adjacent areas that contain known mineral resources (California Department of Conservation, 2009). One known limestone mineral resource site is adjacent the Proposed Project alignment in Segment 3, and one sand and gravel resource site is present within 1 mile of Segment 5. There are no active mining claims and no active mineral recovery sites identified within 1 mile of Segments 3, 4, or 5. No active oil and gas, steam, or water disposal wells are present within 1 mile of Segments 3, 4, or 5.

3.12.2 Applicable Regulations, Policies, and Standards

Federal Regulations, Policies and Standards

There are no federal regulations pertaining to mineral resources that are applicable to the Proposed Project.

State Regulations, Policies, and Standards

California Surface Mining and Reclamation Act of 1975 (Public Resources Code Sections)

The Surface Mining and Reclamation Act of 1975 (SMARA) established statewide policies for surface mining and reclamation. It provides regulations for mining operations that assure that environmental impacts are minimized and mined lands are used in a stable condition (State of California, 2018). The law specifically mandates a two-phased process, commonly referred to as *classification and designation*, for mineral resources. The California Geological Survey is responsible under SMARA for carrying out the classification phase of the process. SMARA requires the State Geologist (who is the chief administrator of the California Geological Survey) to classify lands into MRZs based on the known or inferred mineral resource potential of that land. The classification process is based solely on geology, without regard to land use or ownership. The primary goal of mineral land classification is to help ensure that the mineral resource potential of land is recognized and considered in the land use planning process. The California Mining and Geology Board is responsible for the second phase, which allows the Board to identify areas within a production-consumption region that contain significant deposits of certain mineral resources that may be needed to meet the region's future demand (State of California, 2018).

Local Regulations, Policies and Standards

The CPUC has sole and exclusive State jurisdiction over the siting and design of the Proposed Project because it authorizes the construction, operation, and maintenance of investor-owned public utility facilities. Pursuant to GO 131-D section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters." Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the counties' and cities' regulations are not applicable as the counties and cities do not have jurisdiction over the Proposed Project. Accordingly, the following discussion of local land use laws, regulations, and policies is provided for informational purposes only.

Kern County General Plan: Land Use, Open Space, and Conservation Element

The policies, goals, and implementation measures in the Kern County General Plan for mineral resources are contained in the Land Use, Open Space, and Conservation Element. The following goal and policies are relevant to the analysis of mineral resources for the Proposed Project.

Goal:

- Protect areas of important mineral, petroleum, and agricultural resource potential for future use.

Policies:

- Lands classified as MRZ-2, as designated by the State of California, should be protected from encroachment of incompatible land uses.
- Discourage incompatible land use adjacent to Map Code 8.4 (Mineral and Petroleum) areas.

Los Angeles County General Plan
The Conservation and Natural Resources Element of the County of Los Angeles General Plan establishes goals and policies aimed to protect mineral resources (Los Angles County, 2015). The following policy is relevant to the analysis of mineral resources for the Proposed Project:

Policy:

- Protect MRZ-2s and access to MRZ-2s from development and discourage incompatible adjacent land uses.

City of Arvin General Plan
The City of Arvin General Plan does not contain any goals, policies, or implementation measures relevant to the analysis of mineral resources for the Proposed Project.

City of Bakersfield General Plan
The Conservation Element of the City of Bakersfield Metropolitan General Plan establishes regulations aimed to protect mineral resources (City of Bakersfield County of Kern, 2002). The following goal and policies are relevant to the analysis of mineral resources for the Proposed Project.

Goal:

- Protect areas of significant resources potential for future use.

Policies:

- Protect significant mineral and petroleum resource areas, including potential sand and gravel extraction areas.
- Promote development of compatible uses adjacent to mineral extraction areas.

3.12.3 Applicant Proposed Measures

SCE has proposed measures to reduce environmental impacts. The significance of the impact is first considered prior to application of applicant proposed measures (APMs), and a significance determination is made. The implementation of the APMs is then considered as part of the Proposed Project when determining whether impacts would be significant and thus would require mitigation. These APMs would be incorporated as part of any CPUC project approval, and SCE would be required to adhere to the APMs as well as any identified mitigation measures. The APMs are included in the MMRP for the Proposed Project, and the

implementation of the measures would be monitored and documented in the same manner as mitigation measures. There are no applicant proposed measures (APMs) that would apply to potential mineral resource impacts.

3.12.4 Environmental Analysis

Summary of Impacts

Table 3.12-4 presents a summary of the CEQA significance criteria and impacts on mineral resources that would occur during construction, operation, and maintenance of the Proposed Project.

Table 3.12-4 Summary of Proposed Project Impacts to Mineral Resources

Would the proposed project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?	☐	☐	☒	☐
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	☐	☐	☐	☒

Impact Discussion

a) Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?

The Proposed Project crosses lands identified as containing known mineral resources that are of value to the region and residents of the state. MRZ-2a is present along Segments 1 and 2 of the Proposed Project alignment. Two active mining sites are also located within 1,000 feet of the Proposed Project but are not within the Proposed Project area. The Proposed Project involves replacing and rebuilding existing subtransmission lines and substations within or immediately adjacent the existing alignment. Construction activity would involve use of SCE's existing access roads. The nearest access road to an active mining site is approximately 933 feet. The access road improvements and use would not cause loss of availability of a known mineral resource. SCE constructed the existing subtransmission lines and substations in the early 1900s. Since the replacement subtransmission lines and structures would be located proximate to the existing infrastructure, there would be no new loss of availability of known mineral resources. Additionally, mineral resources within or in close proximity to the existing ROW and easements that are available for extraction or are actively mined would continue to be available during construction of the Proposed Project. The impact from loss of availability of a known mineral resource would be less than significant.

Required APMs and MMs: None required.

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

No mineral resource recovery sites are delineated in any general plan, specific plan, or other land use plan in the vicinity of the Proposed Project. Because the Proposed Project would not affect any mineral resource recovery site delineated in a local general plan, specific plan or other land use plan, no impact would occur.

Required APMs and MMs: None required.

3.12.5 References

CalGEM. (2022, May 26). WellSTAR: Oil and Gas Wells. *CalGEM WellSTAR Database*. California Department of Conservation. Retrieved from https://gis.conservation.ca.gov/server/rest/services/WellSTAR/Wells/MapServer/0.

California Department of Conservation. (2000). Guidelines for Classification and Designation of Mineral Lands. *California Surface Mining and Reclamation Policies and Procedures*. Retrieved November 8, 2019, from https://www.conservation.ca.gov/smgb/Guidelines/Documents/ClassDesig.pdf.

California Department of Conservation. (2009). Designated_Mineral_Resource_Zones_NAD83. *Special Report 210 - Update of Mineral Land Classification: Aggregate Materials in the Bakersfield Production-Consumption Region*. California Department of Conservation, California Geological Survey.

California Department of Conservation. (2018). Mines Online. Division of Mine Reclamation. Retrieved from https://maps.conservation.ca.gov/mol/index.html.

California Department of Conservation. (2023, February). Mines online. doi:https://mods.conservation.ca.gov/documents?mineid=91150001.

California Department of Conservation, California Geological Survey. (2009). Designated_Mineral_Resource_Zones_NAD83. *Special Report 210 - Update of Mineral Land Classification: Aggregate Materials in the Bakersfield Production-Consumption Region*. California Department of Conservation, California Geological Survey.

California Department of Conservation, Division of Mine Reclamation. (2020, May 2). Mines. Department of Conservation. Retrieved from https://gis.conservation.ca.gov/server/rest/services/MOL/MOLMines/MapServer.

Californoa Department of Conservation. (2023). WellSTAR Database System. Retrieved November 6, 2019, from https://secure.conservation.ca.gov/WellSearch/.

City of Bakersfield County of Kern. (2002, December). Metropolitan Bakersfield General Plan.

Kern County. (2009, September 22). Kern County General Plan.

Los Angles County. (2015, October 6). General Plan. Retrieved from https://planning.lacounty.gov/assets/upl/project/gp_final-general-plan.pdf.

National Park Service: Energy and Minerals Management. (2022, April 24). Surface Mining Control and Reclamation Act. Retrieved from https://www.nps.gov/subjects/energyminerals/smcra.htm.

State of California. (2018, July). SMARA Statutes and Regulations. Retrieved from https://www.conservation.ca.gov/smgb/Regulations/Documents/SMARA-statutes-regs-7-2018.pdf.

U.S. Geological Survey. (2010, September 24). U.S. Geological Survey Mineral Resources Data System. *California Mineral Resources*. Reston, Virginia, USA: U.S. Geological Survey. Retrieved from http://mrdata.usgs.gov/mineral-resources/mrds-us.html.

3.13 Noise

This section presents the environmental setting and impact analysis for noise and vibration for the Proposed Project. This section provides information regarding noise and vibration concepts, existing noise levels, applicable regulations, environmental impacts, and mitigation measures to reduce or avoid significant effects.

3.13.1 Noise Concepts

Noise is generally defined as undesirable sound that is a byproduct of human activities. Sound becomes undesirable when it interferes with normal activities including sleep, speech, recreation, and tasks requiring concentration or coordination or when it causes physical harm or has adverse effects on the health of the environment.

Metrics of Noise

Sound pressure level (SPL), measured in decibels (dB), is used to quantify the amplitude of a sound pressure wave as a ratio of sound pressure to a reference pressure, which is the lowest sound pressure that a human can hear. Because sounds within the range of human hearing can vary in intensity by over one million times, a logarithmic scale is used to express this wide range. Additionally, because the human ear is not equally sensitive sounds on the spectrum of audible frequency, or number of times per second that a sound pressure wave repeats, human response is expressed in A-weighted decibels (dBA), a scale of measurement that quantifies the sensitivity of normal human hearing to sounds of along a scale of audible frequency.

The A-weighted decibel scale (dBA) is utilized in the criteria for most noise evaluations. Several time-averaged scales represent noise environments and consequences of human activities. The most commonly used noise descriptors *are continuous equivalent sound* level L_{eq}, a single value for equivalent to the same total energy as the total fluctuating noise over the measurement period, also known as time-average sound level (LAT); A-weighted equivalent continuous sound level LA_{eq},; day–night 24-hour average sound level (Ldn)[1], which is equal to the 24-hour A-weighted equivalent sound level with a 10-decibel penalty applied for nighttime, defined as between 10:00 p.m. and 7:00 a.m., to account for sensitivity to noise during the nighttime; and *community noise equivalent level* (CNEL) calculated with the addition of a 5-decibel penalty in the evening, defined as 7:00 to 10:00 p.m., and a 10-decibel penalty for nighttime, defined as between 10:00 p.m. and 7:00 a.m. All references to decibels (dB) in this analysis will be A-

1 Ldn is the day–night average sound level that is equal to the 24-hour A-weighted equivalent sound level with a 10-decibel penalty applied for nighttime, defined as between 10:00 p.m. and 7:00 a.m.

weighted unless noted otherwise. Table 3.13-1, lists example decibel levels for common sound sources.

On the dBA scale, the normal range of human hearing extends from about 0 dBA to about 140 dBA. Except in carefully controlled laboratory experiments, a change of only 1 dBA in sound level cannot be perceived. Outside of the laboratory, a 3 dBA change is considered a perceptible difference while a 5 dBA change is readily noticeable. A 10 dBA increase in the level of a continuous sound represents a perceived doubling of loudness (Caltrans 2013).

Noise Attenuation

Stationary sources, or *point sources*, of noise, including construction equipment, attenuate (i.e., lessen) at a rate of 6 to 7.5 dB per doubling of distance from the source, depending on ground absorption. Soft sites attenuate at 7.5 dB per doubling because they have an absorptive ground surface such as soft dirt, grass, or scattered bushes and trees. Hard sites have reflective surfaces (e.g., parking lots, still bodies of water) and therefore have less attenuation (6 dB per doubling). For example, when the attenuation is 6 dBA per doubling, a 60 dBA noise level measured at 50 feet from a point source would be approximately 54 dBA at 100 feet from the source and 48 dBA at 200 feet from the source. A street or roadway with moving vehicles, known as a *line source*, would typically attenuate at a lower rate, approximately 3 to 4.5 dB for each doubling of distance from the source, with the rate also depending on ground absorption (Caltrans 1998). Physical barriers located between a noise source and the noise receptor, such as berms or sound walls, would increase the attenuation that occurs by distance alone. Noise from large construction sites have characteristics of both point and line sources, so attenuation would likely range between 4.5 and 7.5 dB per doubling of distance.

Table 3.13-1 Typical Noise Levels in the Environment

Noise level (dBA)	Common outdoor examples	Common indoor examples
Over 110		Rock band
110–100	Jet flyover at 1,000 feet	
100–90	Gas lawnmower at 3 feet	
90–80	Diesel truck at 50 feet at 50 mph	Food blender at 3 feet or a Garbage disposal at 3 feet
80–70	Noisy urban area, daytime, or a gas lawnmower at 100 feet	Vacuum cleaner at 10 feet
70–60	Commercial area or Heavy traffic at 300 feet	Normal speech at 3 feet
60–50	Quiet urban daytime	Large business office or Dishwasher in next room
40–30	Quiet urban nighttime or quiet suburban nighttime	Theater, large conference room (background), or library
30–20	Quiet rural nighttime	Bedroom at night, concert hall (background)

Noise level (dBA)	Common outdoor examples	Common indoor examples
Below 20		Broadcast/recording studio (background)

Source: (Caltrans 2013)

3.13.2 Groundborne Vibration Concepts

Vibration is the physical manifestation of energy carried through the earth and structures. *Groundborne* vibration, consisting of rapidly fluctuating motions or waves, has the potential to disturb people perceiving it and to damage buildings. Low-level vibrations may cause secondary vibrations in the form of slight rattling of windows, doors, stacked dishes, and the like, a potentially irritating disturbance that, while posing little risk of actual structural damage, can be cause for vibration complaints.

Construction activities can produce varying degrees of groundborne vibration, depending on the equipment and methods employed. Groundborne vibrations from construction activities very rarely reach levels high enough to cause damage to structures; however, special consideration must be given when fragile historical buildings are in near proximity to a construction site.

Groundborne Vibration Metrics

The most common measure used to quantify construction vibration amplitude is the *peak particle velocity* (PPV), defined as as the maximum speed of ground particle movement, expressed in the U.S. in inches per second (in./sec).

3.13.3 Environmental Setting

The environmental setting for noise is based on a review of information provided by SCE and data from various other sources, including the following:

- United States (U.S.) Environmental Protection Agency (EPA)
- California Department of Transportation (Caltrans)
- Plans, policies, and ordinances adopted by local jurisdictions

Existing Noise Conditions

The Proposed Project site is located in unincorporated Kern County, unincorporated Los Angeles County, the city of Arvin, and the city of Bakersfield. Land uses near the Proposed Project site area are primarily undeveloped open space, rural agricultural areas, and scattered rural residential uses (as shown in Figure 3.11-2 in Section 3.11 Land Use and Planning). An ambient noise survey was not conducted for baseline conditions in the vicinity of the Proposed Project site. Instead, the existing noise conditions for the vicinity of the Proposed Project site were determined by applying Governor's Office of Planning and Research (OPR) Noise Element Guidelines (OPR 2017). This approach was used because ambient noise within a 1,000-foot buffer around the Proposed Project site consist primarily of community noise, roadway and highway noise, and the operation of agricultural equipment, and there are no stationary (i.e., point) noise sources in the area. No airports are located within 2 miles of the Proposed Project

site. While there may be some aircraft noise within the vicinity of the Proposed Project site due to agricultural uses in the area, air traffic is not a predominant routine source of noise in the area.

Table 3.13-2 lists the typical ambient land use noise levels in the vicinity of the Proposed Project site.

Much of the Proposed Project alignment, including Segment 1, 2, 4, 5, and the northern portion of Segment 3, traverses unincorporated Kern County, which is largely comprised of open space or is in agricultural production. Open space is generally quiet with low ambient noise levels. Source of noise in agricultural areas would be from highway or local road traffic and mechanical agricultural equipment. The very small portion of Segment 1 that traverses jurisdictions of the City of Arvin and City of Bakersfield comprises agricultural and rural residential land uses. The major sources of community noise within the City of Bakersfield include traffic on state highways and major local streets, railroad operations, airport operations, and local industrial activities (City of Bakersfield 2002). Of these potential sources, only one source—highway-related noise from State Route 178—is present in the vicinity of the Proposed Project site. In the City of Arvin, major sources of noise include transportation sources on rural roads and primary roads (City of Arvin 2012). The Arvin Branch Railroad Line in the eastern portion of the City of Arvin can produce intermittent sources of noise. The small portion of the Proposed Project alignment located in unincorporated Los Angeles County largely comprises of open space, with the primary source of ambient noise being vehicle traffic on the two-lane Gorman Post Road and Highway 5 that is equivalent to commercial land use, ranging from 50 to 78 dB Ldn.

No airports are located within 2 miles of the Proposed Project site. While there may be some aircraft noise within the vicinity of the Proposed Project site due to agricultural uses in the area, air traffic is not a predominant routine source of noise in the area.

Table 3.13-2 Existing Typical Land Use Noise Levels in Proposed Project Vicinity

Land use category	Typical land use noise level (dB, Ldn) [1]	Major sources of noise in land use type
Residential (rural)	36–42 [2]	The noise environment outside of residences can be highly variable depending on how close a residential use is to nearby uses that generate high noise levels. In residential areas of the United States, major contributions to outdoor noise come from transportation, industrial, construction, human and animal noises (EPA 1978). Rural populations experience average outdoor sound levels generally lower than 50 dB, L_{dn} (EPA 1978).

Land use category	Typical land use noise level (dB, Ldn) [1]	Major sources of noise in land use type
Residential (urban)	56–62 [2]	The noise environment outside of residences can be highly variable depending on how close a residential use is to nearby uses that generate high noise levels. In residential areas of the United States, major contributions to outdoor noise come from transportation, industrial, construction, human and animal noises (EPA 1978). Nearly half of all urban populations live in areas exposed to traffic sounds that range between 55 and 60 dB, Ldn (EPA 1978). Noise measurements taken in urbanized areas (i.e., residential neighborhoods) of Bakersfield indicate community noise levels of 44 to 64 dB, CNEL (City of Bakersfield 2002)
Agricultural crop land (rural)	41–47 [2,3]	The noise environment at agricultural land uses can be highly variable depending on how close the agricultural land use is to nearby uses that generate high noise levels. If operational, agricultural land uses can widely vary depending on the type of enterprise or business. Primary noise sources would be from heavy machinery, equipment, and livestock.
Commercial land	50–78 [4]	The noise environment at commercial land uses can be highly variable depending on how close the commercial land use is to nearby uses that generate high noise levels. Noise levels from commercial uses can widely vary depending on the type of enterprise or business. Major noise sources from commercial operations would include mechanical equipment, machinery, and traffic.
School	50–70 [5]	The noise environment outside of schools can be highly variable depending on how close a school use is to nearby uses that generate high noise levels. Due to its close proximity, traffic noise levels from Interstate 5 could reach up to 75 dB at the nearest campus buildings at El Tejon School on Lebec Road (Caltrans 2021a; 2021b; FHWA 1978).
Industrial land	50–80 [6]	Only a small area of Segment 2 comprises industrial land use. Noise levels from industrial uses can widely vary depending on the type of enterprise or business. Major noise sources from industrial operations would include noise from mechanical equipment, machinery, and traffic.
Open space	36–42 [7]	The noise environment at open space land uses can be highly variable depending on how close the open spaces use is to nearby uses that generate high noise levels. Major noise sources in open space areas would be expected to come from transportation, construction, and human and animal noises.

Notes:

1. The Ldn is the day–night average sound level that is equal to the 24-hour A-weighted equivalent sound level with a 10 dB penalty applied to nighttime, defined as between 10:00 p.m. and 7:00 a.m. The use of Ldn in this column is

to describe the cumulative noise exposure during an average annual day/night period. Although there may be instances where noise levels may reach high instantaneous, maximum levels, the Ldn does not represent the sound level perceived at any given time but, rather, the overall sound exposure over the course of a typical day.

2. Outdoor day-night average sound levels are from the EPA's Protective Noise Levels (EPA 1978). A conservative assumption of +/- 3 dB Ldn was used to establish the range for this land use based on the outdoor day-night average sound level listed in that document.
3. This range of day-night outdoor noise levels assumes no operations occurring on rural agricultural lands at the time. The OPR's General Plan Noise Element Compatibility Guidelines recommends a maximum community noise exposure of 80 dB Ldn as a"conditionally acceptable" outdoor noise level for agricultural land uses (Governor's Office of Planning and Research [OPR] 2017).
4. The OPR's General Plan Noise Element Compatibility Guidelines recommends a community noise exposure of up to 78 dB Ldn as a "conditionally acceptable" outdoor noise level for commercial land uses (OPR 2017).
5. The OPR's General Plan Noise Element Compatibility Guidelines recommends a community noise exposure of up to 70 dB Ldn as a "Conditionally Acceptable" outdoor noise level for schools (OPR 2017).
6. The OPR's General Plan Noise Element Compatibility Guidelines recommends a community noise exposure of up to 80 dB Ldn as a "conditionally acceptable" outdoor noise level for industrial land uses (OPR 2017).
7. Since the majority of open space land use within the vicinity of the Proposed Project site would be in rural areas, this range of day-night outdoor noise levels assumes the same outdoor noise levels for rural residential areas

Source: ((U.S. EPA, 1978) (OPR, 2017)

Noise-sensitive Receptors in the Vicinity of the Proposed Project Site

Noise sensitive receptor varies slightly in definition among jurisdictions For the purposes of this analysis, noise sensitive receptors include the following:

- Residences (when occupied)
- Schools (when in session)
- Hospitals, convalescent homes, and retirement homes
- Houses of worship (when occupied)
- Parks and recreational facilities/community centers

The few noise sensitive receptors located in the vicinity of the Proposed Project site in Segments 1, 2, and 3 comprise scattered rural residences and an elementary school, located in Segment 2. In the eastern portion of Segment 4 and the western portion of Segment 5, suburbanized residential developments are found in proximity to the Proposed Project site, with residences clustered along the Proposed Project alignment. In the eastern portion of Segment 4 and western portion of Segment 5, numerous residences are directly adjacent the Proposed Project work areas. There are no hospitals, convalescent homes, retirement homes, houses of worship, or recreational facilities/community centers within 1,000 feet from the Proposed Project. Table 3.13-3, identifies the type and distance of the nearest sensitive receptors within 1,000 feet of the Proposed Project alignment, including staging work areas. Figure 3.13-1 through Figure 3.13-5 show where these nearest sensitive receptors are located to the Proposed Project by segment.

Table 3.13-3 Noise-sensitive Receptors within 1,000 feet of the Proposed Project

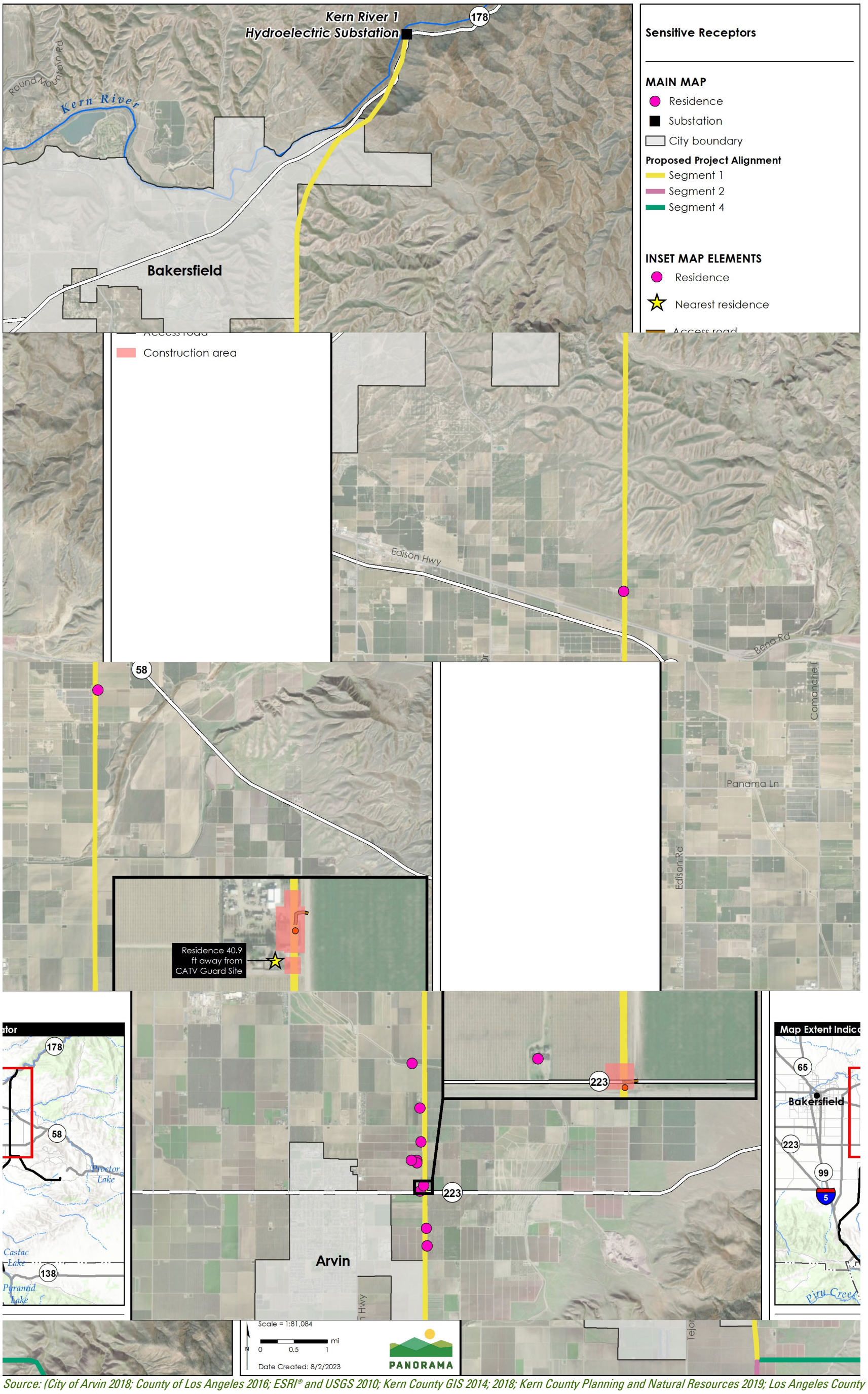
Receptor type	Distance to nearest work area (feet) [2]	Nearest project feature
Segment 1		
Residence [1]	65	Guard structure site for installation of a new LWS
Segment 2		
Residence [1]	105	Guard structure site for transmission line pull
El Tejon School	200	Removal of a lattice steel tower and installation of a new LWS pole
Segment 3		
Residence [1]	123	Construction work at the Gorman substation
Segment 4		
Residence [1]	20	Guard structure site for a new LWS monopole
Segment 5		
Residence [1]	20	Guard structure site for distribution line

Notes:

1. Numerous residences occur within 1,000 feet of Proposed Project work areas. This table lists the distance to the residential receptor closest to work areas within each segment and staging area.
2. Distance was rounded up to the nearest foot.

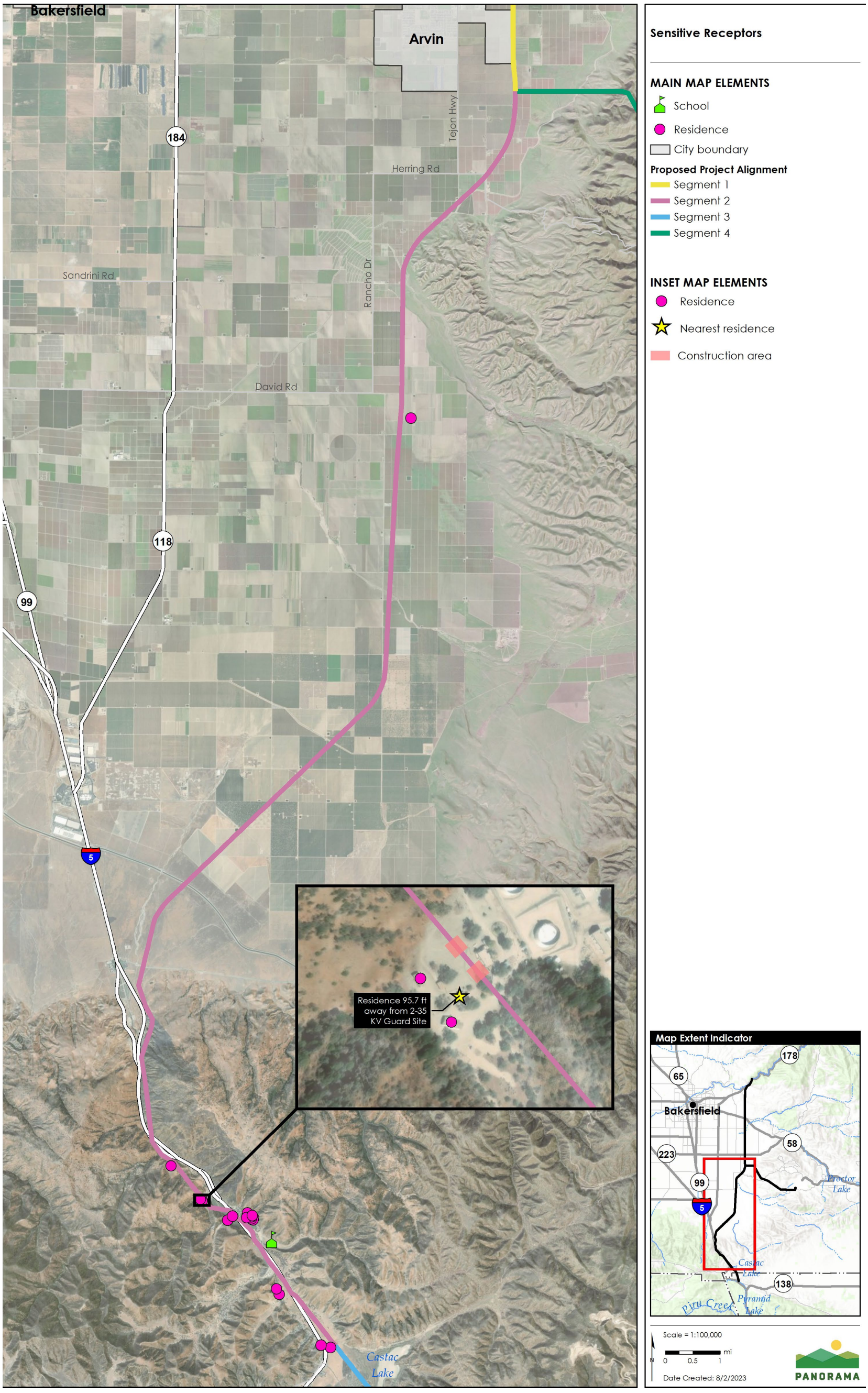
Source: (City of Arvin 2018; County of Los Angeles 2016; ESRI® and USGS 2010; Kern County GIS 2014; 2018; Kern County Planning and Natural Resources 2019; Los Angeles County Department of Regional Planning 2019; Oak Ridge National Laboratory [ORNL] and National Geospatial-Intelligence Agency [NGA] Homeland Security Infrastructure Program [HSIP] Team 2020)

Figure 3.13-1 Nearest Residential Sensitive Receptor by Proposed Project Segment (Map 1 of 5)



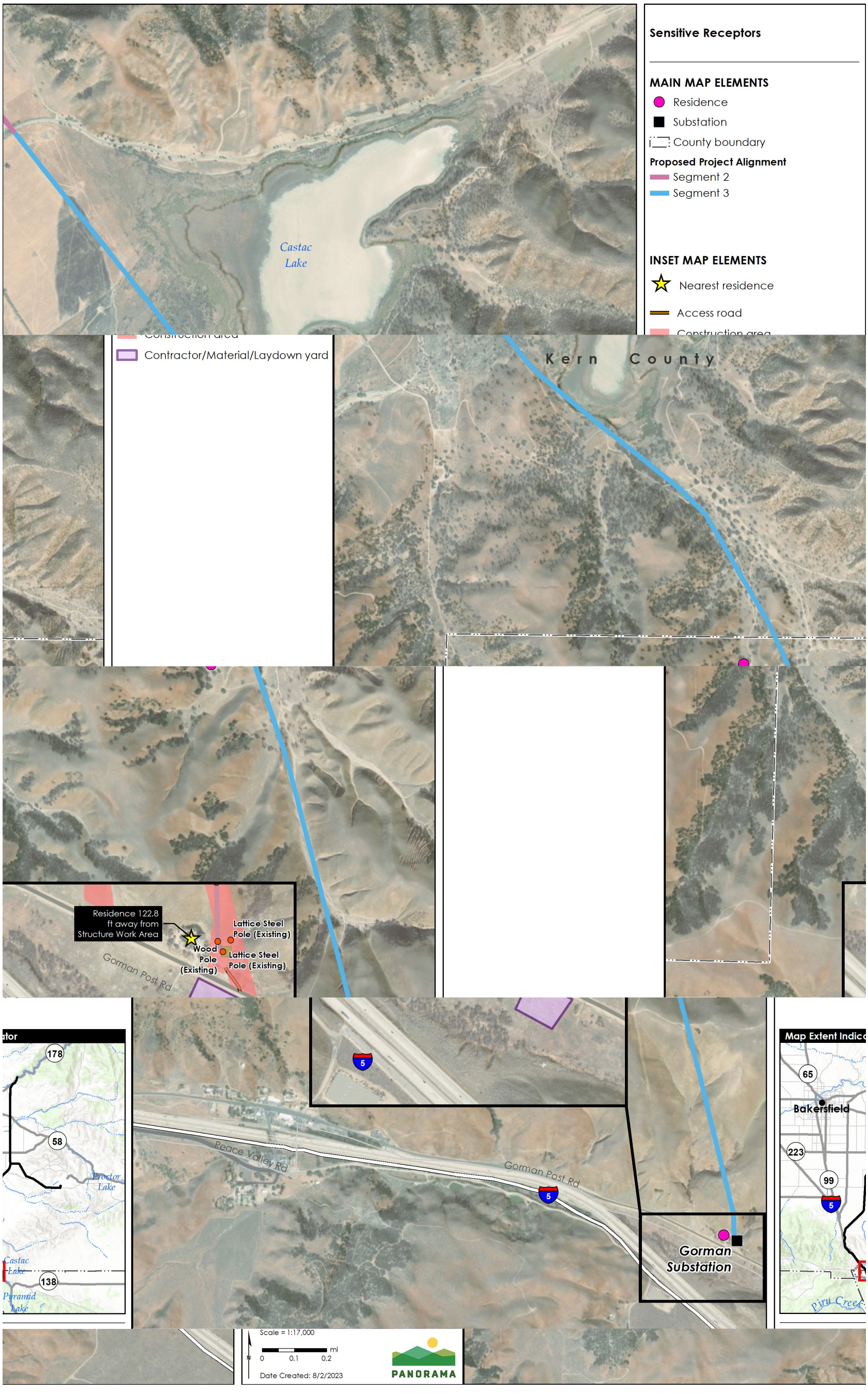
Source: (City of Arvin 2018; County of Los Angeles 2016; ESRI® and USGS 2010; Kern County GIS 2014; 2018; Kern County Planning and Natural Resources 2019; Los Angeles County Department of Regional Planning 2019; Oak Ridge National Laboratory [ORNL] and National Geospatial-Intelligence Agency [NGA] Homeland Security Infrastructure Program [HSIP] Team 2020)

Figure 3.13-2 Nearest Residential Sensitive Receptor by Proposed Project Segment (Map 2 of 5)



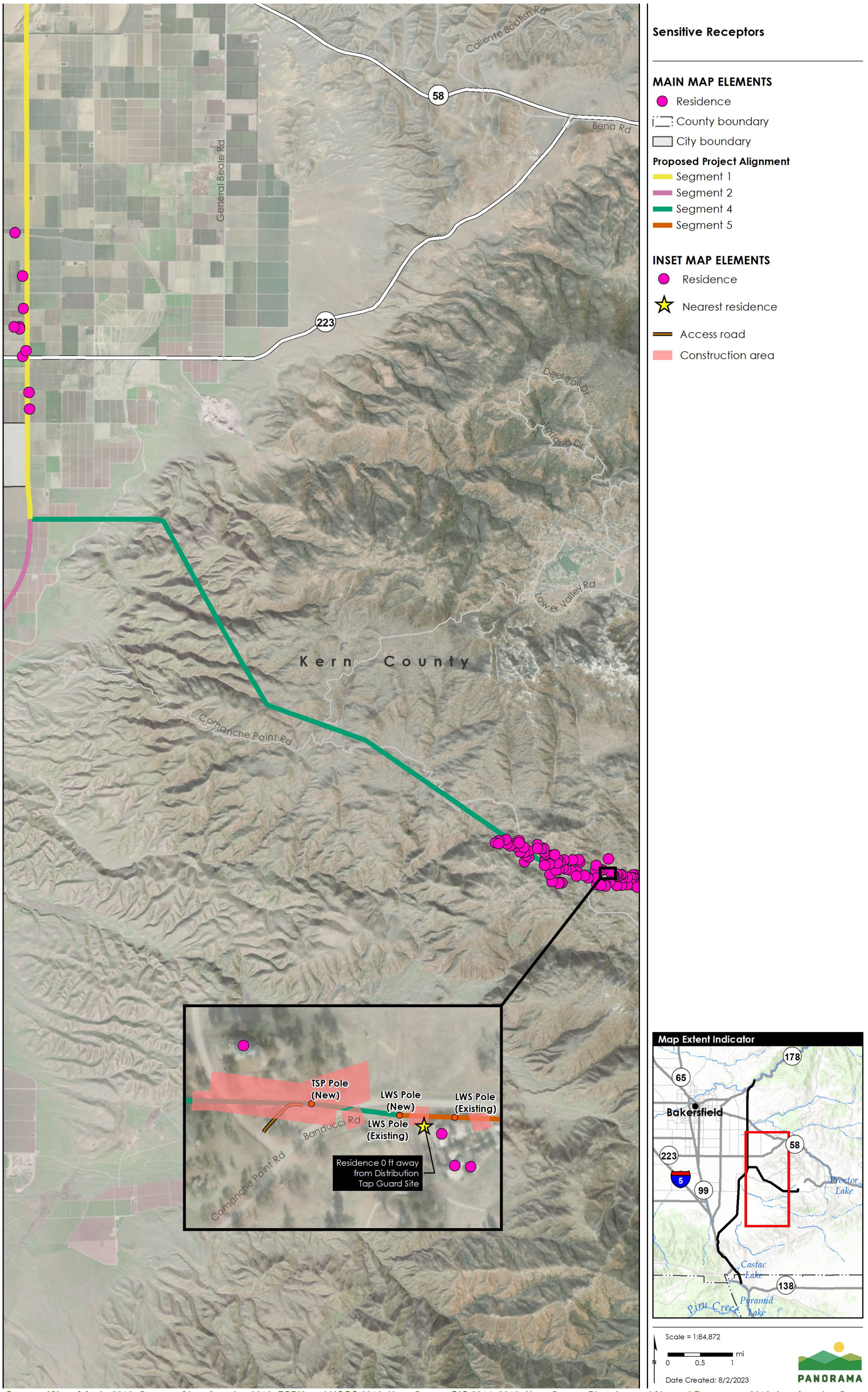
Source: (City of Arvin 2018; County of Los Angeles 2016; ESRI® and USGS 2010; Kern County GIS 2014; 2018; Kern County Planning and Natural Resources 2019; Los Angeles County Department of Regional Planning 2019; Oak Ridge National Laboratory [ORNL] and National Geospatial-Intelligence Agency [NGA] Homeland Security Infrastructure Program [HSIP] Team 2020)

Figure 3.13-3 Nearest Residential Sensitive Receptor by Proposed Project Segment (Map 3 of 5)



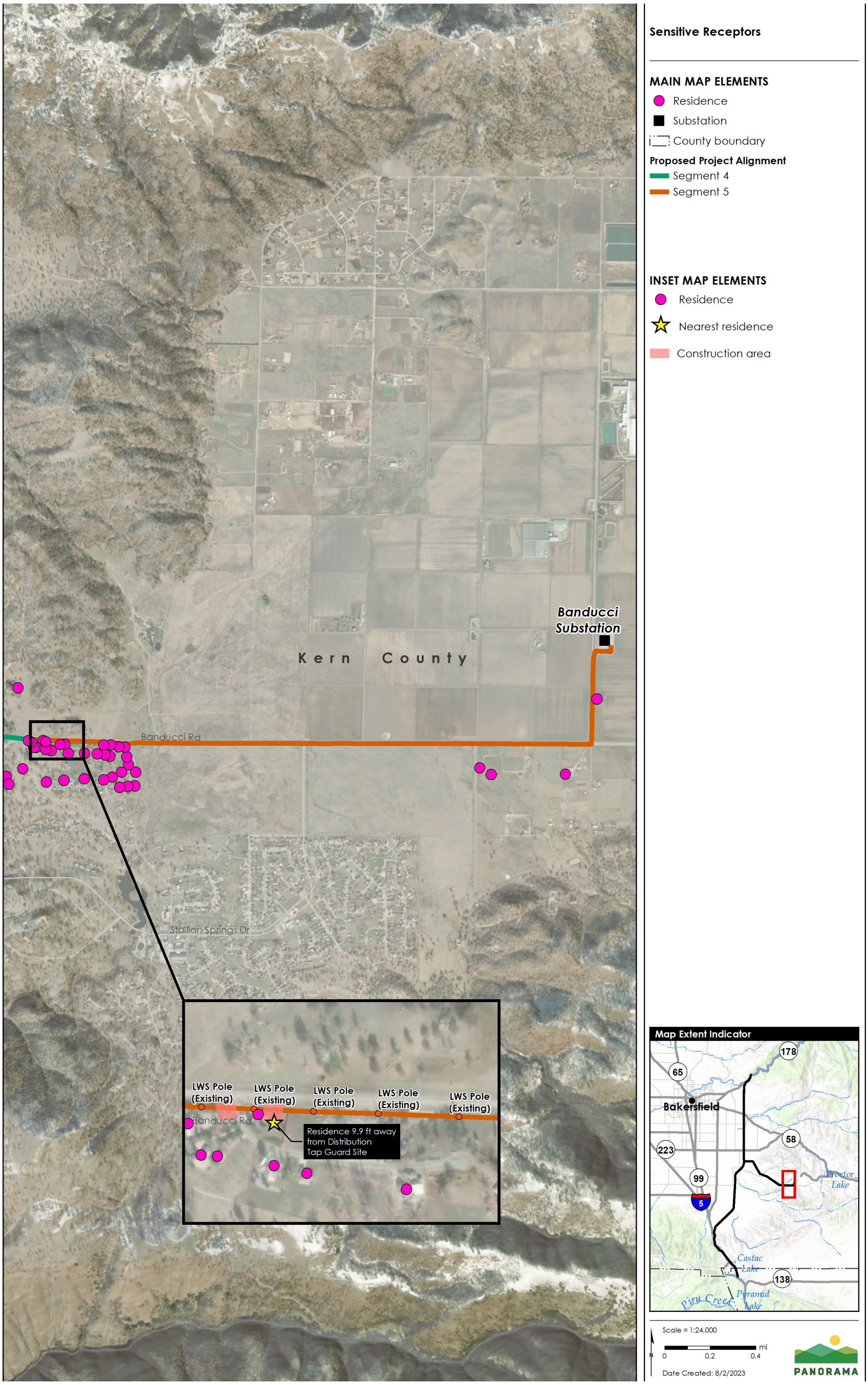
Source: (City of Arvin 2018; County of Los Angeles 2016; ESRI® and USGS 2010; Kern County GIS 2014; 2018; Kern County Planning and Natural Resources 2019; Los Angeles County Department of Regional Planning 2019; Oak Ridge National Laboratory [ORNL] and National Geospatial-Intelligence Agency [NGA] Homeland Security Infrastructure Program [HSIP] Team 2020)

Figure 3.13-4 Nearest Residential Sensitive Receptor by Proposed Project Segment (Map 4 of 5)



Source: (City of Arvin 2018; County of Los Angeles 2016; ESRI® and USGS 2010; Kern County GIS 2014; 2018; Kern County Planning and Natural Resources 2019; Los Angeles County Department of Regional Planning 2019; Oak Ridge National Laboratory [ORNL] and National Geospatial-Intelligence Agency [NGA] Homeland Security Infrastructure Program [HSIP] Team 2020)

Figure 3.13-5 Nearest Residential Sensitive Receptor by Proposed Project Segment (Map 5 of 5)



Source: (City of Arvin, 2018; Oak Ridge National Laboratory (ORNL), National Geospatial-Intelligence Agency (NGA) Homeland Security Infrastructure Program (HSIP) Team, 2022; Kern County Planning and Community Development Department, 2014; Kern County GIS, 2018; County of Los Angeles, 2022; Esri, United States Geological Survey, U.S. Geographic Names Information System, 2022; Kern County Planning and Natural Resources Department, 2022; The County of Los Angeles, 2022)

This page is intentionally left blank.

3.13.4 Applicable Laws, Regulations, and Policies

The following section discusses Federal, state, and local regulations that are applicable to the Proposed Project and the Proposed Project's compliance therewith.

Federal Laws, Regulations, and Policies

There are no federal noise standards that directly regulate environmental noise resulting from the Proposed Project.

U.S. Environmental Protection Agency

Regulating environmental noise is generally the responsibility of local government. The U.S. EPA has developed and published criteria for environmental noise levels with a directive to protect public health and welfare with an adequate margin of safety. Recommendations from the EPA's *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety* (1974), which was developed to be used as an acceptable guideline when no other local, county, or state standard has been established, are listed in Table 3.13-4. The EPA's recommendations are not meant to substitute for agency regulations or standards in cases where a state or locality has developed their own standards (EPA 1974). .

Table 3.13-4 Protective Noise Levels Recommended by U.S. EPA

Effect	Maximum level	Environment type
Hearing loss	70 dB $L_{eq}(24)$	All environments
Outdoor activity interference and annoyance	55 dB L_{dn}	Outdoors in residential areas and farms and other outdoor areas where people spend widely varying amounts of time and other places in which quiet is a basis for use
	55 dB $L_{eq}(24)$	Outdoor areas where people spend limited amounts of time, such as schoolyards, playgrounds, etc.
Indoor activity interference and annoyance	45 dB L_{dn}	Indoor residential areas
	45 dB $L_{eq}(24)$	Other indoor areas with human activities such as schools, etc.

Note: Leq(24) is the sound energy averaged over a 24-hour period. Ldn is the Leq with a 10 dB nighttime penalty.

Source: (EPA 1974)

Federal Transit Administration

The Federal Transit Administration (FTA) has developed vibration impact thresholds for noise-sensitive buildings, residences, and institutional land uses. These thresholds are 80 vibration velocity (VdB) at residences and buildings where people normally sleep (e.g., nearby residences, daycare facilities) and 83 VdB at institutional buildings (e.g., schools, churches). These thresholds apply to conditions where there are an infrequent number of events per day. Although the FTA standards are intended for federally funded mass-transit projects, the FTA's

impact assessment procedures are routinely used to evaluate construction noise and vibration effects from projects proposed by local government and private developers (FTA 2018). .

Occupational Safety and Health Act of 1970

The Occupational Safety and Health Act of 1970 governs worker exposure to noise levels. Code of Federal Regulations (CFR) title 29 section 1910.95 limits worker exposure to noise levels of 85 dB or lower over an 8-hour period. Additionally, this regulation establishes a maximum for impulse or impact noise (e.g., blasting noise) of 140 dB peak sound pressure level.

State Law, Regulations, and Policies

California Department of Transportation

Caltrans provides guidance for analysis of groundborne vibration. The Proposed Project is not subject to Caltrans regulations; however, these guidelines serve as a useful tool to evaluate vibration impacts on structures and residents (Caltrans 2020). Table 3.13-5 lists the thresholds for evaluating the potential for groundborne vibration to damage structures and describes the typical human response when exposed to various intensities of continuous groundborne vibration.

Table 3.13-5 Groundborne Vibration Impact Thresholds

Parameter	Maximum PPV (in./sec)	
	Transient sources [1]	Continuous/frequent intermittent sources [2]
Structural damage		
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
Human response		
Severe	2.0	0.4
Strongly perceptible	0.9	0.10
Distinctly perceptible	0.25	0.04
Barely perceptible	0.04	0.01

Notes:

Transient sources create a single isolated vibration event, such as blasting or drop balls.

Continuous/frequent intermittent sources include pile drivers, pogo-stick compactors, crack-and-seat equipment, vibratory pile drivers, and vibratory compaction equipment.

Source: (Caltrans 2020)

California Noise Exposure Regulations

The State of California addresses worker exposure to noise levels through the California Noise Exposure Regulations California Code of Regulations (CCR) tilte 8 section 5095. Adopted by the California Division of Occupational Safety and Health, these regulations limit worker exposure to noise levels of 85 dB or lower over an 8-hour period, which is consistent with federal OSHA standards. The State has not established noise exposure standards for non-workplace environments.

Local Laws, Regulations, and Policies

The CPUC has sole and exclusive State jurisdiction over the siting and design of the Proposed Project because it authorizes the construction, operation, and maintenance of investor-owned public utility facilities. Pursuant to GO 131-D section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters." Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the counties' and cities' regulations are not applicable as the counties and cities do not have jurisdiction over the Proposed Project. Accordingly, the following discussion of local land use laws, regulations, and policies is provided for informational purposes only.

Kern County Code of Ordinances

Kern County Code of Ordinances title 8 section 8.36.020 (Prohibited sounds) regulates the generation of construction noise in unincorporated Kern County as follows (County of Kern 2007):

> It is unlawful for any person to do, or cause to be done, any of the following acts within the unincorporated areas of the county:
>
> H. To create noise from construction, between the hours of nine (9:00) p.m. and six (6:00) a.m. on weekdays and nine (9:00) p.m. and eight (8:00) a.m. on weekends, which is audible to a person with average hearing faculties or capacity at a distance of one hundred fifty (150) feet from the construction site, if the construction site is within one thousand (1,000) feet of an occupied residential dwelling except as provided below:
>
> 1. The development services agency director or his designated representative may for good cause exempt some construction work for a limited time.
> 2. Emergency work is exempt from this section.

Kern County General Plan, Noise Element
The purpose of the *Kern County General Plan Noise Element* is to:

> (1) establish reasonable standards for maximum desired noise levels in Kern County, and (2) develop an implementation program which could effectively deal with the noise problem (Kern County Planning Department 2009).

Section 3.2 of the *Noise Element* identifies the following as noise sensitive land uses:

- Residential areas
- Schools
- Convalescent and acute care hospitals
- parks and recreational areas
- Churches

The Noise Element of the Kern County General Plan does not include noise standards for construction activities (Kern County Planning Department 2009).

City of Bakersfield Municipal Code
Bakersfield Municipal Code title 9 chapter 9.22, Noise, section 9.22.020 addresses noise generated during construction as follows (City of Bakersfield 1999):

- Except as provided herein or in subsection B, C or D of this section, it is unlawful for any person, firm or corporation to erect, demolish, alter or repair any building, or to grade or excavate land, streets or highways, other than between the hours of six a.m. and nine p.m. on weekdays, and between eight a.m. and nine p.m. on weekends; provided, however, that city crews and those of the city's contractors performing street work between nine p.m. and six a.m. are exempt here from if the city engineer has directed that work be performed between such hours to alleviate potential traffic congestion.
- Notwithstanding any other provisions of this chapter, if the city manager determines that the public health and safety will not be impaired by the erection, demolition, alteration or repair of any building or the excavating and grading of land, streets or highways between the hours of nine p.m. and six a.m., and if he or she further determines that loss or inconvenience would result to any party in interest by virtue of the requirements provided in subsection A of this section, he or she may grant a permit for such work to be done between the hours of nine p.m. and six a.m., upon application being made at the time the permit for the work is awarded or during the progress of the work. Such permit may be granted for a period not to exceed three days, and may be extended by the city manager for a period not to exceed three days.
- The provisions of this section shall not apply to any work of construction performed one thousand feet or more from the nearest residential dwelling.
- The provisions of this section shall not apply to performance of emergency work as defined in this chapter (Ord. 3924 § 3, 1999).

City of Bakersfield General Plan
The Noise Element of the City of Bakersfield General Plan does not establish noise standards for construction activities. Noise standards established in the Noise Element for new land uses are not relevant as the Proposed Project does not constitute a new land use (City of Bakersfield, 2022).

City of Arvin Code of Ordinances
The City of Arvin Code of ordinances II title 9, Public Peace, Morals and Welfare, article II defines *nuisances* to include, but not be limited to, "noises that are unreasonably loud, raucous, or jarring to persons within the area of audibility in a residential area" and that occur between 9:00 p.m. and 7:00 a.m. Sunday through Thursday and between 10:00 p.m. and 8:00 a.m. on Friday and Saturdays (City of Arvin 2005b).

City of Arvin Municipal code title 9 article II section 9.08.060,Exemptions, stipulates the following (City of Arvin 2005a):

> The following acts or conditions are exempt from having to comply with this chapter:
>
> a. Any activity to the extent regulation thereof has been preempted by state or federal law.

City of Arvin General Plan
The City of Arvin General Plan does not establish noise standards for construction activities. Land use compatibility standards established in the City of Arvin General Plan for new land uses are not relevant as the Proposed Project does not constitute a new land use (City of Arvin 2012).

Los Angeles County Code of Ordinances
The Los Angeles County Code of Ordinances title 12, Environmental Health, chapter 12.08, Noise Control, section 12.08.440 defines prohibitions on the generation of construction noise in unincorporated Los Angeles County (County of Los Angeles 1978a)::

Within Title 12 of the Code of Ordinances, section 12.08.440 describes restrictions on construction noise as follows:

> A. Operating or causing the operation of any tools or equipment used in construction, drilling, repair, alteration or demolition work between weekday hours of 7:00 p.m. and 7:00 a.m., or at any time on Sundays or holidays, such that the sound there from creates a noise disturbance across a residential or commercial real-property line, except for emergency work of public service utilities or by variance issued by the health officer is prohibited.
>
> B. Noise Restrictions at Affected Structures. The contractor shall conduct construction activities in such a manner that the maximum noise levels at the affected buildings will not exceed those listed in the following schedule:

1. At Residential Structures.

   b. Mobile Equipment. Maximum noise levels for nonscheduled, intermittent, short-term operation (less than 10 days) of mobile equipment. (Table 3.13-6)

Table 3.13-6 Maximum Noise Limitations for Mobile Construction Equipment

Time	Single-family residential	Multi-family residential	Semiresidential/ commercial
Daily, except Sundays and legal holidays, 7:00 a.m. to 8:00 p.m.	75 dBA	80 dBA	85 dBA
Daily, 8:00 p.m. to 7:00 a.m. and all day Sunday and legal holidays	60 dBA	64 dBA	70 dBA

   c. Stationary Equipment. Maximum noise level for repetitively scheduled and relatively long-term operation (periods of 10 days or more) of stationary equipment. (Table 3.13-7)

Table 3.13-7 Maximum Noise Limitations for Stationary Construction Equipment

Time	Single-family residential	Multi-family residential	Semiresidential/ commercial
Daily, except Sundays and legal holidays, 7:00 a.m. to 8:00 p.m.	60 dBA	65 dBA	70 dBA
Daily, 8:00 p.m. to 7:00 a.m. and all day Sunday and legal holidays	50 dBA	55 dBA	60 dBA

2. At Business Structures

   d. Mobile equipment. Maximum noise levels for nonscheduled, intermittent, short-term operation of mobile equipment:
   Daily, including Sunday and legal holidays, all hours: maximum of 85dBA.

   C. All mobile or stationary internal-combustion-engine powered equipment or machinery shall be equipped with suitable exhaust and air-intake silencers in proper working order.

To decrease vibration, the ordinance prohibits "the operation any device that creates vibration that can be felt beyond the property boundary of the source (if on private property) or 150 feet away from the source (if on a public space or public right-of-way). The perception threshold is a motion velocity of 0.01 inches per second over the range of 1 to 100 hertz" (County of Los Angeles 1978b).

Los Angeles County General Plan, Noise Element

The Noise Element of the Los Angeles County General Plan does not establish standards for construction activities. However, the Noise element contains the following goals and policies (Los Angeles County Department of Regional Planning 2015):

- Goal N 1: The reduction of excessive noise impacts

- Policy N 1.3: Minimize impacts to noise-sensitive land uses by ensuring adequate site design, acoustical construction, and use of barriers, berms, or additional engineering controls through Best Available Technologies (BAT).
- Policy N 1.9: Require construction of suitable noise attenuation barriers on noise sensitive uses that would be exposed to exterior noise levels of 65 dBA CNEL and above, when unavoidable impacts are identified.

3.13.5 Applicant Proposed Measures

SCE has proposed measures to reduce environmental impacts. The significance of the impact is first considered prior to application of applicant proposed measures (APMs), and a significance determination is made. The implementation of the APMs is considered as part of the Proposed Project when determining whether impacts would be significant and thus would require mitigation. These APMs would be incorporated as part of any CPUC Project approval, and SCE would be required to adhere to the APMs as well as any identified mitigation measures. The APMs are included in the Mitigation Monitoring and Reporting Program (MMRP) for the Proposed Project, and the implementation of the measures would be monitored and documented in the same manner as mitigation measures. The APMs that are applicable to the noise analysis are listed in Table 3.13-8.

Table 3.13-8 Applicant Proposed Measures for Noise Impacts

APM Number	Requirements
NOI-1	**Noise Disturbance Minimization Procedures.** SCE will employ the following noise-control techniques, at a minimum, to reduce construction noise exposure at noise-sensitive receptors during construction: • Construction activities will be confined to daytime, weekday and weekend hours established by the applicable local jurisdiction. In the event construction is required beyond those hours, SCE will notify the appropriate local agency or agencies regarding the description of the work, location, and anticipated construction hours. • Construction equipment will use noise reduction features (e.g., mufflers and engine shrouds) that are no less effective than those originally installed by the manufacturer. • Construction traffic and helicopter flight will be routed away from residences and schools, where feasible. • Unnecessary construction vehicle use, and idling time will be minimized. If a vehicle is not required for use immediately or continuously for construction activities, its engine will be shut off.

3.13.6 Environmental Analysis

Approach to Impact Analysis

This impact analysis considers whether implementation of the Proposed Project would result in significant noise and groundborne vibration impacts. The analysis focuses on reasonably foreseeable effects from the construction and operational activities of the Proposed Project as compared with existing conditions. The analysis uses significance criteria based on the CEQA Guidelines (Appendix G). Applicable APMs are identified, and mitigation is defined to avoid or

reduce significant noise impacts. Noise and vibration levels associated with construction and operation of the Proposed Project are analyzed for impacts to noise sensitive receptors within 1,000 feet from the Proposed Project, such as residences, educational facilities, places of worship, hospitals, convalescent homes, and recreation areas.

The CPUC is not subject to local land use jurisdiction. The noise standards included in the local noise ordinance were considered for the purpose of evaluating whether the project would generate a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Proposed Project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. EPA, OPR, and public-school recommendations were used to determine the appropriate noise standards.

Noise Impact Analysis

Construction noise levels for the Proposed Project were estimated by evaluating the noise generated by the equipment that would be used for the proposed construction activity. The noise levels generated by construction equipment would vary greatly depending upon factors such as the type and specific model of the equipment, the operation being performed, the condition of the equipment, and the prevailing wind direction. Therefore, the analysis estimated noise generated by each proposed work activity to the nearest sensitive receptor types.

Calculated noise levels at the nearest sensitive receptor that exceed noise levels defined by local ordinances are considered a significant impact.

Groundborne Vibration Impact Analysis

Caltrans guidelines were used to evaluate vibration impacts on residents and structures. For construction, which is short-term, the impact of concern is annoyance of residents and damage to structures. Caltrans sets vibration thresholds for structural damage depending on the fragility of the structure of concern. Under the Caltrans' latest guidelines for continuous vibration sources, a vibration limit of 0.5 in./sec PPV is recommended for buildings that are structurally sound and designed to modern engineering standards and a vibration limit of 0.3 in./sec PPV is set for older residential and historic buildings. All buildings in the Proposed Project area are assumed to be structurally sound, and no historic structures are within 1,000 feet from the Proposed Project site, the 0.5 in/sec PPV criteria would apply for vibration from construction activities.

Summary of Impacts

Table 3.13-9 and Table 3.13-10 present a summary of the CEQA significance criteria and impacts on noise that would occur during construction, operation, and maintenance of the Proposed Project.

Table 3.13-9 Summary of Proposed Project Impacts to Noise

Would the proposed project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) 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	☐	☒	☐	☐
b) Generation of excessive groundborne vibration or groundborne noise levels	☐	☐	☒	☐
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels	☐	☐	☐	☒

Impact Discussion

a) Would the Proposed Project generate 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?

Construction

Construction would result in a temporary increase in ambient noise levels in the vicinity of the Proposed Project. Construction activities would require the use of numerous pieces of noise-generating equipment, such as excavating machinery (e.g., excavators, loaders) and other construction equipment (e.g., dozers, compactors, trucks). The noise levels generated by construction equipment would vary greatly depending upon factors such as the type and specific model of the equipment, the operation being performed, the condition of the equipment, and the prevailing wind direction.

Noise levels generated by equipment that would be used in construction of the Proposed Project are listed in Table 3.13-10. Construction of the Proposed Project would occur primarily between the hours of 7:00 a.m. and 7:00 p.m., Monday through Saturday. However, pursuant to APM NOI-1, construction activities will be confined to daytime, weekday and weekend hours established by the applicable local jurisdiction. In the event construction is required beyond those hours, SCE will notify the appropriate local agency or agencies regarding the description of the work, location, and anticipated construction hours. The construction phase of the

Proposed Project would occur over a 23-month period. Due to the linear nature of the Proposed Project, construction at any one location would be short-term in nature as the work moves along the Proposed Project alignment. Some construction activities may be performed concurrently; for instance, pull-and-tension/stringing sites may be established at the same time as guard structures are being installed, and the restoration of disturbed areas may occur at the same time as staging area demobilization and restoration is occurring. Furthermore, work could occur in one or more segments simultaneously. Use of the staging areas would occur over the duration of the Proposed Project construction.

Table 3.13-10 Typical Noise Levels from Construction Equipment

Construction equipment	Noise level (dB, L_{max} at 50 feet)
Air compressor	78
Auger drill rig	84
Auger drill rig truck	79
Backhoe	78
Compactor (ground)	83
Concrete mixer truck	79
Concrete pump truck	81
Crane	81
Dozer	82
Dump truck	76
Excavator	81
Flat bed truck	74
Forklift	77
Front end loader	79
Generator	81
Gradall	83
Helicopter (light-duty)	90
Helicopter (Medium and Heavy-Duty)	97
Grader	85
Pickup truck	75
Pneumatic tools	85
Roller	80
Scraper	84

Construction equipment	Noise level (dB, L_{max} at 50 feet)
Tractor	84
Welder/torch	74

Source: (USDOT 2006)

Kern County

Residential Receptors

Kern County has not adopted any decibel level limitations for construction; the noise limitations are for the proximity to residences and daily hours of construction. In Kern County, construction activity noise would exceed the standards established in Kern County Code of Ordinances section 8.36.020 if construction noise is generated within 1,000 feet of an occupied residential dwelling outside the hours of 6:00 a.m. to 9:00 p.m. on weekdays and 8:00 a.m. to 9:00 p.m. on weekends. The Proposed Project standard construction schedule includes construction between the hours of 7:00 a.m. and 7:00 p.m. Monday through Saturday. Saturday construction could occur before 8:00 a.m. within 1,000 feet of an occupied residence in Kern County, which would be a conflict with the Kern County noise ordinance. Numerous occupied residences in Kern County are located within 1,000 feet of construction work areas, and construction activities on Saturday before 8:00 a.m. within 1,000 feet of a residence would conflict with the Kern County noise ordinance standards, which would be a significant impact. SCE has proposed APM NOI-1, which confines construction activities within 1,000 feet of a residence to the hours established in the local noise ordinance. Because SCE would implement APM NOI-1, weekend work within 1,000 feet of a residence would not occur before 8:00 a.m. in Kern County, and the Proposed Project would not cause a substantial increase in temporary ambient noise levels in excess of local standards. The impact from construction noise would be less than significant.

Schools

While Kern County sets standards for construction activities in proximity to residential areas, the County does not set specific standards for construction in proximity to schools. Because schools are in session during the day, the construction noise hour limitations set by the Kern County noise ordinance do not address the potential for construction activities to interfere with classroom instruction. The Proposed Project would conduct various construction activities in the vicinity of El Tejon School such as road work, TSP erection, and LWS Pole installation as well as the use of a staging area for the duration of the Proposed Project construction. These activities that would occur between approximately 230 and 440 feet away from a school room would generate noise between approximately 66 and 85 dB, L_{eq} (see Table 3.13-11). For spoken conversation to be heard and understood in a classroom, background noise levels inside school classrooms should not exceed 45 dBA (EPA 1974b). The OPR's *General Plan Noise Element Guidelines* recommends a community noise exposure of up to 70 dB, L_{dn} as a "conditionally acceptable" outdoor noise level for schools (OPR 2017), and buildings with windows closed typically provide noise attenuation of approximately 20 to 25 dB (Caltrans 2011).

As shown in Table 3.13-11 construction activities in proximity to El Tejon School would generate noise levels of approximately 65 to 80 dB, Leq at the exterior façade of the nearest classroom buildings. Because construction activities would be conducted during the daytime when school is in session (mid-August to early June) and activities would produce noise levels in excess of 70 dB at the exterior of the classroom and 45 dB at the interior, the impact would be potentially significant without mitigation (El Tejon Unified School District 2023). Mitigation Measure NOI-1 requires SCE to coordinate with El Tejon School and time construction activities that would produce noise greater than 70 dB at the nearest classroom to occur when school is not in session. Because construction activities would be coordinated with El Tejon School to occur when school is not in session, and because of the very short duration (a few days) of activities that exceed 70 dB in proximity to the school, the noise levels generated in proximity to the school would not exceed noise standards recommended by the U.S. EPA and OPR for classroom instruction, and the impact would be less than significant with mitigation incorporated.

Table 3.13-11 Construction Noise Near School and Residences

Work area	Sensitive receptor	Noise level at 50 feet (dB, Leq)	Distance from work area (feet) [a, b]	Noise level (dB, Leq) [c, d]	Duration of work activity (days)	Exceeds noise standards?
Survey	Residence	80	127	72	1	No
	School		nil	nil	nil	nil
Staging area	Residence	92	260	78	180	Yes
	School		1,060	66	180	No
Road work	Residence	93	290	78	1	Yes
	School		230	80	1	Yes
TSP foundation	Residence	92	127	84	2	Yes
	School		440	73	2	Yes
TSP haul	Residence	90	127	82	¼	Yes
	School		230	77	¼	Yes
TSP assembly	Residence	89	127	81	1	Yes
	School		440	70	1	Yes
TSP erection	Residence	98	127	90	1	Yes
	School		440	79	1	Yes
LWS pole haul	Residence	90	470	71	¼	No
	School		230	77	¼	Yes

Work area	Sensitive receptor	Noise level at 50 feet (dB, Leq)	Distance from work area (feet) [a, b]	Noise level (dB, Leq) [c, d]	Duration of work activity (days)	Exceeds noise standards?
LWS pole assembly	Residence	89	470	70	¼	No
	School		225	76	¼	Yes
LWS pole installation	Residence	98	470	79	¼	Yes
	School		225	85	¼	Yes
Existing pole removal	Residence	91	127	83	¼	Yes
	School		225	78	¼	Yes
Existing lattice structure/TSP removal	Residence	99	127	91	2	Yes
	School		440	80	2	Yes
Remove conductor and OHGW	Residence	93	127	85	20	Yes
	School		nil	nil	nil	nil
Conductor and OPGW/OHGW installation	Residence	97	127	89	20	Yes
	School		nil	nil	nil	nil
Guard structure installation	Residence	92	nil	80	½	nil
	School		400	74	½	Yes
Guard Structure removal	Residence	92	nil	80	½	nil
	School		400	74	½	Yes
Restoration	Residence	91	127	83	1	Yes
	School		105	65	1	No

Notes:

[a] Distance from school is to the nearest school building.

[b] Distance from residence is to nearest property line.

[c] Noise levels presented for schools would be the expected exterior noise level at the nearest building of the school. Interior noise levels at schools would be the exterior dB noise level minus a 20dB exterior-to-interior noise reduction from standard construction materials (i.e., windows and walls).

[d] An attenuation rate of 6.0 dB per doubling of distance was used to convert the Phase Noise Levels at 50 feet of the noise levels at the nearest sensitive receptors.

City of Bakersfield

City of Bakersfield Municipal Code chapter 9.22, Noise, defines hours when construction activities are permitted. The City of Bakersfield has not adopted any noise level (decibel) limitations for construction activities. In the City of Bakersfield, construction activity noise including the erection, demolition, alteration, or repair of any building, or the grading or excavation of land, streets, or highways, is allowed only between the hours of 6:00 a.m. and 9:00 p.m. on weekdays and between 8:00 a.m. and 9:00 p.m. on weekends. However, in accordance with provision C of the City of Bakersfield noise ordinance, construction activities beyond 1,000 feet from any residential dwelling is exempt from these daily noise restrictions. The Proposed Project would not involve construction activities within 1,000 feet of any residential dwelling in the City of Bakersfield and, thus, would not cause a substantial increase in temporary ambient noise levels in excess of local standards. Therefore, the impact from construction noise would be less than significant.

City of Arvin

The City of Arvin does not have a noise ordinance, and noise levels are not established in the City's General Plan. Therefore, the established noise level standards for Kern County are applied to construction activities within the city of Arvin to determine the Proposed Project's impacts. However, there are no sensitive receptors within 1,000 feet of the Proposed Project construction activities within the city of Arvin. Construction of the Proposed Project would, therefore, not generate a substantial increase in temporary ambient noise levels in excess of local standards. The impact from construction noise in the city of Arvin would be less than significant.

Los Angeles County

The Los Angeles County noise standards for construction near residential structures are listed in Table 3.13-12. In summary, Los Angeles County has developed specific daytime and nighttime noise level thresholds for construction activities within proximity to certain types of residential dwellings. There are two rural single family residential structures within 1,000 feet of Proposed Project construction areas in Los Angeles County.

Table 3.13-12 Established Noise Standards for Construction Near Residential Structures.

Time	Single-family residential	Multi-family residential	Semiresidential/ commercial
Daily, except Sundays and legal holidays, 7:00 a.m. to 8:00 p.m.	75 dBA	80 dBA	85 dBA
Daily, 8:00 p.m. to 7:00 a.m. and all day Sunday and legal holidays	60 dBA	64 dBA	70 dBA

Source: (County of Los Angeles 1978a)

The first residential structure is located approximately 500 feet south of the Los Angeles–Kern county line. The nearest construction activities to the residence would include the removal of H-frame poles and replacement with LWS poles at poles M48-T10 and M48-T9A in Segment 3. The

single-family residence is located approximately 600 feet west of the proposed pole replacements.

The second residential structure is located directly adjacent and approximately 130 feet west of the existing Gorman substation as well as across from Gorman Post Street and approximately 260 feet from the proposed Gorman substation staging area proposed to be placed between Gorman Post Street and I-5. The construction activities at the Gorman Substation would include removal of existing LSTs and poles, installation of new TSPs and LWS poles, removal, transfer, and installation of conductor, staging and storage of equipment, and helicopter takeoff and landing. The estimated construction noise levels from each activity in proximity to the nearest residential structure adjacent to Gorman substation are listed in Table 3.13-11 Noise levels would be 76 dB to 92 dB L_{max} and would exceed Los Angeles County noise standards of 75 dBA at residences for 50 days during pole installation, demolition, conductor removal, and conductor stringing and would be 78 dBA for up to 180 days during use of the staging area, which would result in a potentially significant impact. The Proposed Project would implement APM NOI-1, which would include using noise reduction features (e.g., mufflers, engine shrouds), limiting unnecessary construction vehicle use, and minimizing idling time of construction trucks and equipment. While APM NOI-1 may result in minor reduction in equipment generated noise levels, the noise levels at the nearest residential structure would continue to exceed Los Angeles County noise standards of 75 dBA at the nearest residences because the mitigation measure would not reduce peak noise levels. Mitigation Measure NOI-2 would require SCE to provide advance notification of construction to residences within 1,000 of construction work areas and to offer to temporarily relocate the residents during nighttime construction activities that may occur adjacent to the residence. Mitigation Measure NOI-3 requires SCE to include a helicopter noise control strategy that identifies the established helicopter flight corridors and minimum transit elevations above ground level to minimize impact to noise-sensitive receptors on the ground. Because the mitigation measures would provide for temporary relocation of residents to avoid exposure to the temporary nighttime construction noise and would reduce construction noise levels with installation of temporary noise barriers and other noise attenuation measures, the impact from exceedance of the Los Angeles County noise standards would be less than significant with mitigation.

Operation and Maintenance

During operation and maintenance, noise sources resulting from the Proposed Project would include use of work trucks traveling to access the poles and substations for any maintenance or inspections as well as use of some equipment to conduct the maintenance work, such as repairing conductors, washing or replacing insulators, repairing or replacing other hardware components, replacing poles and towers, and tree trimming and other vegetation maintenance. The operation and maintenance activities as currently performed along the existing subtransmission lines would not change as a result of implementation of the Proposed Project. SCE currently operates and maintains the existing subtransmission lines along the Proposed Project alignment. The activities and frequency of maintenance inspections would remain the same as inspections of the existing lines. Operation and maintenance of the Proposed Project

would not result in any alteration in noise levels because the operation and maintenance activities would be the same as those conducted for the existing subtransmission line, and the impact would therefore be less than significant.

Required APMs and MMs: APM NOI-1, MM Noise-1, Noise-2, Noise-3

Mitigation Measures

Mitigation Measure NOI-1: Coordination with El Tejon School

At least 90 days prior to construction at El Tejon School, SCE shall coordinate with El Tejon School to schedule power line construction activities within 1,000 feet of the school to occur when school is not in session (e.g., during holiday or summer breaks). The power line construction activities include roadwork, TSP foundation, TSP haul, TSP assembly, TSP erection, LWS pole haul, LWS pole assembly, LWS pole installation, existing pole removal, existing lattice structure/TSP removal, guard structure installation, and guard structure removal. If power line construction activities within 1,000 feet of El Tejon School need to occur when school is in session, SCE shall provide instructions to El Tejon School on how to reduce impacts of the noise at El Tejon School during construction activities, such as closure of doors and windows, and scheduling of school activities that would minimize effects of construction noise when school is in session.

Applicable locations: Work areas within 1,000 feet of El Tejon School and staging area adjacent to El Tejon School

Performance standards and timing:

Before construction: Coordinate construction schedule with El Tejon School for construction activities that would be within 1,000 feet of El Tejon School. Construction activities that are expected to exceed 70 dB at the El Tejon School would include but would not be limited to roadwork, TSP foundation, TSP haul, TSP assembly, TSP erection, LWS pole haul, LWS pole assembly, LWS pole installation, existing pole removal, existing lattice structure/TSP removal, guard structure installation, and guard structure removal. The nearest and loudest construction activities should be scheduled when school is not in session to the extent possible.

During construction: SCE shall coordinate schedules to minimize construction activities that are scheduled to occur within 1,000 feet of El Tejon School when school is in session.

After construction: N/A

Mitigation Measure NOI-2: Resident Notification and Construction Noise Suppression Measures

For construction within Los Angeles County expected to exceed 75 dB at sensitive receptors, SCE shall notify affected residences within 1,000 feet of construction areas at least 10 days in advance of the construction activity. SCE shall also employ noise-control techniques to reduce construction noise exposure in proximity of sensitive receptors. Noise control techniques shall include:

- Construction equipment shall use noise reduction features (e.g., mufflers and engine shrouds) that are no less effective than those originally installed by the manufacturer.
- Stationary noise sources (e.g., generators, pumps) and staging areas shall be shielded from adjacent noise-sensitive receptors by an enclosure, temporary sound walls, or acoustic blankets. Where feasible, sound walls or acoustic blankets shall have a height of no less than 8 feet, a Sound Transmission Class (STC) of 27 or greater, and a surface with a solid face from top to bottom without any openings or cutouts.
- Construction traffic and helicopter flight shall be routed away from residences and schools, where feasible.

Mitigation Measure NOI-2: Resident Notification and Construction Noise Suppression Measures
• Unnecessary construction vehicle use and idling time shall be minimized to the extent feasible, such that if a vehicle is not required for use immediately or continuously for safe construction activities, its engine should be shut off. • Offer temporary relocation to residents within 500 feet of nighttime construction areas.
Applicable locations: Residences next to the Gorman substation and within 1,000 feet of construction work areas, including staging areas, in Los Angeles County.
Performance standards and timing: **Before construction:** Notify residents within 1,000 feet of any proposed construction activities in Los Angeles County at least 10 days in advance of construction activities. **During construction:** Install a sound barrier or sound blankets (rated STC 27 or greater) between the residence and work at the Gorman Substation and the staging area, employ noise suppression measures during construction and provide alternative lodging if desired by residents within 500 feet of proposed nighttime construction activities in Los Angeles County. **After construction**: N/A

Mitigation Measure NOI-3: Helicopter Noise Control Strategy
As part of the final Helicopter Use Plan, SCE shall include a helicopter noise control strategy that identifies the established helicopter flight corridors and minimum transit elevations above ground level to minimize impact to noise-sensitive receptors on the ground.
Applicable locations: Helicopter use areas near sensitive receptors.
Performance standards and timing: **Before construction:** Development, review, and approval of Plan by the CPUC prior to construction. **During construction:** N/A **After construction**: N/A

a) Would the Proposed Project generate excessive groundborne vibration or groundborne noise levels.

Construction

Proposed Project construction activities could result in varying degrees of temporary groundborne vibration, depending on the specific construction equipment used and operations involved. In most cases, vibration induced by typical construction equipment does not result in adverse effects on people or structures (Caltrans 2013). At the highest levels of vibration, damage to structures is primarily architectural (e.g., loosening and cracking of plaster or stucco coatings) and rarely results in structural damage. Caltrans states that 0.3 in./sec PPV is the threshold for vibration impacts on older residential structures and 0.5 in./sec PPV for newer residential structures, commercial, and industrial buildings. A threshold under 0.5 PPV is rarely used for impact analysis unless the proposed construction is occurring near old residential areas or historic buildings. Therefore a maximum threshold of 0.5 in./sec PPV for exposure of residential and commercial structures to groundborne vibration was used (Caltrans 2020).

Construction of the Proposed Project would involve use of heavy equipment that would temporarily generate groundborne vibration levels in proximity to residential and commercial structures. Groundborne vibration levels generated by equipment that would be used in construction of the Proposed Project are listed in Table 3.13-13, below.

Table 3.13-13 Vibration Levels from Construction Equipment

Construction equipment	Distance to the nearest receptor (feet)	PPV at 25 feet (in./sec)	PPV at nearest receptors to the Proposed Project area (in./sec)	Exceed threshold of 0.5 PPV? [1]
Track type dozer [2]	168	0.003	0.0002	No
Drum type compactor [2]	168	0.21	0.0121	No
Excavator [3]	168	0.04	0.0023	No
Auger truck [2]	85 (15 feet to guard structure)	0.089	0.01 (0.19 if used within 15 feet of nearest receptor)	No
Dump truck [4]	85	0.076	0.012	No
Backhoe [3]	135 (15 feet to guard structure)	0.028	0.022 (0.06 if used within 15 feet of nearest receptor)	No
Front loader [3]	135 (15 feet to guard structure)	0.0263	0.021 (0.057 if used within 15 feet of nearest receptor)	No

Notes:

1. Caltrans recommends a threshold of 0.5 in./sec PPV for modern residential and commercial structures (Caltrans 2020).

2. Reference PPV obtained from *Transit Noise and Vibration Impact Assessment Manual* (FTA 2018).

3. Reference PPV obtained from *Ground Vibrations Emanating from Construction Equipment* (New Hampshire Department of Transportation [NHDOT] 2012)

4. This analysis conservatively assumes a dump truck would generate a PPV of 0.076 in./sec at 25 feet (the same as a loaded truck, as listed in Table 7-4 of the Transit Noise and Vibration Impact Assessment Manual (FTA 2018).

Vibration impacts associated with construction activities would primarily affect receptors located closest to staging areas and TSP and LWS pole installation sites and those receptors located near conductor removal/replacement locations that would include the use of an excavator, heavy trucks, boom/crane truck, auger truck, and water trucks. The closest receptor to these construction activities would be residences located approximately 85 feet from the work area. There are also several places where guard structures would be installed as close as 15 feet to a residence. Guard structure installation could entail either use of a boom truck or

installation of poles. Installation of poles would involve an auger truck, backhoe, and loader truck. The vibration levels from heavy construction equipment that could be used for guard structures as close as 15 feet away from residential structures for installation of guard structures would not exceed the 0.5 in./sec PPV threshold (see Table 3.13-13, above). Since the Proposed Project's construction vibration level would not exceed the identified significance thresholds, the impact from groundborne vibration would be less than significant.

Operation and Maintenance

SCE currently operates and maintains the existing subtransmission lines along the Proposed Project alignment. Operation and maintenance activities would include the same activities conducted at the same general frequency as the existing subtransmission lines. While the Proposed Project would relocate the subtransmission lines, the subtransmission lines as relocated parallel to the existing subtransmission lines would not cause significant goundborne vibration at any receptor because the subtransmission lines are not a source of groundborne vibration. Therefore, excessive groundborne vibrations or groundborne noise levels would not occur during operation and maintenance activities, and the impact would be less than significant.

Required APMs and MMs: None required.

b) Would the Proposed Project be 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, and expose people working in the project area to excessive noise levels.

The Proposed Project is not located within the vicinity of a private airstrip or an airport land use plan or within 2 miles of a public airport or public use airport. Therefore, there would be no impact.

Required APMs and MMs: None required.

3.13.7 References

California Department of Transportation (Caltrans). 1998. *Traffic Noise Analysis Protocol for New Highway Construction and Highway Reconstruction Projects*.

———. 2011. *California Airport Land Use Planning Handbook*. Division of Aeronautics. https://dot.ca.gov/-/media/dot-media/programs/aeronautics/documents/californiaairportlanduseplanninghandbook-a11y.pdf.

———. 2013. *Technical Noise Supplement to the Caltrans Traffic Noise Analysis Protocol*. CT-HWANP-RT-13-069.25.2.

———. 2020. *Transportation and Construction Vibration Guidance Manual*. CT-HWANP-RT-20-365.01.01. Available: https://dot.ca.gov/programs/environmental-analysis/noise-vibration/guidance-manuals.

———. 2021a. "Traffic Volumes: Annual Average Daily Traffic (AADT)." XLS. Tabular data. Available: https://dot.ca.gov/programs/traffic-operations/census.

———. 2021b. "Truck Traffic: Annual Average Daily Truck Traffic." XLS. Tabular data. Available: https://dot.ca.gov/programs/traffic-operations/census.

City of Arvin. 2005a. *Exemptions*. *City of Arvin Code of Ordinances*. Vol. Title 9 article II.

———. 2005b. *Nuisances Defined*. *Code of Ordinances*. Vol. Title 9 article II. https://library.municode.com/ca/arvin/codes/code_of_ordinances?nodeId=TIT9PUPEMOWE_CH9.20PUDRALBE_9.20.020OPCOPUPL.

———. 2012. *City of Arvin General Plan*. Resolution No. 2012-34.

———. 2018. "Arvin Zoning Ordinance Map." Feature Server. Vector digital data. "Sensitive Receptors in the Proposed Project Vicinity" created by Panorama, Environmental, Inc.: Using Arc GIS (August 29, 2023). https://services.arcgis.com/jDGuO8tYggdCCnUJ/arcgis/rest/services/Arvin_Zoning_Ordinance_Map/FeatureServer.

City of Bakersfield. 1999. *Definitions*. *Bakersfield Municipal Code*. Vol. Chapter 9.22 Noise section 9.22.020 Definitions. https://bakersfield.municipal.codes/Code/9.22.010.

———. 2002. *Metropolitan Bakersfield General Plan*. Available: https://www.bakersfieldcity.us/271/Adopted-Planning-Documents.

County of Kern. 2007. *Probited Sounds*. *Kern County Code of Ordinances*. Vol. Section 8.36.020.

County of Los Angeles. 1978a. *12.08.440 - Construction Noise*. *Code of Ordinances*. Vol. Chapter 12.08 Noise Control. https://library.municode.com/ca/los_angeles_county/codes/code_of_ordinances?nodeId=TIT12ENPR_CH12.08NOCO.

———. 1978b. *12.08.560 - Vibration*. *Code of Ordinances*. Vol. Chapter 12.08 Noise. https://library.municode.com/ca/los_angeles_county/codes/code_of_ordinances?nodeId=TIT12ENPR_CH12.08NOCO_PT4SPNORE_12.08.560VI.

———. 2016. "Public Elementary Schools." Map service. Vector digital data. "Sensitive Receptors in the Proposed Project Vicinity" created by Panorama Environmental, Inc.: Using ArcGIS August 28, 2023. https://data.lacounty.gov/datasets/50584b00f5674f989a982821d81c97d3_49/about.

El Tejon Unified School District. 2023. "El Tejon Unified School District 2023/24 Instructional Calendar." https://www.el-tejon.k12.ca.us/wp-content/uploads/sites/59/2023/10/District-Calendar.pdf.

ESRI® and U.S. Geological Survey (USGS). 2010. "USA Geographic Names Information System Churches." Shapefile. Geospatial data. Last updated December 27,2023. https://www.arcgis.com/home/item.html?id=2dc11432d7d94d0db943961e3710c719.

Federal Transit Administration (FTA). 2018. *Transit Noise and Vibration Impact Assessment Manual*. FTA Report No. 0123. Available: https://www.transit.dot.gov/research-innovation/transit-noise-and-vibration-impact-assessment-manual-report-0123.

Governor's Office of Planning and Research (OPR). 2017. "Appendix D: Noise Element Guidelines." In *General Plan Guidelines*. State of California. https://opr.ca.gov/docs/OPR_Appendix_D_final.pdf.

Kern County GIS. 2014. "Kern Schools." "Sensitive Receptors in the Proposed Project Vicinity" created by Panorama Environmental, Inc.: Using Arc GIS (August 29, 2023). https://maps.kerncounty.com/H5/index.html?viewer=KCPublic.

———. 2018. "Public Libraries." "Sensitive Receptors in the Proposed Project Vicinity" created by by Panorama Environmental, Inc.: Using Arc GIS (August 29, 2023).

Kern County Planning and Natural Resources. 2019. "Kern County General Plan." Feature Service. Geospatial data. "Sensitive Receptors in the Proposed Project Vicinity" created by Panorama Environmental, Inc.: Using Arc GIS August 29, 2023. https://geodat-kernco.opendata.arcgis.com/datasets/575bd48fb01c44899334301c8e6da015_0/about.

Kern County Planning Department. 2009. "Chapter 3: Noise Element." In *Kern County General Plan*, by Kern County Planning Department. Bakersfield, CA. Available.

Los Angeles County Department of Regional Planning. 2015. "Noise Element." In *Los Angeles County 2035 General Plan*. Available: https://planning.lacounty.gov/long-range-planning/general-plan/.

———. 2019. "Land Use Policy - Community/Area Plan." Feature layer. "Kern TLRR LA County Land Use Map" Created by Panorama Environmental, Inc. (9/24/2023): Using ArcGIS. https://arcgis.gis.lacounty.gov/arcgis/rest/services/DRP/Open_Data/MapServer/7.

New Hampshire Department of Transportation (NHDOT). 2012. *Ground Vibrations Emanating from Construction Equipment*. Final Report, FHWA-NH-RD-12323W.

Oak Ridge National Laboratory (ORNL) and National Geospatial-Intelligence Agency (NGA) Homeland Security Infrastructure Program (HSIP) Team. 2020. "Prison Points." Feature Service. Vector digital data. "Sensitive Receptors in the Proposed Project Vicinity" generated by Panorama Environmental, Inc.: Using Arc GIS (August 29, 2023). https://www.arcgis.com/home/item.html?id=2a33288266bd44eabd80e7559474cd23.

United States Federal Highway Administration (FHWA). 1978. "FHWA Highway Traffic Noise Prediction Model." https://rosap.ntl.bts.gov/view/dot/30259.

U.S. Department of Transportation (USDOT). 2006. *FHWA Highway Construction Noise Handbook*. Final Report, FHWA-HEP-06-015; DOT-VNTSC-FHWA-06-02; NTIS No. PB2006-109012. Prepared for: U.S. Department of Transportation, Federal Highway Administration, Office of Natural and Human Environment.

U.S. Environmental Protection Agency (EPA). 1974. *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety*. 550/9-74–004.

———. 1978. *Protective Noise Levels Condensed Version Of EPA Levels Document*. https://nepis.epa.gov/Exe/ZyNET.exe/20012HG5.TXT?ZyActionD=ZyDocument&Client=EPA&Index=1976+Thru+1980&Docs=&Query=&Time=&EndTime=&SearchMethod=1&TocRestrict=n&Toc=&TocEntry=&QField=&QFieldYear=&QFieldMonth=&QFieldDay=&IntQFieldOp=0&ExtQFieldOp=0&XmlQuery=&File=D%3A%5Czyfiles%5CIndex%20Data%5C76thru80%5CTxt%5C00000008%5C20012HG5.txt&User=ANONYMOUS&Password=anonymous&SortMethod=h%7C-&MaximumDocuments=1&FuzzyDegree=0&ImageQuality=r75g8/r75g8/x150y150g16/i425&Display=hpfr&DefSeekPage=x&SearchBack=ZyActionL&Back=ZyActionS&BackDesc=Results%20page&MaximumPages=1&ZyEntry=1&SeekPage=x&ZyPURL.

3.14 Population and Housing

This section presents the environmental setting and impact analysis for population and housing resulting from the Proposed Project. This section includes existing population and housing information for the Proposed Project, applicable regulations, environmental impacts, and mitigation measures to reduce or avoid significant effects.

3.14.1 Environmental Setting

Regional Setting

Population Estimates

The Proposed Project is located within unincorporated areas of Kern and Los Angeles counties, the City of Arvin, and the City of Bakersfield. The Proposed Project alignment also crosses the Lebec Census-Designated Place (CDP) and the Stallion Springs CDP in Kern County.

Population estimates for cities and counties within the Proposed Project alignment are presented in Table 3.14-1. The Planning Division of the City of Bakersfield projects that the City of Bakersfield population grew by approximately 23.9 percent over a 2010 to 2024 period (City of Bakersfield, 2019). While the population was estimated to grow by 23.9 percent in the City of Bakersfield, the estimated population growth between 2010 and 2020 was approximately 16 percent, as shown in Table 3.14-1. Population projections are not available for the City of Arvin. The California Department of Finance projects that the Kern County population will grow by approximately 11.6 percent over a 2020 to 2030 period (California Department of Finance, 2021). The California Department of Finance projects that the Los Angeles County population will increase by approximately 1.5 percent over the 2020 to 2030 period (California Department of Finance, 2021).

Table 3.14-1 Population Estimates

City, County, or CDP	Population 2010	Population 2020	Percent change in population (%)	Population below poverty level, 2020 (%)
Kern County	839,631	909,235	8.3	20.4
Los Angeles County	9,818,605	10,014,009	2.0	14.2
City of Arvin	19,304	19,495	1.0	32
City of Bakersfield	347,483	403,455	16.1	17.2
Lebec CDP	1,468	1,472	0.3	18.6
Stallion Springs CDP	2,488	3,581	43.9	12.2

Source: (City of Bakersfield 2019; U.S. Census Bureau 2020)

Housing Estimates

Data on the number of housing units and vacancy rates for each of the cities and counties within the Proposed Project alignment is presented in Table 3.14-2.

Table 3.14-2 Housing Estimates

City, County, or CDP	Housing units 2020	Vacant housing units	Vacancy rate (%)
Kern County	299,179	25,623	8.5
Los Angeles County	3,559,790	227,286	7.7
City of Arvin	4,992	281	5.6
City of Bakersfield	125,143	6,575	5.2
Lebec CDP	802	157	19.5
Stallion Springs CDP	1,302	182	13.9

Source: (U.S. Census Bureau, 2020)

Approved Housing Developments

Several approved housing developments are located in proximity to the Proposed Project in unincorporated Kern County and unincorporated Los Angeles County. A zoning change was approved in the City of Arvin that foretells the approval of new housing development. The approved housing developments and zoning change are described in the sections below. No housing developments were identified in the City of Bakersfield within the vicinity of the Proposed Project.

Kern County Approved Housing Development – Grapevine Specific and Community Plan

The Grapevine Specific and Community Plan is an 8,010-acre master-planned community located at the southern end of the San Joaquin Valley near the junction of Interstate 5 (I-5) and State Route (SR) 99, approximately 25 miles south of downtown Bakersfield (Kern County , 2016). The Grapevine Specific and Community Plan would provide a new residential community and employment center that would extend the range of economic development opportunities that currently exist in the Tejon Ranch Commerce Center. The plan would designate 60 percent of the plan area (4,778 acres) for mixed-use residential and commercial zones, and 40 percent of the plan area (3,232 acres) would be maintained for agriculture. The Grapevine Specific and Community Plan would allow for 12,000 dwelling units, and an additional 2,000 dwelling units may be permitted. Development of the plan was approved in December 2019 and would result in an estimated net population increase of 38,400 people (Kern County , 2016). The construction schedule for the Grapevine Specific and Community Plan is unknown. The Proposed Project alignment cross through the eastern portion of the Grapevine Specific and Community Plan.

Los Angeles County Approved Housing Development – Centennial Specific Plan

The Centennial Specific Plan authorized the development of a new master-planned community of 19,333 residences and 8.4 million square feet of commercial and business park uses on

approximately 12,323 acres at the northwest corner of Los Angeles County (County of Los Angeles, 2019). The site of the Centennial Specific Plan is approximately 1 mile east of the intersection of I-5 and SR 138, east of the Gorman substation. The plan was adopted by the Los Angeles County Board of Supervisors on April 30, 2019, and became effective on May 30, 2019. Once construction is completed, the population is estimated to increase by approximately 57,000 people. The construction schedule for the Centennial Specific Plan is unknown. The Proposed Project does not cross through the Centennial Specific Plan area.

City of Arvin – General Plan Amendment 2013-01/Zone Change

The General Plan Amendment 2013-01/Zone Change rezones APN 189-35202 and 189-35208 on the south side of Sycamore Road, east of Tejon Highway in the City of Arvin, west of the Proposed Project alignment (Segment 1). The amendment would change the zoning designation of 32.89 acres from A-1 Light Agricultural and A-2 General Agricultural to M-2 Light Industrial; 8.01 acres from A-1 Light Agricultural and A-2 General Agricultural to C-2 General Commercial; 13.46 acres from A-1 Light Agricultural and A-2 General Agricultural to R-2 Two-family Dwelling; and 7.0 acres from A-1 Light Agricultural and A-2 General Agricultural to R-4 Multiple Family Dwelling. There are no current plans for residential developments within the area; however, residential development may occur in the future. The Proposed Project does not cross through the amendment area.

Labor Estimates

Construction labor estimates for cities and counties within the Proposed Project alignment are shown in Table 3.14-3.

Table 3.14-3 Construction Labor Estimates

City, County, or CDP	Number of construction workers
Kern County	25,476
Los Angeles County	301,223
City of Arvin	401
City of Bakersfield	11,841
Lebec CDP	16
Stallion Springs CDP	0
Total	*338,957*

Source: (U.S. Census Bureau, 2021)

Environmental Setting by Segment

Approved housing developments within each Proposed Project segment are shown in Table 3.14-4.

Table 3.14-4 Housing Determination by Segment

Project segment	Segment location	Approved housing development and/or zoning changes
Segment 1	• City of Bakersfield • City of Arvin	City of Arvin General Plan Amendment 2013-01/Zone Change
Segment 2	• Unincorporated Kern County • Lebec CDP	Grapevine Specific and Community Plan
Segment 3	• Kern County • Los Angeles County • Lebec CDP	Los Angeles Centennial Specific Plan
Segment 4	• Unincorporated Kern County • Stallion Springs CDP	None
Segment 5	• Unincorporated Kern County • Stallion Springs CDP	None

3.14.2 Applicable Regulations, Policies and Standards

Federal, state, and local regulations were reviewed for applicability to the Proposed Project.

Federal and State Regulations, Policies, and Standards

There are no federal or state regulations pertaining to population and housing that are applicable to the Proposed Project.

Local Regulations, Policies, and Standards

The CPUC has sole and exclusive State jurisdiction over the siting and design of the Proposed Project because it authorizes the construction, operation, and maintenance of investor-owned public utility facilities. Pursuant to GO 131-D section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters." Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the counties' and cities' regulations are not applicable as the counties and cities do not have jurisdiction over the Proposed Project. Accordingly, the following discussion of local land use laws, regulations, and policies is provided for informational purposes only.

Kern County General Plan

The Kern County 2015–2023 Housing Element Update of the Kern County General Plan provides an assessment of current and future housing needs and establishes housing goals, policies, and programs (Michael Baker International, 2021). The Kern County Housing Element identifies specific goals for preserving neighborhoods, providing adequate housing and affordable housing, removing constraints on housing investments, and promoting fair and equal housing opportunities. The plan also contains an assessment of regional housing needs for unincorporated Kern County. The regional housing needs assessment (RHNA) identified a need for over 21,000 housing units during the 2015 to 2023 planning period.

Los Angeles County General Plan

The 2021–2029 Housing Element of the Los Angeles General Plan identifies the city's housing needs and conditions, provides programs for meeting the city's housing priorities, and identifies housing goals and policies (City of Los Angeles, 2021). The housing element identifies and addresses housing shortages throughout the city and emphasizes the need for housing stability, affordability, opportunity, and equity. The RHNA contained within the housing element identifies the need for over 450,000 housing units during the 2021 to 2029 planning period.

City of Arvin General Plan

The 2013–2023 City of Arvin Housing Element focuses on identifying the quality, quantity, condition, and occupancy of housing within the City of Arvin. The housing element contains goals and policies for addressing the city's concerns of providing equitable housing, adequate affordable housing, and clean, fair, and upgraded housing. The housing element identified the need for approximately 1,168 housing units during the 2013 to 2023 planning period.

City of Bakersfield General Plan

The City of Bakersfield General Plan Housing Element includes goals, policies, and programs for addressing housing adequacy in the city of Bakersfield. The overarching goals of the housing element is to provide housing opportunities and accessibility for all economic segments of the city, provide adequate new affordable housing, preserve and enhance existing housing,

and ensure that all housing programs promote equal opportunity for housing. The RHNA contained within the housing element identifies the need for approximately 36,000 housing units during the 2015 to 2023 planning period.

Frazier Park/Lebec Specific Plan
The Frazier Park/Lebec Specific Plan was developed in 2003 to meet community growth objectives within Frazier Park and Lebec CDP. The Frazier Park/Lebec Specific Plan Housing Element defers to the 2002 Kern County General Plan Housing Element.

Stallion Springs
The Stallion Springs CDP has no local population or housing regulations, policies, or standards that pertain to the Proposed Project.

3.14.3 Applicant Proposed Measures

No applicant proposed measures were identified by SCE in its Proponents Environmental Assessment for potential population and housing impacts.

3.14.4 Environmental Analysis

Summary of Impacts

Table 3.14-5 presents a summary of the CEQA significance criteria and impacts on population and housing that would occur during construction, operation, and maintenance of the Proposed Project.

Table 3.14-5 Summary of Proposed Project Impacts to Population and Housing

Would the proposed project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Induce substantial unplanned population growth in the area, either directly (e.g., by proposing new homes or businesses) or indirectly (e.g., through the extension of new roads or other infrastructure)	☐	☐	☐	☒
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere.	☐	☐	☐	☒

Impact Discussion

a) Induce substantial unplanned population growth in the area, either directly (e.g., by proposing new homes or businesses) or indirectly (e.g., through the extension of new roads or other infrastructure)?

Construction

The Proposed Project does not include the construction of new homes or businesses and, as a result, would not directly induce substantial temporary or permanent population growth in the area. Construction of the Proposed Project is anticipated to take 24 months and would require up to 85 workers per day during peak construction periods. It is anticipated that the labor demand would generally be met by workers within Kern County and Los Angeles County. Contracted workers would likely be sourced from nearby communities including the City of Bakersfield, City of Arvin, or the City of Tehachapi. As shown in Table 3.14-3, approximately 338,957 construction workers are available for the cities and counties within the Proposed Project alignment. Therefore, the work force necessary for Project construction could generally be accommodated locally. Due to the temporary nature of construction, and given the work force would be sourced from SCE or surrounding communities, construction of the Proposed Project would have a minimal short-term impact on population, and the impact would be less than significant.

Operation and Maintenance

The Proposed Project would replace existing 66 kV subtransmission infrastructure. The existing infrastructure provides power to a portion of unincorporated Kern County, the city of Tehachapi, and the surrounding communities. The infrastructure also has the ability to provide power to communities directly served from the existing Gorman and Frazier Park substations, as needed. The Proposed Project would not provide service to any new users or area that would indirectly induce an increase in population. Additionally, the Proposed Project would not construct any new infrastructure such as publicly accessible roads that could induce population growth. No impact on population growth from operation of the Proposed Project would occur.

The existing operation and maintenance activities performed along the subtransmission lines included under the Proposed Project would not be materially changed as a result of the construction of the Project. SCE currently operates and maintains the existing subtransmission lines along the Proposed Project alignment. The frequency of maintenance inspections would remain the same as inspections of the existing lines. Because the lines and infrastructure would be new, the maintenance of the new lines would be expected to reduce initially after construction. Because the Proposed Project would replace an existing subtransmission line at the same voltage, there would be no impact on population growth from operation and maintenance of the Proposed Project.

Required APMs and MMs: None required.

b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?

The Proposed Project would include the replacement and rebuilding of existing 66 kV subtransmission lines adjacent to the existing 66 kV subtransmission lines. While the Proposed Project would be constructed in a slightly different alignment, a majority of the Proposed Project would be within SCE's existing ROW on private lands. SCE does not possess sufficient ROW or easements for approximately 7.4 miles of the Proposed Project alignment. New permanent or modified ROWs and new permanent easements would be obtained by SCE from private landowners for the new ROW areas. No housing units or residential structures are located within the area of the new ROW. The Proposed Project would, therefore, not displace existing housing that would require the construction of replacement housing. Service interruptions during project construction would not occur. The Proposed Project would not displace people or housing. No impact would occur.

Required APMs and MMs: None required.

3.14.5 References

California Department of Finance. (2021, July 19). *Report P-2A: Total Population Projections, 2010-2060 California and Counties.* Retrieved September 8, 2023, from https://dof.ca.gov/forecasting/demographics/projections/

City of Bakersfield. (2019). 2019 Community Profile . *Population Demographics Housing*.

City of Los Angeles. (2021, November). *City of Los Angeles General Plan.* Retrieved September 8, 2023, from https://planning.lacity.org/plans-policies/housing-element

County of Los Angeles. (2019, March). Centennial Specific Plan. Retrieved from https://planning.lacounty.gov/view/centennial_specific_plan#:~:text=The%20Specific%20Plan%20authorizes%20the,offsite%20infrastructure%20and%20mitigation%20areas.

Kern County . (2016, March). Grapevine Specific and Community Plan.

Michael Baker International. (2021, April 13). *County of Kern 2015-2023 Housing Element Update.* Retrieved September 8, 2023, from https://psbweb.co.kern.ca.us/planning/pdfs/he/KCHE_2015.pdf

U.S. Census Bureau. (2020). *American Community Survey Demographic and Housing Estimates*. Retrieved May 23, 2022, from https://data.census.gov/table?tid=ACSDP5Y2020.DP05

U.S. Census Bureau. (2020). Decennial Census. *DEC Redistricting Data (PL 94-171)*. Retrieved May 04, 2022, from https://data.census.gov/cedsci/table?q=population&g=0500000US06029,06037_1600000US0602924,0603526,0640956,0673868&tid=DECENNIALPL2020.P1

U.S. Census Bureau. (2020). Poverty Status in the Past 12 Months. *American Community Survey 5-Year Estimates Subject Tables*. Retrieved May 4, 2022, from https://data.census.gov/cedsci/table?q=poverty&tid=ACSST5Y2020.S1701

U.S. Census Bureau. (2021). *American Community Survey Selected Economic Characteristics 2021 5-Year Estimates Data Profiles*. Retrieved September 8, 2023, from https://data.census.gov/table?q=DP03:+SELECTED+ECONOMIC+CHARACTERISTICS&tid=ACSDP1Y2021.DP03

3.15 Public Services

This section presents the environmental setting and impact analysis for public services resulting from the Proposed Project. This section includes existing public services information for the Proposed Project, applicable regulations, environmental impacts, and mitigation measures to reduce or avoid significant effects.

3.15.1 Environmental Setting

Regional Setting

Service Providers

Fire stations, police stations, schools, parks, and hospitals serving the Proposed Project area are shown in Figure 3.15-1.

Fire

The Kern County Fire Department (KCFD), Los Angeles County Fire Department (LACFD), and the Bakersfield Fire Department provide fire protection services for the Proposed Project. The City of Arvin falls within the jurisdiction of the Kern County Fire Department (City of Arvin, 2022b). The KCFD serves a population of more than 500,000 people and an area of more than 8,000 square miles (Kern County Fire Department, 2022). The KCFD has more than 546 uniformed firefighters and operates a total of 46 fire stations throughout Kern County (Kern County Fire Department, 2022). The Bakersfield Fire Department provides services within the City boundaries from 14 fire stations.

Response times vary throughout Kern County and the City of Bakersfield depending on the proximity of the nearest fire station. The Operational and Administrative Analysis report (Center for Public Safety Management, LLC, 2017) for Kern County analyzes response times in four subareas: urban areas, rural areas, remote areas, and the Bakersfield Joint Protection Area (JPA). The Bakersfield JPA consists of an agreement between the Bakersfield Fire Department and the KCFD and covers the City of Bakersfield and first due areas for 12 KCFD stations. Urban areas include the cities of Arvin, Delano, Maricopa, McFarland, Ridgecrest, Shafter, Taft, Tehachapi, and any area in the City of Bakersfield not covered by the JPA. Both *rural areas* and *remote areas* are defined as areas outside of city limits, but *rural areas* are those within 8 miles of a fire station while *remote areas* are those beyond 8 miles of a fire station. In urban areas, response times average 8.8 minutes for the KCFD. In rural areas and remote areas, response times are longer and average 11.4 and 21.2 minutes, respectively. The average response time for the Bakersfield JPA is 9.1 minutes (Center for Public Safety Management, LLC, 2017).

The LACFD provides fire, safety, and emergency medical services to the unincorporated areas of the county. The LACFD serves a population of more than 4 million people in an area of more than 2,300 square miles (County of Los Angeles Fire Department, 2020). The LACFD has more than 700 firefighters and operates 177 fire stations throughout Los Angeles County (County of

Los Angeles Fire Department, 2020). The typical response time for the LACFD in urban areas is approximately 6 minutes; longer response times are expected in rural areas or remote areas (County of Los Angeles, 2013).

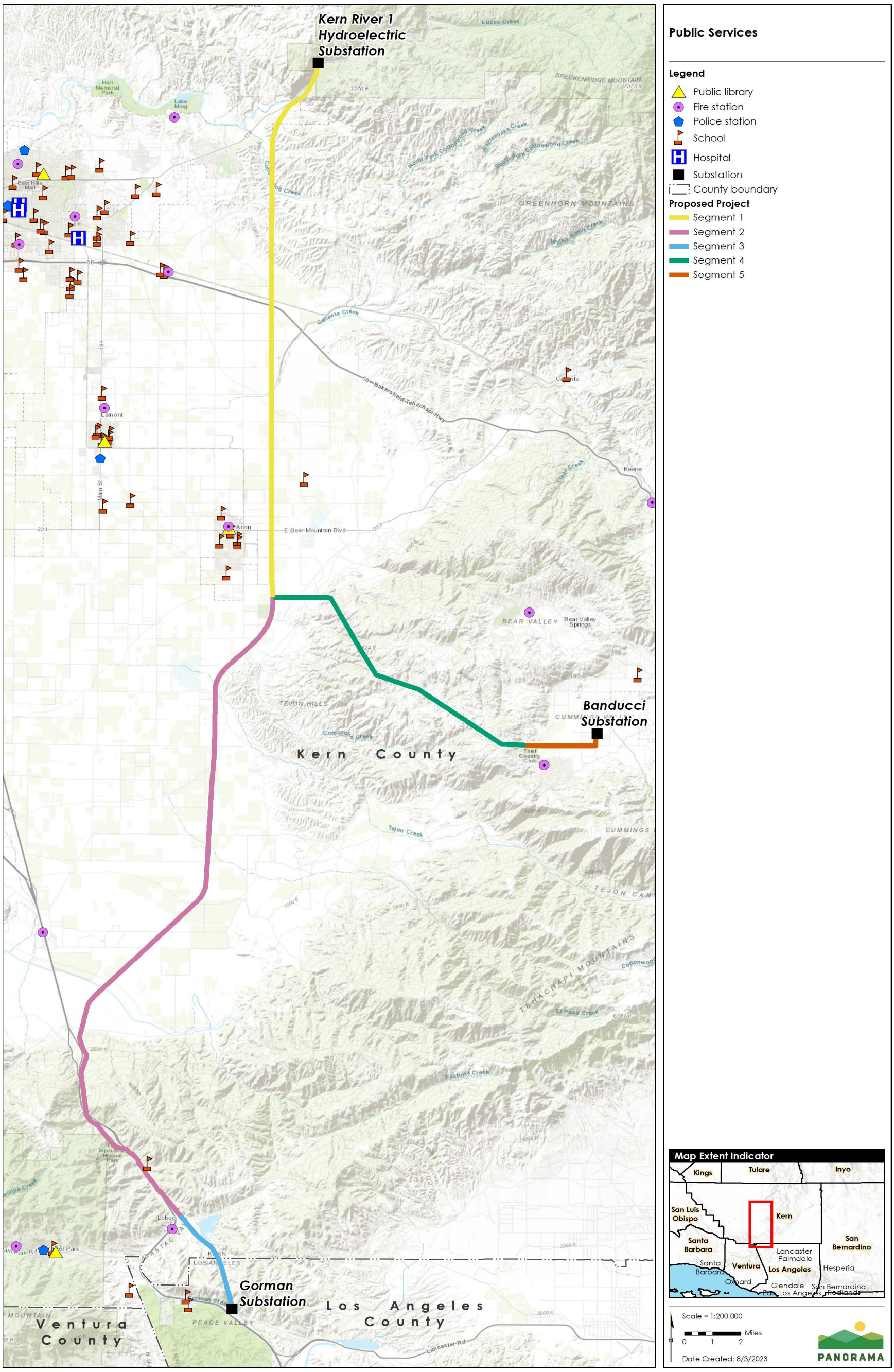
The closest fire stations to the Proposed Project are provided in Table 3.15-1 and depicted in Figure 3.15-1.

Table 3.15-1 Fire Stations in Proximity to the Proposed Project

Project segment or segment(s)	Name of proximate fire station	Address of proximate fire station	County location of proximate fire station	Approximate distance to Proposed Project (miles)
1	Bakersfield Fire Department Station #10	12100 Alfred Harrell Expressway, Bakersfield	Kern	3.7
1	KCFD Edison – Fire Station #45	11809 Edison Highway, Bakersfield	Kern	3.7
1	KCFD Arvin – Fire Station #54	301 Campus Drive, Arvin	Kern	1.5
1	KCFD Lamont – Fire Station #51	8225 McKee Road, Lamont	Kern	5.9
2	Tejon Ranch – Fire Station #55	5441 Dennis McCarthy Drive, Lebec	Kern	3.1
2, 3	Lebec – Fire Station #56	1545 Lebec Service Road, Lebec	Kern	0.5
3	Gorman – Fire Station #77	46833 Peace Valley Road, Gorman	Los Angeles	2.8
3	Frazier Park – Fire Station #57	729 W End Dr, Frazier Park	Kern	6.0
4, 5	Bear Valley – Station #16	28946 Bear Valley Road, Tehachapi	Kern	4.5
4, 5	Stallion Springs – Station #18	28381 Braeburn Place #22, Stallion Springs	Kern	0.8

Source: (Kern County Fire Department, 2022)

Figure 3.15-1 Public Services in Proximity to the Proposed Project



Source: (Oak Ridge National Laboratory, 2022; Kern County Planning and Community Development Department, 2014; County of Los Angeles, 2022; Kern County GIS, 2006; Kern County GIS, 2017; Los Angeles County GIS; Kern County GIS, 2018)

This page is intentionally left blank.

Police

The Kern County Sheriff's Office (KCSO) provides police services in unincorporated Kern County and serves over 890,000 persons. The KCSO employs over 1,200 people and has 14 stations in Kern County (Kern County Sheriff's Office, 2022). Average response times for the KCSO are approximately 5 minutes for emergency or immediate incidents, and 8 to 10 minutes for routine calls (Kern County, 2019). Several KCSO stations are located within proximity to the Proposed Project alignment. The closest KCSO stations to the Proposed Project are provided in Table 3.15-2. The locations of the nearby KCSO stations are also depicted in Figure 3.15-1.

The Los Angeles Sheriff's Department (LASD) provides police services to unincorporated Los Angeles County. The LASD provides police services to more than 5 million people in 90 unincorporated communities and 40 cities. The LASD has 23 stations across the county. The nearest LASD station to the Proposed Project alignment is the Santa Clarita Valley station located approximately 30 miles southeast of Segment 3 (Los Angeles County Sheriff's Department, 2019). Response times for the LASD and the Santa Clarita Valley patrol station are not publicly available.

Portions of the Proposed Project are located in the cities of Arvin and Bakersfield. The City of Arvin Police Department provides police services to the City of Arvin and serves approximately 20,000 persons (City of Arvin, 2022a). Response times for the City of Arvin Police Department are not publicly available. The City of Bakersfield Police Department provides police services throughout the City of Bakersfield and serves approximately 400,000 people (City of Bakersfield, 2002). Response times for the City of Bakersfield Police Department are less than 7 minutes city-wide (Dalu, 2023). The closest police stations to the Proposed Project are provided in Table 3.15-2. The locations of the police stations are depicted in Figure 3.15-1.

Table 3.15-2 Police Departments and Sheriff's Office Stations in Proximity to the Proposed Project

Project segment(s)	Name of police department	Address of police station	Approximate distance to Proposed Project (miles)
1	Arvin Police Department	200 Campus Drive, Arvin	1.5
1	Bakersfield Police Department	1601 Truxtun Avenue, Bakersfield	12
1, 2	Lamont Station	12022 Main Street, Lamont	6.2
3	Frazier Park Station	617 Monterey Trail – Suite C, Frazier Park	4.6
4, 5	Tehachapi Station	22209 Old Town Road, Tehachapi	2.2

Source: (Kern County Sheriff's Office, 2022; Bakersfield Police Department, 2022; City of Arvin Police Department, 2022)

Schools

The Proposed Project crosses through seven school districts within Kern County (Kern County, 2022). The portion of the alignment that traverses Los Angeles County is located in the Antelope Valley Union School District; however, there are no Los Angeles County schools near the Proposed Project alignment (County of Los Angeles, 2022). Table 3.15-3 provides an overview of the schools, locations, district, and grades as well as the approximate distance of each school in proximity to the Proposed Project. The locations of the schools are depicted in Figure 3.15-1.

Table 3.15-3 Schools in Proximity to the Proposed Project

Project segment(s)	Name	Address	School district	Grades	Approximate distance to the Proposed Project (miles)
1	Di Giorgio Elementary School	19405 Buena Vista Boulevard, Arvin	Di Giorgio Elementary	K–8	1.1
1	Haven Drive Middle School	341 Haven Drive, Arvin	Arvin Union Elementary	7–8	1.1
1	Sierra Vista Elementary School	300 Franklin Street, Arvin	Arvin Union Elementary	P–6	1.1
1	Grimmway Academy	901 Nectarine Court, Arvin	Arvin Union Elementary	K–8	1.5
1	Arvin High School	900 Varsity Road, Arvin	Kern Union High	9–12	1.5
2	El Tejon School	4337 Lebec Road, Lebec	El Tejon Unified	5–8	0.01
5	Cummings Valley Elementary School	24220 Bear Valley Road, Tehachapi	Tehachapi Unified School District	K–5	2.7

Source: (Kern County, 2022)

Parks

The Kern County Parks and Recreation Department manages approximately 4,726 acres of parks and open space. The Los Angeles Department of Parks and Recreation manages 73,214 acres of parkland and recreation space throughout the county (County of Los Angeles Parks & Recreation, 2023). Public parks, open spaces, and recreational areas in the vicinity of the Proposed Project are described in detail in Section 3.16 Recreation. Parks within 0.5 mile of the Proposed Project alignment include the Sequoia National Forest, Los Padres National Forest, and Fort Tejon State Historic Park. The locations of the parks are depicted in Figure 3.15-1.

Hospitals

The closest hospital to the Proposed Project alignment is the Tehachapi Hospital, which is located approximately 9 miles east of the existing SCE Banducci substation (Kern County, 2022). Several hospitals are located within the City of Bakersfield (Kern County, 2022). The nearest hospital in the City of Bakersfield is the Kern Medical hospital, located approximately 9 miles west of the Proposed Project. The City of Arvin does not contain any hospitals. There are no hospitals within the vicinity of the Proposed Project in Los Angeles County. The locations of the hospitals in proximity to the Proposed Project are depicted in Figure 3.15-1.

3.15.2 Applicable Regulations, Policies and Standards

Federal, state, and local regulations were reviewed for applicability to the Proposed Project.

Federal and State Regulations, Policies, and Standards

There are no federal or state laws or regulations pertaining to public services that are applicable to the Proposed Project.

Local Regulations, Policies, and Standards

The CPUC has sole and exclusive State jurisdiction over the siting and design of the Proposed Project because it authorizes the construction, operation, and maintenance of investor-owned public utility facilities. Pursuant to GO 131-D section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters." Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the counties' and cities' regulations are not applicable as the counties and cities do not have jurisdiction over the Proposed Project. Accordingly, the following discussion of local land use laws, regulations, and policies is provided for informational purposes only.

Kern County General Plan

The Kern County General Plan lays out policies for providing adequate public services and facilities for Kern County residents. The Land Use, Open Space, and Conservation Element and the Safety Element of the Kern County General Plan contain policies, implementation measures, and goals related to public services relevant to the Proposed Project.

Applicable Land Use, Open Space, and Conservation Element policies and implementation measures are as follows:

Policies

- The County will ensure adequate fire protection to all Kern County residents.
- The County will ensure adequate police protection to all Kern County residents.
- Provide recreation opportunities for all citizens of Kern County while avoiding duplication between jurisdictions.

Implementation measures

- Prior to the approval of development projects, the County shall determine the need for fire protection services. New development in the County shall not be approved unless adequate fire protection facilities and resources can be provided.
- Ensure that the Superintendent of Schools and the respective school districts are informed of development proposals and are afforded the opportunity of evaluating their potential effect on the physical capacity of school facilities.

Applicable Safety Element goals, policies, and implementation measures are as follows:

Goals

- Ensure that adequate emergency services and facilities are available to the residents of Kern County through the coordination of planning and development of emergency facilities and services.

Policies

- Require discretionary projects to assess impacts on emergency services and facilities.
- Ensure that new development of properties have sufficient access for emergency vehicles and for the evacuation of residents
- All discretionary projects shall comply with the adopted Fire Code and the requirements of the Fire Department

Implementation Measures

- Require that all development comply with the requirements of the Kern County Fire Department or other appropriate agency regarding access, fire flows, and fire protection facilities.

Kern County Fire Department 2020 Strategic Fire Plan

The Kern County Fire Department 2020 Strategic Fire Plan was updated in April 2020 and documents the assessment of the wildland fire situation throughout the SRA within Kern County. The plan includes stakeholder contributions and priorities and identifies strategic targets for pre-fire solutions. The goal of the plan is to reduce costs and losses from wildfire by protecting assets at risk through pre-fire management prescriptions and increasing initial attack success. The plan assesses the existing levels of wildland protection services and identifies high-risk and high-value areas that are potential locations for costly and damaging wildfires.

Kern County Capital Improvement Plan

A proposed countywide *capital improvement plan* (CIP) was presented to the Kern County Board of Supervisors on October 9, 2007, and adopted in 2008. The CIP represents the best current understanding regarding new public facilities that will be needed to serve projected development in the County through 2030. The scope of services includes parks, libraries, a sheriff's office (public protection and investigation), a fire department, animal control, public health, landfill/transfer facilities, and general government.

Los Angeles General Plan

The Los Angeles General Plan provides goals, policies, implementation programs for providing adequate public services and facilities for Los Angeles County residents. The Parks and Recreation Element and Public Services and Facilities Element contain policies and goals related to public services relevant to the Proposed Project.

The applicable Parks and Recreation Element policy is as follows:

- Ensure that County parks and recreational facilities are clean, safe, inviting, usable and accessible.

Applicable Public Services and Facilities Element goals and policies are as follows:

Goal

- A County with adequate educational facilities

Policies

- Discourage development in areas without adequate public services and facilities.
- Ensure that adequate services and facilities are provided in conjunction with development through phasing or other mechanisms
- Ensure a desired level of library service through coordinated land use and facilities planning.

Applicable Safety Element policies are as follows:

- Ensure that there are adequate resources, such as sheriff and fire services, for emergency response.
- Ensure that residents are protected from the public health consequences of natural or human-made disasters through increase readiness and response capabilities, risk communication, and the dissemination of public information

Metropolitan Bakersfield General Plan

The Metropolitan Bakersfield General Plan contains the Safety Element and Parks Element, which provides goals and policies for providing adequate public services and facilities for the City of Bakersfield (City of Bakersfield, 2002). The following policies and goals related to public services are relevant to the Proposed Project.

The applicable Safety Element goal and policy are as follows:

Goals

- Ensure that adequate police and fire services and facilities are available to meet the needs of current and future metropolitan residents through the coordination of planning and the development of metropolitan police and fire facilities and services.

Policies

- Require discretionary projects to assess impacts on police and fire services and facilities.

The applicable Parks Element goal is as follows:

Goal

- Provide parks and recreation facilities to meet the planning area's diverse needs.

City of Arvin General Plan

The City of Arvin General Plan discusses goals, objectives, and policies that ensure the availability of public services for its residents.

The applicable policies are as follows:

Policies

- Ensure all new development provides adequate access for emergency vehicles and evacuation.
- Continue to coordinate fire protection services with Kern County Fire Department to ensure sufficient capacity, stations, personnel, and equipment are available to meet growth needs in Arvin for fire protection and related emergency services.

3.15.3 Applicant Proposed Measures

SCE has proposed measures to reduce environmental impacts. The significance of the impact is first considered prior to application of applicant proposed measures (APMs) and a significance determination is made. The implementation of the APMs is then considered as part of the Proposed Project when determining whether impacts would be significant and thus would require mitigation. These APMs would be incorporated as part of any CPUC project approval, and SCE would be required to adhere to the APMs as well as any identified mitigation measures. The APMs are included in the MMRP for the Proposed Project, and the implementation of the measures would be monitored and documented in the same manner as mitigation measures. The APMs that are applicable to the public services analysis are provided in Table 3.15-5.

Table 3.15-4 Applicant Proposed Measures Relevant to Public Services Analysis

APM number	Requirements
HAZ-3	Prepare and Implement a Project-specific Fire Management Plan (Plan). A Fire Prevention and Emergency Response Plan will be developed to ensure the health and safety of construction workers, SCE personnel, and the public during Project construction. The Plan shall cover the following: • The purpose and applicability of the plan • Responsibilities and duties • Project areas where the plan applies • Procedures for incorporating red flag warnings, fire potential index (FPI), *project activity level* (PAL), and equivalent indicators in determining fire weather related work restrictions • Procedures for fire reporting, response, prevention, and evacuation routes • Coordination procedures with federal and local fire officials • Crew training, including fire safety practices and restrictions

APM number	Requirements
	• Fire suppression and communication equipment required to be on hand during construction • Method for verification that Plan protocols and requirements are being followed • Post-construction fire prevention and response measures The Project-specific Fire Prevention and Emergency Response Plan for construction of the project will be prepared by SCE and submitted to CPUC, CALFIRE, Inyo, Kern and San Bernardino counties, and local municipal fire agencies for review at least 30 days prior to initiation of construction. SCE will address all comments received from reviewing agencies and provide the final Fire Prevention and Emergency Response Plan to reviewing agencies for approval prior to initiating construction activities.
TRA-1	SCE will implement traffic control measures consistent with those published in the Manual on Uniform Traffic Control Devices, as written and amended by Caltrans for the state of California (CA MUTCD), and using standard templates from the California Temporary Traffic Control Handbook (CATTCH) (California Inter-Utility Coordinating Committee, 2018)). These measures will be implemented as and where necessary as described in the CA MUTCD and/or CATTCH, or in ministerial permits.

3.15.4 Environmental Analysis

Summary of Impacts

Table 3.15-5 presents a summary of the CEQA significance criteria and impacts on public services that would occur during construction and operation and maintenance (O&M) of the Proposed Project.

Table 3.15-5 Summary of Proposed Project Impacts to Public Services

Would the proposed project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services: i. Fire protection? ii. Police protection? iii. Schools? iv. Parks? v. Other public facilities?	☐	☒	☐	☐

Impact Discussion

a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:

i. Fire protection?

ii. Police protection?

iii. Schools?

iv. Parks?

v. Other public facilities?

Construction

Fire Protection

Portions of the Proposed Project are located in areas of high risk for wildland fire. Sparks from construction equipment or personnel smoking during construction could potentially ignite a wildfire (refer to Section 3.20 Wildfire). The Proposed Project would have a significant impact on fire protection services were a large-scale fire to be ignited by construction, resulting in an increased demand for fire response in the Proposed Project area.

Vegetation clearing activities would be implemented prior to the staging of equipment in order to minimize the potential for vehicles or equipment to start a fire. In the event of a red flag warning during construction of the Proposed Project, additional measures would be implemented to address smoking and fire rules, storage and parking areas, the use of gasoline-powered tools, the use of spark arrestors on construction equipment, road closures, the use of a fire guard, fire suppression tools, fire suppression equipment, and training requirements. APM HAZ-3 would be implemented as part of the Proposed Project and requires the preparation of a Fire Prevention and Emergency Response Plan prior to construction. The Fire Prevention and Emergency Response Plan includes fire response and reporting procedures, crew training, procedures for fire-weather related work restrictions, and coordination procedures with appropriate federal, state, and local fire officials. With implementation of APM HAZ-3 and vegetation clearing at workspaces to avoid increased fire risk, construction of the Proposed Project would result in a less-than-significant impact on fire risk and associated increased demand for fire protection services. The impact on demand for fire response during construction would be less than significant.

Police

The materials for the Proposed Project construction would be staged and stored within secure staging areas. The staging areas would be secured through installation of temporary perimeter fencing and one or more gates; typically, chain-link fencing would be used. Other security measures that may be employed at staging areas could include cameras, privacy screening, and security personnel. Through use of proper security measures, the staging of construction materials would not create an increased demand for police protection services. The impact on police demand would be less than significant.

Emergency Response

Guard structures would be installed at road crossings to help keep the existing conductors and the newly installed conductors from coming in contact with the ground and to maintain vehicle access to the extent feasible. Construction of the Proposed Project would require temporary closures of lanes and roads where needed to protect public safety during conductor installation and removal activities. Temporary lane or road closures could affect the response times of emergency vehicles if an emergency were to occur in the area at the time of lane or road closure. Delays to emergency vehicles resulting from lane and road closures could result in a significant impact to emergency response times. SCE would implement APM TRA-1 as part of the Proposed Project. APM TRA-1 requires SCE to implement traffic control measures consistent with those published by Caltrans in the Manual on Uniform Traffic Control devices. Implementation of APM TRA-1 would reduce impacts to emergency access, but impacts would remain potentially significant. Mitigation Measure Traffic-1 requires the implementation of a Traffic Control Management Plan (TCMP), which would require the use of flaggers to avoid potential accidents, the use of temporary traffic detours to redirect traffic during temporary road closures, advanced notification of closures to all emergency services, and coordination with emergency services. Mitigation Measure Traffic-3 further requires advance notice to emergency services of all road closures to allow emergency services agencies to plan alternate

routes for use during temporary road closures. Impacts on emergency response times would be less than significant with implementation of Mitigation Measures Traffic-1and Traffic-3.

Schools and Parks

The Proposed Project would not include any new homes, businesses, or land use changes that would directly or indirectly induce substantial population growth in the area. The majority of the construction workforce would be hired from the local labor force or would commute from nearby cities. Construction activities would not result in an increase in the local population that could create a demand for new services or facilities. Construction workers would not introduce additional school-aged children to area schools. Therefore, the Proposed Project would not precipitate the need to expand schools or create a need for new parks.

Construction of the Proposed Project would not permanently impact any trails or parks. As discussed in Section 3.16 Recreation, a portion of the Fort Tejon State Historic Park parking lot would be temporarily closed for approximately 2 days for conductor removal and installation activities. Generally, conductor removal and installation would occur at nighttime due to the proximity of the Project site to I-5. Therefore, the conductor activities would likely occur while the park is closed. If the conductor removal and installation activities occurred during the daytime, Mitigation Measure Recreation-1 would be implemented, requiring SCE to notify the State Park 60 days prior to the start of construction and to notify the public 14 days prior to construction. Mitigation Measure Recreation -1 also requires restoration of the Fort Tejon State Historic Park parking lot that would be physically impacted by construction. Impacts from the need for new or physically altered parks would be less than significant with implementation of Mitigation Measure Recreation-1.

Operation and Maintenance

Operation and maintenance (O&M) activities for the Proposed Project would be similar to the O&M activities of the existing subtransmission lines. The Proposed Project consists of an unattended subtransmission line, which would not require additional police or fire protection services. Maintenance activities may require temporary lane or road closures similar to maintenance of the existing subtransmission lines; however, the frequency of maintenance activities would likely reduce immediately following construction as the new infrastructure would require less maintenance than the aging infrastructure that currently occurs in the area. The Proposed Project would not create any permanent employment and would not result in population increase; therefore, no new or physically altered parks, schools, hospitals, or other public facilities would be necessary. Thus, impacts to public facilities from operation and maintenance would be less than significant. No mitigation is required.

Required APMs and MMs: APM HAZ-3, APM TRA-1, MM Recreation-1, MM Traffic-1 and Traffic-3

3.15.5 References

Bakersfield Police Department. (2022, May 4). *About Bakersfield Police Department (BPD)*. Retrieved from https://www.bakersfieldcity.us/485/About-Bakersfield-Police-Department-BPD.

California Inter-Utility Coordinating Committee. (2018, May). *California Temporary Traffic Control Handbook.* Retrieved September 8, 2023, from https://workzonesafety.org/publication/california-joint-utility-traffic-control-manual/.

Center for Public Safety Management, LLC. (2017). *Operational and Administrative Analysis Kern County, California Final Report.* Retrieved September 8, 2023, from https://www.cpsm.us/wp-content/uploads/2019/08/Kern-County-Final-Report.pdf.

City of Arvin. (2022a). *Police*. Retrieved May 18, 2022, from https://www.arvin.org/181/Police.

City of Arvin. (2022b). *Departments*. Retrieved May 4, 2022, from https://www.arvin.org/149/Departments.

City of Arvin Police Department. (2022, May 4). *Police*. Retrieved from https://www.arvin.org/181/Police.

City of Bakersfield. (2002, December). *Metropolitan Bakersfield General Plan.* Retrieved September 8, 2023, from https://www.bakersfieldcity.us/271/Adopted-Planning-Documents.

County of Los Angeles. (2013). Los Angeles Fire Department Response Time Lag. *2012-2013 Los Angeles County Civil Grand Jury Report*.

County of Los Angeles. (2022). *LA County eGIS Program*. Retrieved May 5, 2022, from School District Boundaries: https://egis-lacounty.hub.arcgis.com/datasets/lacounty::school-district-boundaries-2/explore?location=34.823348%2C-118.682080%2C10.67.

County of Los Angeles. (2022, April 19). Public Elementary Schools. Retrieved from https://public.gis.lacounty.gov/public/rest/services/LACounty_Dynamic/LMS_Data_Public/MapServer.

County of Los Angeles Fire Department. (2020). 2020 Statistical Summary. Retrieved from https://fire.lacounty.gov/wp-content/uploads/2021/06/2020-Statistical-Summary-FINAL-DRAFT.pdf.

County of Los Angeles Parks & Recreation. (2023, March). *The County of Los Angeles Department of Parks and Recreation Strategic Plan.* Retrieved September 8, 2023, from https://parks.lacounty.gov/strategicplan/.

Dalu, O. (2023, April 8). BPD considers improving response times amid staff shortages. KGET. Retrieved from https://www.kget.com/news/local-news/bpd-considers-improving-response-times-amid-staff-shortages/.

Kern County. (2019). Grapevine Project Final Environmental Impact Report. Retrieved from https://psbweb.co.kern.ca.us/UtilityPages/Planning/EIRS/grapevine_sreir/Vol5/Grapevine-1-11_DEIR.pdf.

Kern County. (2022). *Kern County GIS*. Retrieved May 5, 2022, from https://maps.kerncounty.com/H5/index.html?viewer=KCPublic.

Kern County Fire Department. (2022). *About the Kern County Fire Department*. Retrieved May 4, 2022, from Department Profile: https://kerncountyfire.org/about-kcfd/.

Kern County GIS. (2006, November 22). Sheriff Stations.

Kern County GIS. (2017, May 17). Fire Stations. Retrieved from https://services5.arcgis.com/Y8jwjGUWbRjuqpG5/arcgis/rest/services.

Kern County GIS. (2018, August 29). Public Libraries. Retrieved from https://services5.arcgis.com/Y8jwjGUWbRjuqpG5/ArcGIS/rest/services/PUBLIC_LIBRARIES/FeatureServer/0.

Kern County Planning and Community Development Department. (2014, December). Kern Schools.

Kern County Sheriff's Office. (2022). *Human Resources*. Retrieved May 4, 2022, from https://www.kernsheriff.org/Human_Resources.

Los Angeles County GIS. (n.d.). Fire Stations. Retrieved from https://public.gis.lacounty.gov/public/rest/services/LACounty_Dynamic/LMS_Data_Public/MapServer.

Los Angeles County Sheriff's Department. (2019). Patrol Stations. Retrieved May 4, 2022, from https://lasd.org/stations/.

Oak Ridge National Laboratory. (2022, June 1). Hospitals. Homeland Infrastructure Foundation-Level Database.

3.16 Recreation

This section presents the environmental setting and analysis of impacts on recreational resources resulting from the Proposed Project. This section includes existing information for recreational resources in the Proposed Project area, applicable regulations, environmental impacts, and mitigation measures to reduce or avoid significant effects.

3.16.1 Environmental Setting

Regional Setting

Federal Recreational Areas

The Proposed Project crosses through two federal recreational areas: the Sequoia National Forest (SNF) and the Los Padres National Forest (LPNF), as shown in Figure 3.16-1. Approximately 0.4 miles of Segment 1 is located on the SNF, and approximately 0.1 mile of Segment 2 is located on the LPNF.

Sequoia National Forest

The SNF is located at the southern end of the Sierra Nevada mountain, and approximately 26 percent of the SNF is within Kern County (U.S. Forest Service, 2019). The SNF in Kern County is approximately 0.5 mile northeast of the City of Bakersfield. The Proposed Project is located within the Lower Kern River Place of the SNF in the southwest portion of the forest. The Land Management Plan for the SNF designates the *recreation opportunity spectrum* (ROS) into six classes: primitive, semi-primitive, nonmotorized, semi-primitive motorized, roaded natural, rural, and urban. The ROS for the portion of the Proposed Project area within the SNR is designated as roaded natural (U.S. Forest Service, 2022). The roaded natural class includes areas 0.5 mile or less from roads and trails open to motorized use (USDA Forest Service, n.d.). The Lower Kern River Place is considered a river recreation area, with a mixture of dispersed and developed recreational opportunities.

The Lower Kern River Place is frequently used as a recreational area due to its close proximity to the City of Bakersfield and easy river access along State Route 178. Day use activities include fishing, picnicking, and whitewater rafting (USDA Forest Service, p. Lower Kern River). Limited overnight opportunities are available in the Lower Kern River Place. Visitor data for this portion of the SNF is not available. While the Lower Kern River Place is a popular recreational area in the SNF, the Proposed Project does not traverse any developed recreational facilities such as trailheads, campsites, or recreational buildings in the area. The nearest developed recreational facility is the Live Oak Picnic Site located approximately 3 miles northeast of the alignment.

Los Padres National Forest

The LPNF encompasses over 1.75 million acres and extends across six different counties, including Kern County. The northern boundary of the LPNF is located in southern Kern

County. An estimated 1 million persons visit the LPNF annually (USDA Forest Service, Natural Resource Manager, 2019). The ROSs for lands traversed by the Proposed Project alignment are classified as semi-primitive non-motorized and roaded natural. As discussed above, the roaded natural class includes areas 0.5 mile or less from roads and trails open to motorized use. The semi-primitive non-motorized classification includes areas 0.5 mile to 3 miles from roads. There are 1,680 miles of trails and 109 developed sites across the LPNF, including campgrounds, picnic and day use areas, beaches, swimming sites, and scenic overlooks (USDA Forest Service, 2007). No specific recreational features are present in the small northeastern portion of the LPNF that is traversed by the Proposed Project alignment.

State Recreational Areas

Fort Tejon State Historic Park

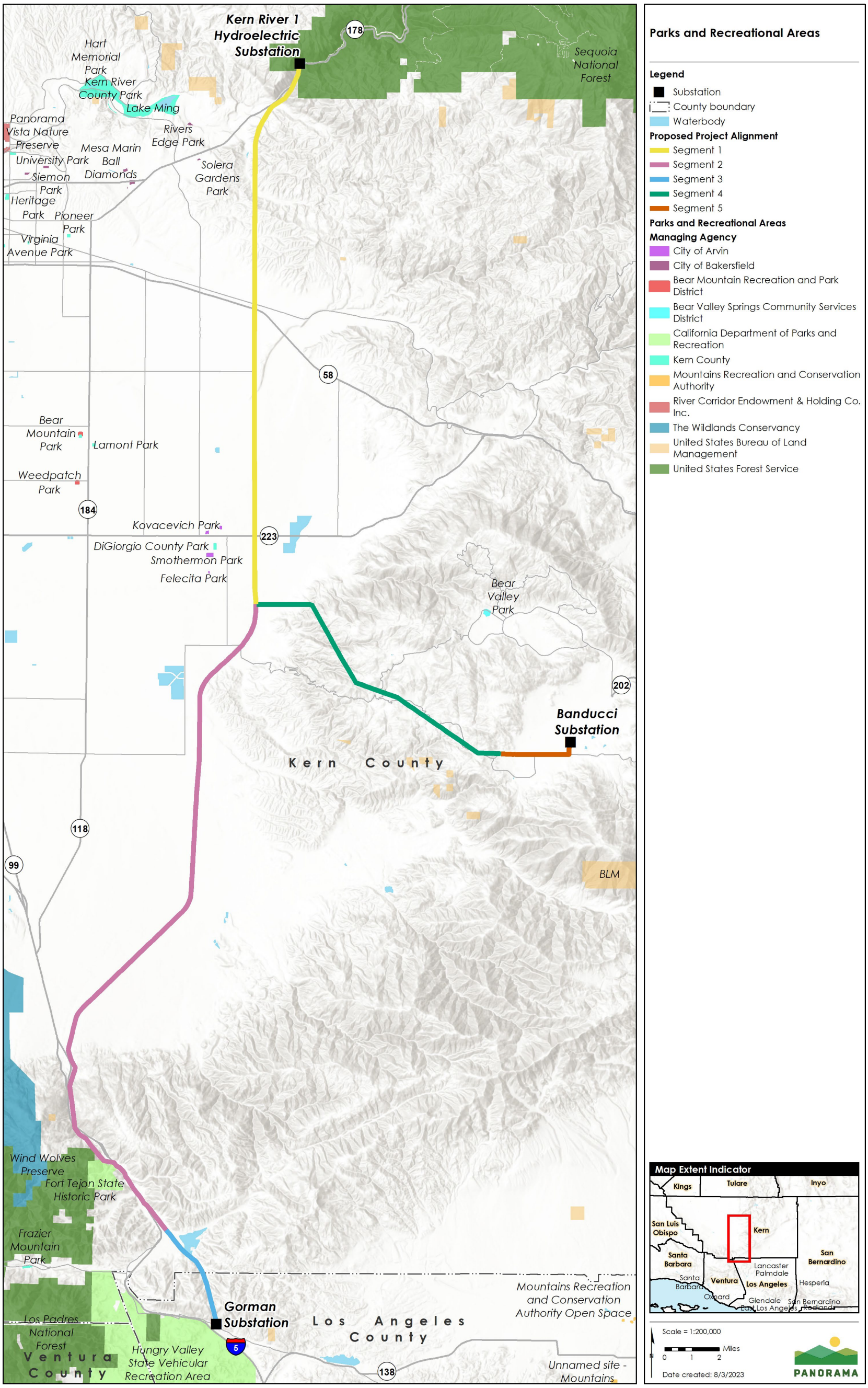
Fort Tejon State Historic Park is an approximately 205-acre park managed by the California Department of Parks and Recreation. The park is located on the west side of Interstate 5 (I-5), approximately 35 miles south of the City of Bakersfield, and 67 miles north of the City of Los Angeles, as shown in Figure 3.16-1. The park was established in 1940 to preserve the historic U.S. Army fort that was built in the mid-1850s (California Department of Parks and Recreation, 1989) and features the historic remains of the U.S. Army fort, and park facilities include a visitor center, historic officers' quarters, picnic tables, group camp area, and restrooms. Approximately 14 acres of the park are developed for recreation and historical education opportunities. The Fort Tejon State Historic Park General Plan (1989) states that visitor activities at Fort Tejon can be divided into two usages: historical appreciation and education or a roadside stop off the I-5 highway where visitors may refresh or have a picnic. Approximately 17,000 individuals visited the park from 2018 to 2019 (California Department of Parks and Recreation, 2022). The Proposed Project would cross the eastern boundary of the park along Lebec Road and through the parking lot, but the alignment is not adjacent any recreational facilities in the park.

Local Recreational Areas

Kern County

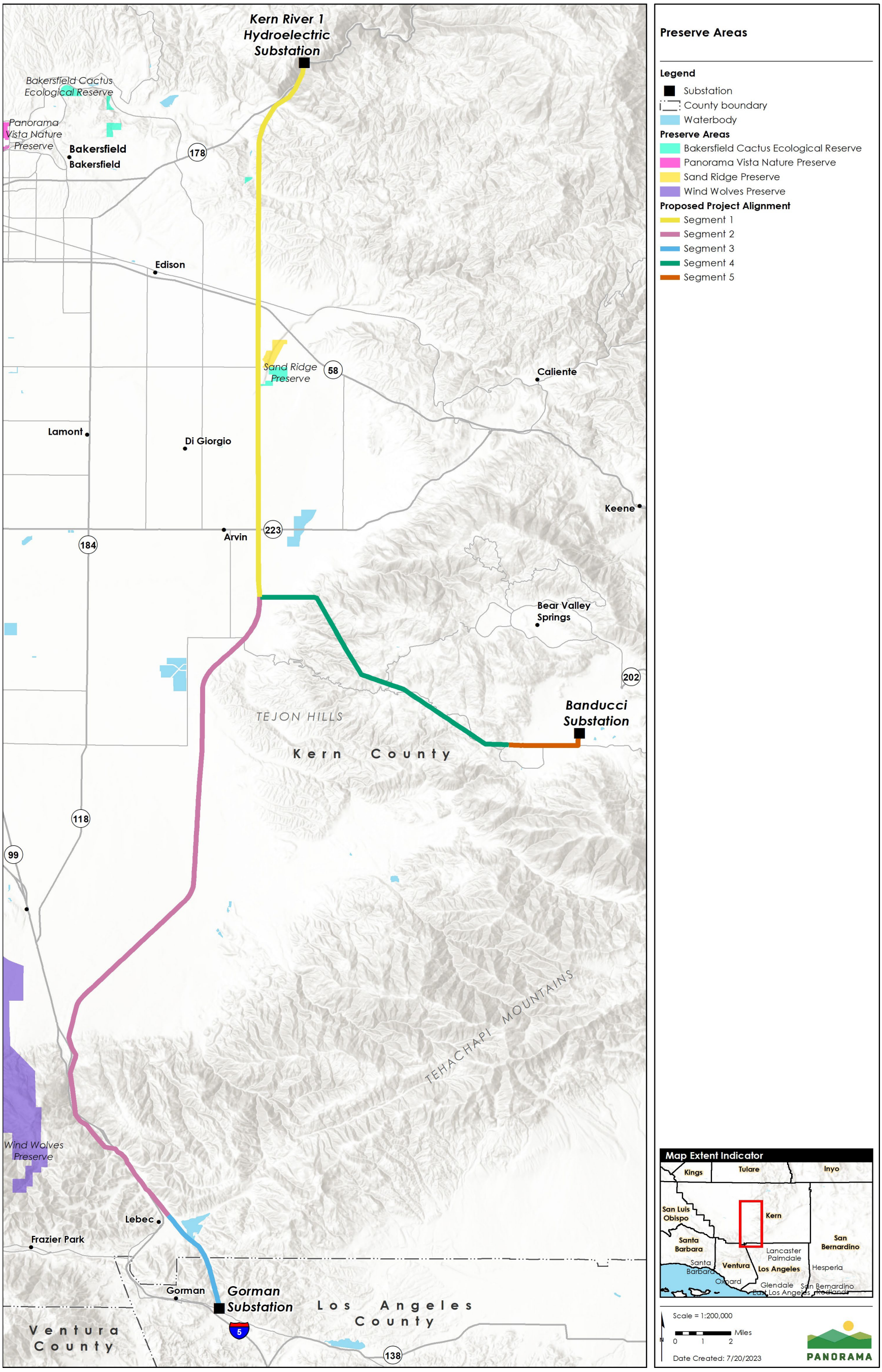
The Kern County Parks and Recreation Master Plan divides Kern County into five areas: Area 1, Area 2, Area 3, Area 4, and Area 5 plus a Sub-area 5b (Kern County Department of Parks and Recreation, 2010). The Proposed Project is located within Area 2, Area 3, and Sub-area 5b, which cover southeast Kern County, greater Bakersfield, and the south of Bakersfield, respectively. There are no parks within 0.5 mile of the Proposed Project.

Figure 3.16-1 Parks and Recreational Areas in the Vicinity of the Proposed Project



Source: (GreenInfo Network, 2022)

Figure 3.16-2 Preserves in the Vicinity of the Proposed Project



Sources: (GreenInfo Network, 2022)

Los Angeles County
The southern portion of the Proposed Project is located in the unincorporated Northwest Antelope Valley area of Los Angeles County. There are no Los Angeles County recreational areas or facilities within 0.5 mile of the Proposed Project.

City of Arvin
The Proposed Project is located immediately west of Tower Line Road, which marks the eastern boundary of the City of Arvin. Several small parks operated and maintained by the City of Arvin Parks and Recreation Department are located within the City of Arvin, including Smothermon Park, Digiorgio County Park, and Kovacevich Park, as shown in Figure 3.16-1. The nearest park in the City of Arvin is Kovacevich Park located 1.2 miles west of Segment 1. Smothermon Park and Digiorgio County Park are approximately 1.5 miles west of the Proposed Project. There are no parks or other recreational facilities within 0.5 mile of the Proposed Project in the City of Arvin.

City of Bakersfield
Ample parks and recreational opportunities are available within the City of Bakersfield. The City of Bakersfield Recreation and Parks Department operates 61 parks, four public pools, two sports complexes, and 27.8 miles of bike paths (City of Bakersfield, 2022). The private Rio Bravo Country Club and golf course is approximately 1.3 miles west of the alignment, and the Solano Garden Park is approximately 2.0 miles west of the alignment (see Figure 3.16-1). There are no City of Bakersfield parks or other recreational facilities within 0.5 mile of the Proposed Project.

Preserve Areas
There are two preserves in the vicinity of the Proposed Project with recreational use: Wind Wolves Preserve and the Panorama Vista Nature Preserve, as shown in Figure 3.16-2. The Wind Wolves Preserve, which is owned and managed by the Wildlands Conservancy for the protection of biological resources and are not available for public recreation, is located 1.25 miles west of the Proposed Project. The Wind Wolves Preserve contains grasslands and saltbush along with several special-status wildlife and plant species. The Panorama Vista Nature Preserve is a 937-acre preserve 9 miles west of the Proposed Project alignment.

Environmental Setting by Segment

Segment 1
The northern terminus of Segment 1 is located within SNF. There are no Kern County, City of Bakersfield, or City of Arvin recreational areas or facilities within 0.5 mile of Segment 1.

Segment 2
The southern portion of Segment 2 is within the LPNF and the Fort Tejon National Historic Park. The Proposed Project alignment would cross through the parking lot of the Fort Tejon National Historic Park but is not adjacent any recreational facilities in the park. The Proposed Project is not adjacent any recreational facilities in the LPNF. There are no Kern County, City of Bakersfield, or City of Arvin recreational areas or facilities within 0.5 mile of Segment 2.

Segment 3
There are no recreational areas or facilities within 0.5 mile of Segment 3. The LPNF is located over 1.25 miles west of Segment 3 and approximately 4 miles west of the Gorman substation.

Segment 4
There are no recreational areas or facilities within 0.5 mile of Segment 4.

Segment 5
There are no recreational areas or facilities within 0.5 mile of Segment 5. The Brite Lake and Brite Valley Aquatic Recreation Area, located in Tehachapi Valley Recreation and Park District, are approximately 3 miles east of the Banducci substation.

3.16.2 Applicable Regulations, Policies and Standards

Federal, state, and local regulations were reviewed for applicability to the Proposed Project.

Federal Regulations, Policies and Standards

Los Padres National Forest Land Management Plan
The Los Padres National Forest Land Management Plan describes the strategic direction at the broad program-level for managing the national forest and its resources. The management strategies are consistent with the concept of adaptive management and sustainable resource use. The Plan's program tiers from National Strategic Plan Goals, including the following goals for recreational use:

- Goal 3.1 – Provide for Public Use and Natural Resource Protection
- REC 1 – Recreation Opportunity – Manage National Forest Land to achieve *recreation opportunity spectrum* (ROS) classes

Sequoia National Forest, Draft Revised Land Management Plan
Under the National Forest Management Act, all national forests managed by the U.S. Forest Service are required to have a land management plan. The Revised Draft Land Management Plan for the Sequoia National Forest (SNF) is the principal document that identifies long-term desired conditions and general directions for making strategic decisions for the SNF. The plan guides where and under what conditions an activity or project on SNF lands can proceed. The SNF ensures that any project or management activity complies with the plan.

State Regulations, Policies, and Standards

Fort Tejon State Historic Park General Plan
The Fort Tejon State Historic Park General Plan contains resource management policies and objectives for the long-term management and development of the Fort Tejon State Historic Park. The General Plan addresses the Park's cultural, natural, aesthetic, and recreational resources, interpretation of those resources, land use, facility development, general operation, and coordination with other public and private entities (California State Parks, 1989). The General Plan includes a relevant policy regarding recreational resources, which includes providing for recreational opportunities that are complementary to resource values.

Local Regulations, Policies, and Standards

The CPUC has sole and exclusive State jurisdiction over the siting and design of the Proposed Project because it authorizes the construction, operation, and maintenance of investor-owned public utility facilities. Pursuant to GO 131-D section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters." Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the counties' and cities' regulations are not applicable as the counties and cities do not have jurisdiction over the Proposed Project. Accordingly, the following discussion of local land use laws, regulations, and policies is provided for informational purposes only.

Kern County Parks and Recreation Master Plan

The County of Kern Parks and Recreation Master Plan does not contain any goals, policies, or implementation measures relevant to the analysis of recreation for the Proposed Project.

Kern County General Plan

The Kern County General Plan contains goals, policies, or implementation measures relevant to the analysis of recreation for the Proposed Project, including the following:

- Provide recreation opportunities for all citizens of Kern County while avoiding duplication between jurisdictions.

Los Angeles County General Plan, Parks and Recreation Element

The Los Angeles County General Plan Conservation and Natural Resources Element guides the long-term conservation of natural resources and preservation of available open space areas. The Conservation and Natural Resources Element contains a number of goals and policies relevant to the analysis of recreation for the Proposed Project, including the following:

Policies

- Ensure that County parks and recreational facilities are clean, safe, inviting, usable and accessible.

City of Bakersfield Metropolitan General Plan

The Open Space Element of the City of Bakersfield Metropolitan General Plan establishes regulations aimed to protect the Kern River (City of Bakersfield, 2002). The following goals and policies are relevant to the analysis of recreation for the Proposed Project.

Goals

- Conserve and enhance the unique aspects of open space within the planning area
- Locate and site development to minimize disruption of open space areas

Policies

- Promote the establishment, maintenance, and protection of the planning area's open space resources, including the following:

  - Outdoor recreation
    - Parks
    - Kern River corridor
- Development location and siting should be sensitive to its relationship to the Kern River

City of Arvin General Plan, Conservation and Open Space Element
The Conservation and Open Space Element outlines the goals, policies, and implementation measures for the preservation and management of biological and cultural resources, soils, minerals, energy, air quality, and open space (City of Arvin, 2019).

Goals

- Promote the preservation of open space in the area for important non-renewable and renewable resources.

3.16.3 Applicant Proposed Measures

SCE has proposed measures to reduce environmental impacts. The significance of the impact is first considered prior to application of applicant proposed measures (APMs) and a significance determination is made. The implementation of the APMs is then considered as part of the Proposed Project when determining whether impacts would be significant and thus would require mitigation. These APMs would be incorporated as part of any CPUC project approval, and SCE would be required to adhere to the APMs as well as any identified mitigation measures. The APMs are included in the MMRP for the Proposed Project, and the implementation of the measures would be monitored and documented in the same manner as mitigation measures. There are no applicant proposed measures (APMs) that would apply for potential recreation impacts.

3.16.4 Environmental Analysis

Summary of Impacts

Table 3.16-1 presents a summary of the CEQA significance criteria and impacts on recreation that would occur during the construction and operation and maintenance (O&M) phases of the Proposed Project.

Table 3.16-1 Summary of Proposed Project Impacts to Recreation

Would the proposed project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) 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?	☐	☒	☐	☐
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

Impact Discussion

a) 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?

The Proposed Project involves construction and operation and maintenance of a 66 kV subtransmission line, which would replace an existing subtransmission line. The existing 66 kV power line provides power to a portion of unincorporated Kern County, the city of Tehachapi, and the surrounding communities. The infrastructure also has the ability to provide power to communities directly served from the existing Gorman and Frazier Park substations, as needed. The Proposed Project would not provide service to any new users or area. The Proposed Project would not directly or indirectly induce population growth, as discussed in Section 3.14 Population and Housing. Therefore, the Proposed Project would not increase the use of existing neighborhood and regional parks or other recreational facilities. The impact on recreational access and physical deterioration of recreational facilities that may result from construction and operation and maintenance of the subtransmission line is discussed below.

Construction

The Proposed Project crosses the SNF, the LPNF, and Fort Tejon State Historic Park. The northern portion of Segment 1 intersects the SNF, and Segment 2 intersects the LPNF and Fort Tejon State Historic Park. There are no developed recreational facilities or trails in the vicinity of the Proposed Project alignment, except for the Fort Tejon State Historic Park. During conductor removal and installation activities within the Fort Tejon State Park parking lot, access to the Fort Tejon State Historic Park's parking lot and pedestrian traffic through the area would be restricted for public safety. The parking lot restriction would last approximately two days and would be coordinated with park staff. Given the proximity of the park to I-5, and that conductor removal and installation activities across highways generally occur during nighttime hours, the limitation of access to the park may occur during the time the park is closed. However, should construction activities occur during daytime activities at the Fort Tejon State Historic Park, the

impact on recreational access and the recreational facility could be significant. In addition, the construction activities have the potential to damage the pavement within the parking lot, which is a potentially significant impact from physical deterioration of the facility. Mitigation Measure Recreation-1 would reduce impacts on recreational access and from physical deterioration by requiring close coordination with Fort Tejon State Park prior to construction activities, advance public notification of any impacts on parking lot or park access, and restoration of the parking areas impacted by construction. Impacts from physical deterioration of parks would be less than significant with mitigation.

Operation and Maintenance

Operation and maintenance of the Proposed Project would not increase use of any recreational facilities because operation and maintenance of the Proposed Project would not create any permanent employment opportunities and would not increase the population of the area (refer to Section 3.14 Population and Housing). Inspection and maintenance activities would continue to be conducted annually, as similar to the inspection and maintenance activities for the existing subtransmission line. The inspection and maintenance activities would not cause physical deterioration of any recreational facility due to the short duration and low intensity of maintenance activities on an annual basis. Impacts would be less than significant. No mitigation is required.

Required APMs and MMs: MM Recreation-1

Mitigation Measures

Mitigation Measure Recreation-1: Fort Tejon State Park
SCE shall notify the Fort Tejon State Park of the location, timing, and duration of all construction activities within the Fort Tejon State Park parking area at least 60 days prior to construction in the area. SCE shall also post notices within the parking area at least 14 days prior to planned construction activities. The notices shall notify the location, date, and time of any impacted access to the parking area and potential alternative parking locations. During construction within the Fort Tejon State Park parking area, SCE shall utilize flaggers to maintain safe vehicle and pedestrian access to the parking area to the extent feasible. SCE shall photo document the existing condition of all work areas within the Fort Tejon State Park parking area. SCE shall repair any damage to pavement or other facilities within the Fort Tejon State Park parking area to pre-construction conditions. SCE shall photo document the post-construction conditions of the parking area after construction is complete.
Applicable Locations: Fort Tejon State Park and parking area.
Performance Standards and Timing: **Before construction:** Notification of recreationists and State Park. Notification of State Park 60 days prior to construction; notification of public 14 days prior to construction. **During construction:** N/A **After construction:** Repair of any damage to the parking area to match pre-construction conditions; provide photographs pre- and post-construction.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

The Proposed Project does not include the construction or expansion of any recreational facilities. As discussed in Section 3.14 Population and Housing, the Proposed Project would not create any permanent sources of employment and would not result in a population increase. As a result, there would be no adverse physical effect on the environment from the construction of new, or expansion of existing, recreational facilities. The Proposed Project would replace or modifying existing facilities and would not create any indirect demand for new or expanded recreational facilities. Therefore, no impact would occur.

Required APMs and MMs: None required.

3.16.5 References

California Department of Parks and Recreation. (1989). *Fort Tejon State Historic Park General Plan.* Retrieved September 11, 2023, from https://www.parks.ca.gov/?page_id=24357

California Department of Parks and Recreation. (2022, May 4). *Statistical Report 2018/2019 Fiscal Year.* Retrieved September 11, 2023, from https://www.parks.ca.gov/?page_id=23308

California State Parks. (1989, March). Fort Tejon State Historic Park General Plan.

City of Arvin. (2019, February). Open Space Element. In *City of Arvin General Plan.*

City of Bakersfield. (2002, December). Open Space Element. In *Metropolitan Bakersfield General Plan* (pp. 120-123).

City of Bakersfield. (2022, April 14). *Bakersfield Recreation & Parks Master Plan Fact Sheet.* Retrieved September 11, 2023, from https://www.bakersfieldcity.us/1049/Recreation-Parks-Master-Plan

GreenInfo Network. (2022). CPAD_2022b_Holdings. *California Protected Areas Database*. Retrieved from https://www.calands.org

Kern County Department of Parks and Recreation. (2010, May). *Parks and Recreation Master Plan.* Retrieved September 11, 2023, from https://www.kerncounty.com/government/parks/how-do-i/learn-about-the-county-parks-division

U.S. Forest Service. (2019). *Revised Draft Land Management Plan for the Sequoia National Forest.* Retrieved September 11, 2023, from https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd640156.pdf

U.S. Forest Service. (2022, June). *Land Management Plan for the Sequoia National Forest Pre-objection Version.* Retrieved September 11, 2023, from https://www.fs.usda.gov/project/?project=3375

USDA Forest Service. (2007, April). *Welcome to Los Padres National Forest! Informational Brochure.* Retrieved September 11, 2023, from https://www.fs.usda.gov/detail/lpnf/recreation/?cid=stelprdb5097646

USDA Forest Service. (n.d.). *Lower Kern River*. Retrieved May 11, 2022, from https://www.fs.usda.gov/recarea/sequoia/recarea/?recid=79573

USDA Forest Service. (n.d.). *Recreation Opportunity Spectrum (ROS).* Retrieved September 11, 2023, from https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fsm9_027593.pdf

USDA Forest Service, Natural Resource Manager. (2019). *National Visitor Use Monitoring Results [Data set]*, 5.3.0.0. Retrieved September 11, 2023, from Natural Resource Manager: https://apps.fs.usda.gov/nvum/results/A05007.aspx/FY2019

3.17 Transportation

This section presents the environmental setting and impact analysis for transportation resulting from the Proposed Project. This section addresses the existing transportation system in the Proposed Project area, applicable regulations, environmental impacts, and mitigation measures to reduce and avoid significant effects.

3.17.1 Environmental Setting

Existing Roadways and Transportation Network

The Proposed Project is located in unincorporated Kern and Los Angeles counties, and in the cities of Arvin and Bakersfield. The regional circulation system in the vicinity of the Proposed Project comprises interstate highways, state highways, and county and local roadways. Figure 3.17-1 shows the regional roadway and highway network along the Proposed Project alignment. Interstate and state highways in proximity to the Proposed Project include Interstate 5 (I-5) and California State Route (SR) 58, SR 178, and SR 223. Table 3.17-2 lists the *annual average daily traffic* (AADT) volumes for roadways that may be used to access the Proposed Project. The roadways are adjacent or intersect the Proposed Project. Table 3.17-1 lists the AADT volumes for Caltrans highways that would be used to access the Proposed Project.

Table 3.17-1 Existing Highways

Roadway	Jurisdiction/ownership	Number of lanes	Traffic volume (annual average daily traffic [AADT])
Segment 1			
SR 178	Caltrans	2	3,850–69,000
SR 58	Caltrans	4	570–6,400
SR 223	Caltrans	2	180-920
Edison Highway	Kern County	2	228–2,525
Segment 2			
I-5	Caltrans	8	2,050–9,200
Staging areas			
SR 178	Caltrans	2	3,850 –69,000

Table 3.17-2 Existing Roadways

Roadway	Jurisdiction/ownership	Number of lanes	Traffic volume (annual average daily traffic [AADT])
Segment 1			
Breckenridge Road	Kern County	2	173
Towerline Road	Kern County	2	409–1,239
Muller Road	Kern County	2	N/A
Hermosa Road	Kern County	2	323
Panama Road	Kern County	2	688
Di Giorgio Road	Kern County	2	662
Buena Vista Boulevard	Kern County	2	712
Russell Avenue	Kern County	2	369
Sunset Boulevard	Kern County	2	985
Landers Road	Kern County	2	nil
Richardson Road	Kern County	2	nil
Widmere Road	Kern County	2	nil
East Sycamore Road	Kern County	2	376
Millux Road	Kern County	2	31
Mountain View Road	Kern County	2	1,420
Segment 2			
Kenmar Lane	Kern County	2	75
Kenmar Road	Kern County	2	nil
Comanche Point Road	Kern County	2	132
Tejon Park Drive	Kern County	2	nil
Sweet Cherry Lane	Kern County	2	nil
Grasshopper Lane	Kern County	2	nil
David Road	Kern County	2	2,894
Sebastian Road	Kern County	2	631
Rancho Road	Kern County	2	1,340–1,985
Laval Road	Kern County	2	5,316
Edmonstron Plan Pumping Road	Kern County	2	nil

Roadway	Jurisdiction/ownership	Number of lanes	Traffic volume (annual average daily traffic [AADT])
Digier Road	Kern County	2	76
Lebec Road	Kern County	2	494
Lebec Oaks Road	Kern County	2	nil
Fort Tejon Road	Kern County	2	nil
Segment 3			
Bear Trap Road	Kern County	2	nil
Segment 4			
Comanche Point Road	Kern County	2	nil
Badger Court	Kern County	2	nil
Quail Drive	Kern County	2	nil
Jacks Hill Drive	Kern County	2	nil
Antler Way	Kern County	2	nil
Elkhorn Place	Kern County	2	nil
Angus Court	Kern County	2	nil
Longhorn Lane	Kern County	2	nil
Segment 5			
Birkdale Court	Kern County	2	nil
St. Andrews Drive	Kern County	2	nil
Banducci Road	Kern County	2	970–4,210
Stallion Springs Drive	Kern County	2	nil
Edward Street	Kern County	2	nil
Pellisier Road	Kern County	2	2,840
Staging Areas			
Comanche Point Road	Kern County	2	132
Crane Canyon Road	Kern County	1	N/A

Source: (MS2, n.d.)

Air Traffic

Four private and public airports are located within 10 miles of the Proposed Project, as shown in Table 3.17-3 (Kern County 2012; U.S. DOT, FAA 2021). The private airports in proximity to

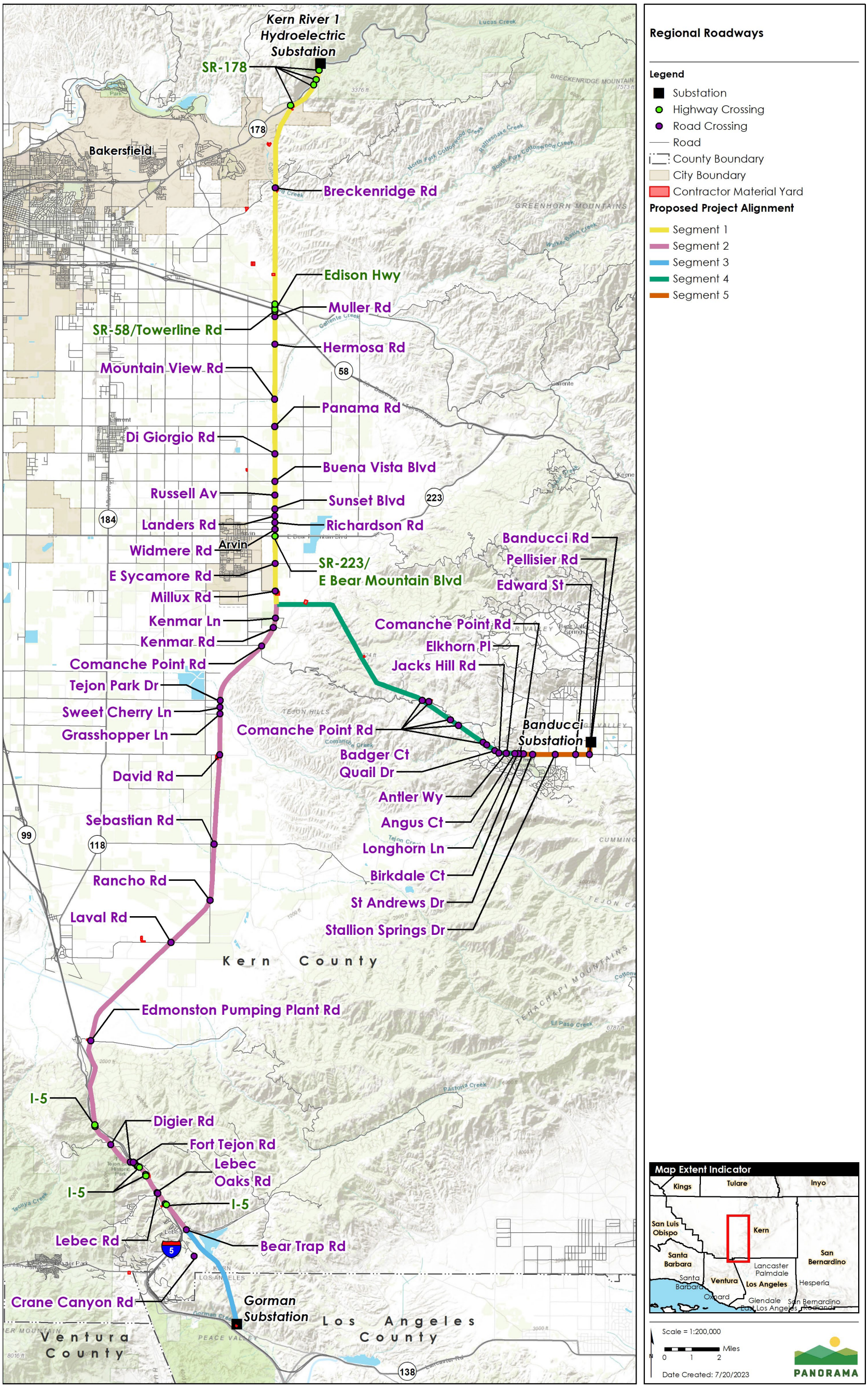
the Proposed Project are primarily used for agricultural operations, and the landing strips consist of single, paved runways.

Table 3.17-3 Existing Airports

Airport name	Location	Distance from Proposed Project (miles)
Kern Medical Center (public)	City of Bakersfield	9.1
Creekside (private)	City of Arvin	6.7
Paradise Lakes (private)	City of Arvin	6.9
Tehachapi Municipal Airport (public)	Kern County	9.4
Quail Lake Sky Park (private)	Los Angeles County	5.6

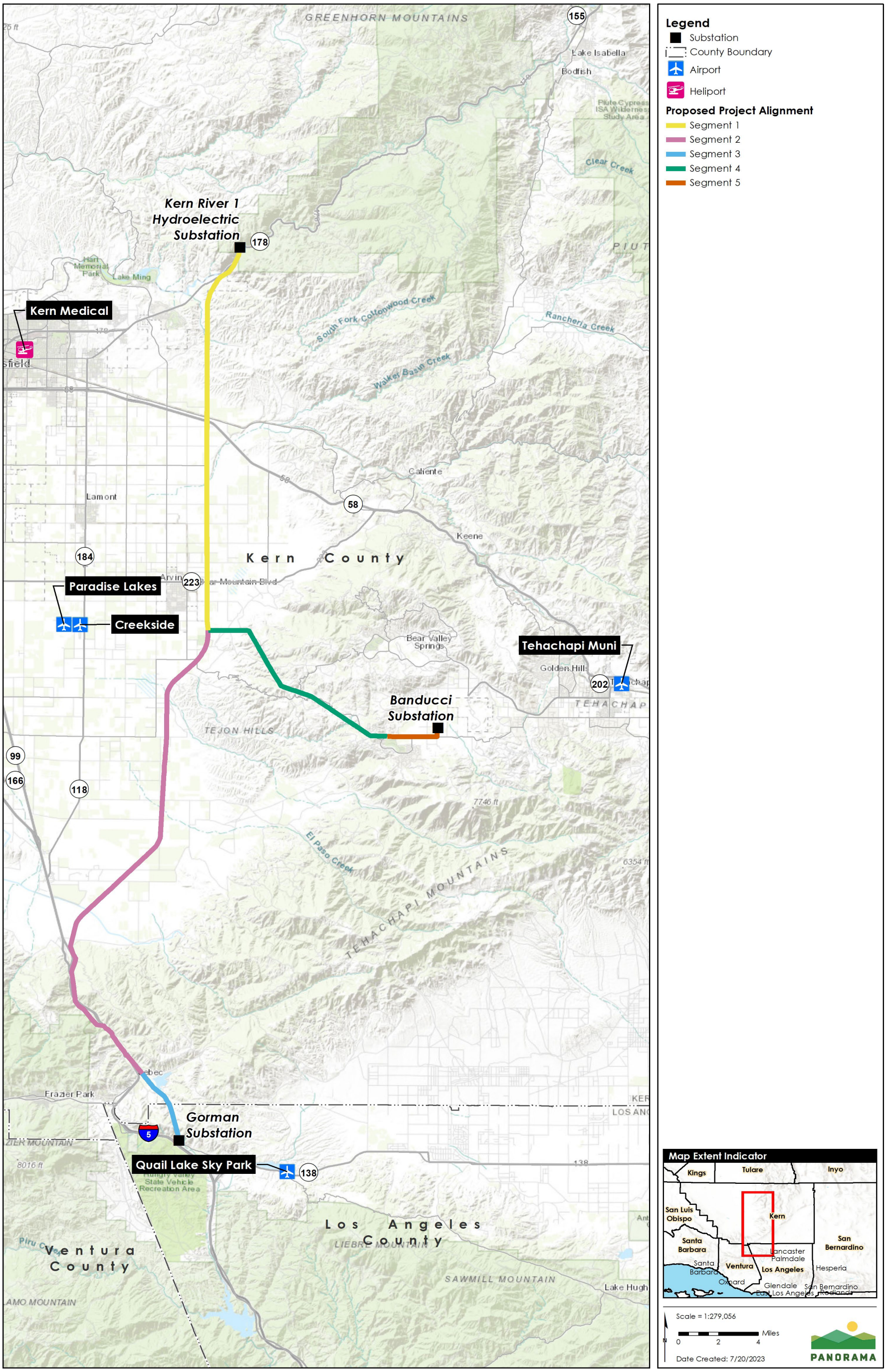
Source: (U.S. Department of Transportation, Federal Aviation Administration-Aeronautical Information Services. 2021)

Figure 3.17-1 Regional Roadway Network



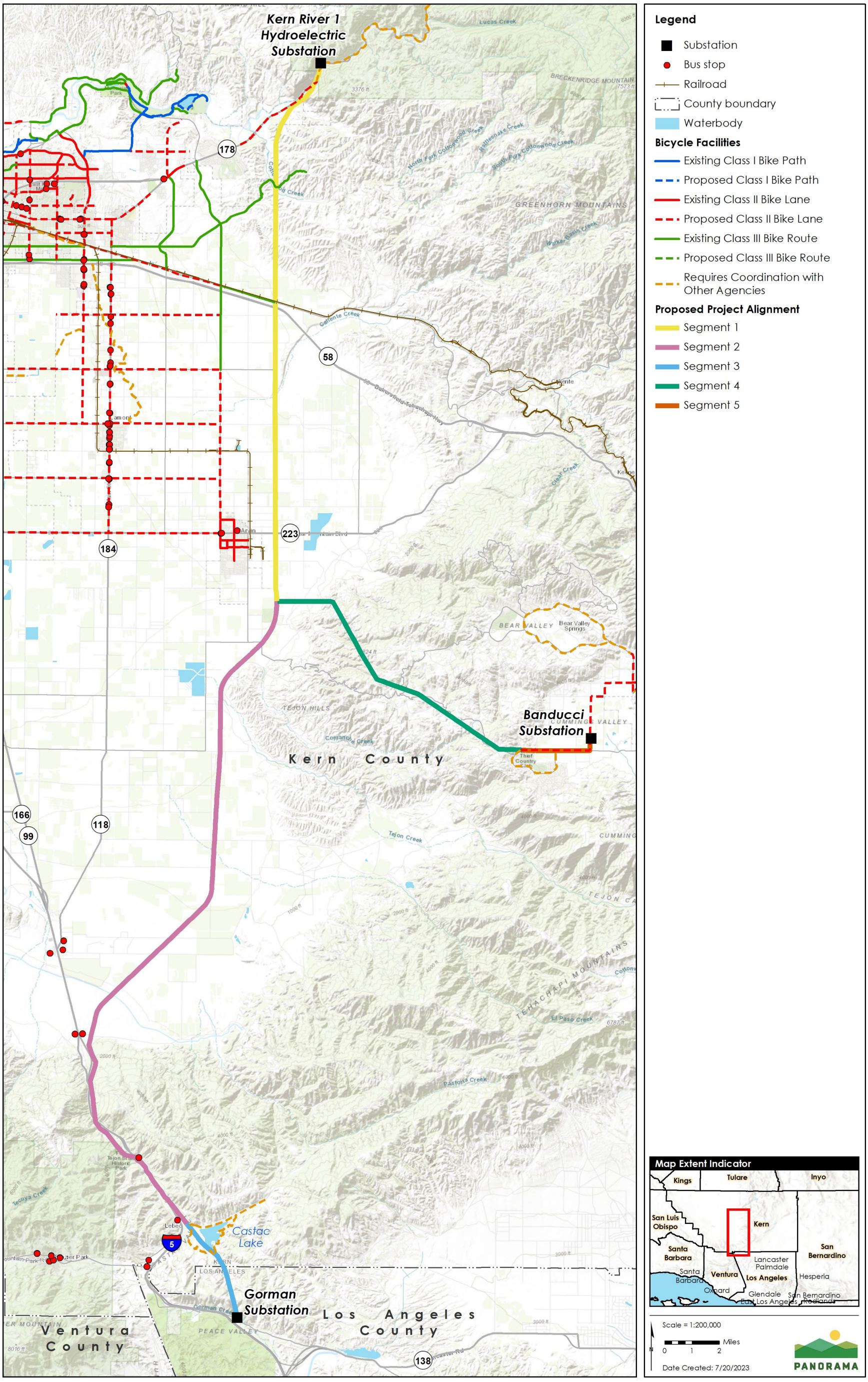
Source: (Kern County Department of Public Works 2018)

Figure 3.17-2 Airport Facilities



Source: (U.S. Department of Transportation, Federal Aviation Administration-Aeronautical Information Services. 2021)

Figure 3.17-3 Bicycle Routes, Public Transit, and Railroads



Source: (Kern County GIS 2018; Kern Transit, n.d.)

This page is intentionally left blank.

Bicycle Facilities

Bicycle routes in Kern County are identified in the Kern County Bicycle Master Plan and Complete Streets Recommendation (Kern County 2012a). The Kern County Bicycle Master Plan and Complete Streets Recommendation classifies bicycle facilities as follows:

- Class I: Bike paths are paved right-of-way for exclusive use by bicyclists, pedestrians, and those using non-motorized modes of travel. They are physically separated from vehicular traffic and can be constructed in roadway right-of-way or exclusive right-of-way.
- Class II: Bike lanes are defined by pavement striping and signage used to allocate a portion of a roadway for exclusive or preferential bicycle travel. Bike lanes are one-way facilities on either side of a roadway.
- Class III: Bike routes provide shared use with motor vehicle traffic within the same travel lane. Designated by signage and/or on-street shared lane markings. Bike routes are typically used on roads with low speeds and traffic volumes but may be used on higher volume roads with wide outside lanes or shoulders.

Class II and Class III bicycle facilities along roadways within the Proposed Project area are listed in Table 3.17-1. There are no Class I bicycle facilities in the vicinity of the Proposed Project alignment. Within Segment 1 of the Proposed Project, a Class II bicycle lane is located along SR 178, which intersects the alignment near the Kern River Hydroelectric Substation. A Class III bicycle facility, located along Breckenridge Road, intersects Segment 1 northeast of the City of Bakersfield. Class II bicycle facilities are proposed along Banducci Road and Pellister Road and would parallel nearly all of Segment 5 and approximately 300 feet of Segment 4 of the Proposed Project. Three proposed bicycle routes located around Castaic Lake, and along Kern Canyon Road, Stallion Springs Drive, and Comanche Point Road are outside of Kern County's jurisdiction and would require coordination with other agencies for development.

Los Angeles County has developed County of Los Angeles Bicycle Master Plan, which guides the development and maintenance of the bicycle network within the county (County of Los Angeles Department of Public Works 2012). The plan identifies 144 miles of existing bikeways and proposes the installation of approximately 831 miles of new bikeways. There are no existing or proposed bicycle facilities in Los Angeles County that are within the vicinity of the Proposed Project.

Public Transit

Public transportation in Kern County is provided by Kern Transit, which offers twelve bus routes throughout the County. Dial-a-ride bus service is available to all riders within seven designated service areas in the communities of Bakersfield, Frazier Park, Kern River Valley, Lamont, Mojave, Rosamond, and Tehachapi (Kern Transit, n.d.). The bus routes that intersect the Proposed Project alignment include Kern Transit Route 100, 130, and 150 (Kern Transit 2023a; 2023b; 2023c). Kern Transit Route 100 (Bakersfield–Lancaster) uses SR 58, which crosses Segment 1 of the Proposed Project. Kern Transit Route 130 (Santa Clarita–Bakersfield) parallels portions of Segments 2 and 3 of the Proposed Project, in the vicinity of the communities of

Lebec and Grapevine. Route 130 extends into the City of Santa Clarita in Los Angeles County, approximately 37 miles south of the Gorman substation. Kern Transit Route 150 (Lake Isabella–Bakersfield) travels SR 178, which crosses Segment 1 of the Proposed Project. There are no public transit services available within the vicinity of the Proposed Project in Los Angeles County aside from Kern Transit Route 130. Operating hours for the Kern Transit bus routes are listed in Table 3.17-4.

Table 3.17-4 Bus Routes and Frequencies

Bus Route	Roadways traveled	Frequency	Hours of operation
100	SR 58	Runs six times daily (weekdays) Runs three times daily (weekends)	3:25 a.m. – 11:13 p.m. (weekdays) 3:55 a.m. – 8:01 p.m. (weekends)
130	I-5, SR 99, SR 223	Runs three times daily (weekdays) Runs two times daily (Saturday)	4:35 a.m.–9:40 p.m. (weekdays) 7:00 a.m.– 8:18 p.m. (Saturday)
150	SR 178	Runs four times daily (weekdays) Runs four times daily (Saturday) Runs three times daily (Sunday	6:00 a.m.–7:18 p.m. (weekdays) 6:00 a.m.–7:18 p.m. (Saturday) 6:45 a.m.–7:15 p.m. (Sunday)

Source: (Kern Transit 2023a; 2023b; 2023c)

Railroads

There are two freight railroads in the vicinity of the Proposed Project, as shown in Figure 3.17-3. The San Joaquin Valley Railroad extends from northeastern Bakersfield to the city of Arvin. The San Joaquin Valley Railroad is located approximately 0.5 mile west of Segment 2 of the Proposed Project. The Proposed Project alignment spans the Union Pacific Railroad (UPRR) track in northeastern Bakersfield adjacent its intersection with SR 58 along Segment 1.

The California High Speed Rail System aims to develop 800 miles of high-speed railway throughout California. The proposed California High Speed Rail System's Bakersfield–Palmdale segment would parallel the UPRR track where it intersects Segment 1 of the Proposed Project alignment. The Bakersfield–Palmdale segment Final Environmental Impact Report was approved in August 2021 (California High-Speed Rail Authority 2021). Construction for the Bakersfield–Palmdale segment is expected to start in 2024 and be complete in 2029 (California High-Speed Rail Authority 2023).

Pedestrian Circulation

Pedestrian facilities include sidewalks, crosswalks, corner ramps, signalized intersections/ pedestrian signals, and traffic calming pedestrian-friendly streetscapes. Due to the rural

location of the Proposed Project, there are no dedicated pedestrian facilities in the vicinity of the Proposed Project.

3.17.2 Applicable Regulations, Policies and Standards

Federal Regulations, Policies, and Standards

Federal Aviation Administration

The Federal Aviation Administration (FAA), an agency that is part of the U.S. Department of Transportation (USDOT), is responsible for regulating civil aviation, including the oversight of air traffic and aeronautical obstructions. All airports and navigable airspace not administered by the U.S. Department of Defense are under the jurisdiction of the FAA. The FAA requires applicants to submit a Notice of Proposed Construction or Alteration and receive approval prior to ground disturbance associated with a project. Title 14 Section 77.13 states that an aviation obstruction would be created if any equipment is positioned such that it would be more than 200 feet above the ground or would exceed an imaginary surface extending outward and upward from applicable airport runways at the following slopes: 100:1 within 20,000 feet, 50:1 within 10,000 feet, and 25:1 within 5,000 feet. The FAA also poses restrictions on helicopter flights carrying external loads in congested areas.[1] Helicopter flights with external loads in congested areas require submittal of a Congested Area Plan to the FAA (14 CFR part 133.33).

Federal Railroad Administration

The Federal Railroad Administration (FRA) is an agency within the USDOT that is responsible for regulating railroad safety and development. In California, the CPUC Railroad Operations and Safety Branch (ROSB) has the regulatory authority to oversee rail safety within California, including the enforcement of state and federal laws, regulations, orders, and directives regarding rail transportation in California. The CPUC is required to consult with the FRA when performing duties related to railroad safety.

State Regulations, Policies, and Standards

Caltrans

Interstate highways are governed by the Federal Highway Administration (FHWA) and the USDOT. They provide research, technical assistance, standards, and financial assistance to state and local agencies for the design, construction, and maintenance of roads.

The California Streets and Highways Code section 70-8 assigns responsibility for meeting or exceeding the FHWA guidelines to the California Transportation Commission and, thereby, to the California Department of Transportation (Caltrans).

[1] The term *congested area* refers to a city, town, or open-air assembly of people.

The Division of Transportation Planning within Caltrans is primarily responsible for the maintenance, development, and support of transportation facilities within the state. However, the Division of Transportation Planning partners with counties and cities in planning, managing, and maintaining the transportation system.

All work on or over Caltrans facilities would require coordination with the Caltrans District 6 (Kern County) and District 7 (Los Angeles County) offices, issuance of an encroachment permit, and approval of traffic control plans based on the 2014 (or latest) California Manual on Uniform Traffic Control Devices.

Local Regulations, Policies and Standards

The CPUC has sole and exclusive State jurisdiction over the siting and design of the Proposed Project because it authorizes the construction, operation, and maintenance of investor-owned public utility facilities. Pursuant to GO 131-D section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters." Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the counties' and cities' regulations are not applicable as the counties and cities do not have jurisdiction over the Proposed Project. Accordingly, the following discussion of local land use laws, regulations, and policies is provided for informational purposes only.

Kern County General Plan

The Kern County General Plan and Circulation Element provides planning tools for achieving transportation goals and policies throughout Kern County (Kern County Planning Department 2009). The following goals and implementation measures are included in the General Plan:

- Maintain a minimum Level of Service (LOS) D.
- Coordinate and cooperate with airport operators, the County Department of Airports, the California Department of Transportation, Division of Aeronautics, affected cities, Edwards Air Force Base, NAWS China Lake and the Department of Defense on the ALUCP, review of land use applications, public education and encroachment issues.

Los Angeles County General Plan

The Los Angeles County General Plan Mobility Element provides an overview of transportation infrastructure and strategies for developing the transportation network in Los Angeles County (Los Angeles County Department of Regional Planning 2015). The Mobility Element includes two sub-elements: the Highway Plan and Bicycle Master Plan. These sub-elements establish policies for roadway and bikeway systems in unincorporated areas of Los Angeles County. The following policies in the General Plan Mobility Element are applicable to the Proposed Project:

- Policy M 4.14: Coordinate with Caltrans on mobility and land use decisions that may affect state transportation facilities.

- Policy M 4.8: Provide and maintain appropriate signage for streets, roads and transit.

City of Bakersfield Metropolitan General Plan
The City of Bakersfield Metropolitan General Plan identifies circulation needs and issues within the City of Bakersfield and establishes goals, objectives, and policies based on the total circulation needs of the community. The following goals and policies are applicable to the Proposed Project:

- Provide a safe and efficient street system that links all parts of the area for movement of people and goods.
- Provide for safe and efficient motorized, non-motorized, and pedestrian traffic movement.
- Minimize the impact of truck traffic on circulation, and on noise sensitive land uses.
- Continue designation and signage of specific streets as official truck routes within incorporated areas (1-13}.
- Prohibit trucks from non-truck routes within incorporated areas except as necessary for direct property access for pick-up and delivery (1-13).

City of Arvin General Plan
The City of Arvin General Plan contains regulations pertaining to transportation that would be applicable to the Proposed Project. The following goal is applicable to the Proposed Project:

- Provide safe and convenient access for pedestrians and bicyclists to, across, and along major transit priority streets. Prohibit projects that impede or make difficult bicycle and pedestrian access or that block through access on existing or potential bicycle and pedestrian routes.

3.17.3 Applicant Proposed Measures.

SCE has proposed measures to reduce environmental impacts. The significance of the impact is first considered prior to application of *applicant proposed measures* (APMs), and a significance determination is made. The implementation of the APMs is then considered as part of the Proposed Project when determining whether impacts would be significant and thus would require mitigation. These APMs would be incorporated as part of any CPUC project approval, and SCE would be required to adhere to the APMs as well as any identified mitigation measures. The APMs are included in the MMRP for the Proposed Project, and the implementation of the measures would be monitored and documented in the same manner as mitigation measures. The APMs that are applicable to the transportation analysis are provided in Table 3.17-5.

Table 3.17-5 Applicant Proposed Measures

APM	Requirements
TRA-1	SCE will implement traffic control measures consistent with those published in the Manual on Uniform Traffic Control Devices, as written and amended by Caltrans for the state of California (CA MUTCD) and using standard templates from the California Temporary Traffic Control Handbook (CATTCH) (California Inter-Utility Coordinating Committee 2018). These measures will be implemented as and where necessary as described in the CA MUTCD and/or CATTCH, or in ministerial permits.
TRA-2	Prior to construction, SCE will consult with the FAA regarding helicopter flight plans that will take place during construction. This consultation will include, but not be limited to: • Providing locations of helicopter construction staging and work areas. • Establishing designated flight corridors between staging and work areas • Means to ensure external load operations avoid occupied structures and roadways. • Locations of traffic control where external load operations will cross public roadways. • Locations where Congested Area Plans may be required for filing with the FAA. • Identifying any flight restrictions recommended/required by the FAA. The results of this coordination will be provided to the CPUC.
TRA-3	Where the proposed project work area encroaches upon a public right-of-way and reduces the existing pedestrian path of travel to less than 48 inches wide, alternate pedestrian routing will be provided during construction activities.

3.17.4 Environmental Analysis

Summary of Impacts

Table 3.17-6 presents a summary of the CEQA significance criteria and impacts on transportation that would occur during construction, operation, and maintenance of the Proposed Project.

Table 3.17-6 Summary of Proposed Project Impacts to Transportation

Would the proposed project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	☐	☒	☐	☐
b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?	☐	☐	☒	☐
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☒	☐	☐
d) Result in inadequate emergency access)?	☐	☒	☐	☐

Impact Discussion

a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Construction

Vehicle Trips and Access Routes

Project construction would generate additional vehicle travel on roadways from construction worker vehicles and truck trips associated with the delivery of equipment and materials and removal of excavated material and waste. Construction activities would include the movement of light, medium, and heavy-duty vehicles along I-5, state routes, and county- and city-maintained roadways. Project-related vehicles and equipment would generally travel from staging areas or contractor yards to work sites daily. Construction is scheduled to begin in June 2026 and last approximately 23 months. Construction would generate approximately 250 vehicle trips per day. Applicable policies and plans regarding vehicle trips and roadway circulation are presented in Table 3.17-7. During peak construction, vehicles would be dispersed through the regional road network because access to each work area would be provided from different access roads. Therefore, the short-term additional vehicle trips generated by construction activities would not be significant. Temporary closure of traffic lanes or roads would be required during installation or removal of structures located adjacent roadways and installation of overhead wire. Temporary lane and road closures could affect motor vehicle circulation during construction activities. APM TRA-1 requires the implementation of traffic control measures and a traffic control plan in accordance with the California Manual on Uniform Traffic Control Devices (CA MUTCD) and the California Temporary Traffic Control Handbook (CATTCH) (California Inter-Utility Coordinating Committee 2018). Implementation of traffic control measures would minimize disruptions to the road network during

construction. As analyzed in Table 3.17-7, the Proposed Project would not conflict with policies for safe and efficient streets. The impact would be less than significant. No mitigation is required.

Road, Bicycle, and Pedestrian Route Closures

Temporary lane, road, and bicycle route closures would occur on Proposed Project roadways during construction. The closures would be temporary and short-term, and access would be restored after construction. There are no pedestrian facilities within the vicinity of the Proposed Project alignment. While encountering pedestrian facilities is not anticipated, APM TRA-3 requires SCE to provide alternate pedestrian routes during construction where the Proposed Project reduces existing pedestrian pathways to less than 48 inches wide. As specified in APM TRA-1, a traffic control plan would be developed and implemented to include elements that would reduce impacts from lane, road, and bicycle route closures during construction.

Transit Network

Kern Transit Routes 100, 130, and 150 cross the Proposed Project alignment. Construction of the Proposed Project would require temporary lane and road closures that could result in temporary transit delays and reduce transit access where lane and road closures occur along the bus routes. The temporary transit delays and reduced transit access would be considered a significant impact on transit. As detailed in the Project Description, APM TRA-1 requires the implementation of a traffic control plan and measures in accordance with the CA MUTCD and CATTCH. While APM TRA-1 would reduce impacts on transit operations, temporary closures of bus stops or changes to bus routing would still result in a significant impact. Mitigation Measure Transportation 1 requires notification to Kern Transit at least 60 days prior to any bus stop closure or road closures that could affect bus routes. Because SCE would comply with APM TRA-1, which requires implementation of a traffic control plan and traffic control measures, and Mitigation Measure Transportation 1, which requires advance notification to Kern Transit for closures of any bus stops or detours a result of construction, the impact from conflict with transit operations would be less than significant with mitigation.

Railroad Network

The Proposed Project spans the UPRR and San Joaquin Valley Railroad tracks as well as the Bakersfield–Palmdale segment of the proposed High Speed Rail System. Conductor stringing that would occur across the railroad tracks could interfere with railroad operations, resulting in a significant impact. CPUC's General Order 26-D governs clearances for overhead structures on railroads, as discussed in Table 3.17-7. SCE would be required to comply with the clearance requirements specific in General Order 26-D. In accordance with APM TRA-1, SCE would implement railroad traffic control measures outlined in Section 8 of the CA MUTCD. Impacts would be less than significant.

Operation and Maintenance

The Proposed Project would replace the existing subtransmission line directly adjacent the Proposed Project. The Proposed Project would replace the existing structures with new structures, or the existing structures would be reused and/or modified to support the

installation of OPGW. The frequency of inspection and maintenance of the Proposed Project would be consistent with existing activities. Because the Proposed Project alignment would be directly adjacent the existing subtransmission line, the Proposed Project would not create any new conflicts with operation of roadways, bicycle routes, pedestrian facilities, or transit routes. Lane or road closures may be required for maintenance activities, as similar to maintenance of the existing subtransmission line. Maintenance activities that require lane, road, or bicycle route closures would implement traffic control measures in accordance with TRA-1. There are no pedestrian facilities in the vicinity of the Proposed Project that would be impacted by operation and maintenance activities. Operation and maintenance activities could occur along Kern Transit bus routes and across railways. While maintenance activities that conflict with bus routes and railroads would be infrequent and temporary, conflict could occur that would result in a significant impact. Mitigation Measure Transportation-1 would require the notification of local jurisdictions prior to any maintenance activities that would conflict with transit operations. The use of regional roadways by workers and heavy trucks during operation and maintenance would not conflict with any program, plan, ordinance, or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities. Therefore, the impact would be less than significant.

Plan, Program, and Policy Consistency Analysis

The Proposed Project is located within the city of Bakersfield, city of Arvin, and unincorporated Kern and Los Angeles counties. Bike and public transit routes occur within the vicinity of alignment. Programs, plans, policies, and ordinances that are applicable to the circulation systems in the Proposed Project area include the following:

- Los Angeles County General Plan
- Kern County General Plan
- City of Bakersfield General Plan
- City of Arvin General Plan

Table 3.17-7 lists the local transportation programs and plans and their associated policies relevant to the circulation system along the Proposed Project alignment along with an analysis of possible conflicts resulting from the construction, operation, and maintenance of the Proposed Project.

Table 3.17-7 Applicable Transportation Programs, Plans, and Policies

Local transportation program or plan	Policy	Analysis
Kern County General Plan	Coordinate and cooperate with airport operators, the County Department of Airports, the California Department of Transportation, Division of Aeronautics, affected cities, Edwards Air Force Base, NAWS China Lake and the Department of Defense on the ALUCP, review of land use applications, public education and encroachment issues.	During Proposed Project construction, SCE would coordinate with the FAA regarding helicopter flight plans. SCE would also coordinate with local jurisdictions and Caltrans to obtain encroachment permits for lane or roadway closures. The Proposed Project is not within the vicinity of the Edwards Air Force Base or NAWS China Lake. The Proposed Project would be consistent with the policy.
Los Angeles County General Plan	Coordinate with Caltrans on mobility and land use decisions that may affect state transportation facilities	SCE would coordinate with Caltrans to obtain encroachment permits and for the timing of lane and road closures. SCE would also consult with Caltrans to secure necessary permits to install and remove conductors and install OPGW and remove ground wire where the alignment crosses highways. The Proposed Project is consistent with the policy.
	Provide and maintain appropriate signage for streets, roads, and transit.	In accordance with APM TRA-1, SCE would install appropriate traffic control devices, including signage, during construction consistent with CATTCH and CA MUTCD. The Proposed Project is consistent with the policy.
City of Bakersfield	Provide a safe and efficient street system that links all parts of the area for movement of people and goods	The Proposed Project would require bicycle route, lane, and road closures for overhead cable removal and installation activities. APM TRA-1 requires the implementation of a traffic control plan and traffic control measures in accordance with CA MUTCD and CATTCH to reduce hazards to the street system from temporary bicycle route, lane, and road closures. There are no dedicated pedestrian facilities in the vicinity of the Proposed Project. Therefore, the Proposed Project would not create a hazard to pedestrians. The Proposed Project is consistent with the policy.

Local transportation program or plan	Policy	Analysis
	Provide for safe and efficient, motorized, non-motorized, and pedestrian traffic movement	The Proposed Project would require bicycle route, lane, and road closures for overhead cable removal and installation activities. APM TRA-1 requires the implementation of a traffic control plan and traffic control measures in accordance with CA MUTCD and CATTCH to reduce hazards to the street system from temporary bicycle route, lane, and road closures. There are no dedicated pedestrian facilities in the vicinity of the Proposed Project. However, if the Proposed Project reduces the existing pedestrian path of travel to less than 48 inches wide, TRA-3 requires alternate pedestrian routing during construction activities. The Proposed Project is consistent with the policy.
	Minimize the impact of truck traffic on circulation, and on noise sensitive land uses	The Proposed Project would generate approximately 250 truck trips daily during construction. The truck trips would be dispersed throughout the regional road network. The truck trips would be temporary and limited to one area at a time along the alignment for a short duration. SCM TRA-1 would implement traffic control measures in accordance with CA MUTCD and CATTCH to minimize the impact of construction traffic on circulation. SCE would perform routine maintenance on the subtransmission line. The Proposed Project would not generate new truck traffic during operation and maintenance activities. The Proposed Project would not conflict with this policy.
	Prohibit trucks from non-truck routes within incorporated areas except as necessary for direct property access for pick-up and delivery.	Trucks would be prohibited from non-truck routes within the City of Bakersfield, to the extent feasible. Trucks would require the use of non-truck routes for the delivery of materials and equipment to work areas along the Proposed Project alignment. The Proposed Project would not conflict with this policy.

Local transportation program or plan	Policy	Analysis
City of Arvin	Provide safe and convenient access for pedestrians and bicyclists to, across, and along major transit priority streets. Prohibit projects that impeded or make difficult bicycle and pedestrian access or that block through access on existing or potential bicycle and pedestrian routes.	There are no dedicated pedestrian facilities in the vicinity of the Proposed Project. However, if the Proposed Project reduces the existing pedestrian path of travel to less than 48 inches wide, TRA-3 requires alternate pedestrian routing during construction activities.
CPUC General Order No. 26-D	The minimum overhead clearance above railroad and street railroad tracks, which are used or proposed to be used for transporting freight cars, shall be twenty-two (22) feet six (6) inches. Structures constructed prior to the effective date of this order may be maintained at such clearances as was lawful at the time of construction.	The Proposed Project would be designed to meet the vertical clearance requirements for railroads. The Proposed Project would not conflict with this policy.

Required APMs and MMs: APM TRA-1, MM Transportation - 1

Mitigation Measure

Mitigation Measure Transportation-1: Transit Notification
Notification shall be given to the relevant local transit agency no less than 60 days prior to construction within 20 feet of any bus stop or detours of any bus route. The notification shall include the following: The location and timing of construction activities within proximity to the bus stop The location and timing of road closures along the bus route(s) and proposed detours The affected bus route(s) and bus stop(s) Name and contact information for a responsible individual who can address any questions and meet with the transit agency to resolve any conflicts with bus operations
Applicable locations: Project areas that could affect bus routes
Performance Standards and Timing: **Before construction:** Local transit agency is notified no less than 30 days before construction. **During construction:** Signs are posted at affected bus stops no less than 7 days before closures. **After construction:** N/A

b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?

Construction

CEQA Guidelines section 15064.3(b) identifies *vehicle miles traveled* (VMT) as the most appropriate measurement of transportation impacts. VMT measures the amount and distance a vehicle travels to and from a project. Higher VMT indicates increases in greenhouse gas emissions, poorer air quality, and potential collisions with other vehicles and wildlife. Increases in VMT also negatively impact other road users (e.g., pedestrians, transit users, bicyclists) (OPR 2018). In accordance with the *Technical Advisory on Evaluating Transportation Impacts in CEQA,*

section 21099 of the Public Resources Code states that the criteria for determining the significance of transportation impacts must promote 1) reduction of GHG emissions; 2) development of multimodal transportation networks; and 3) a diversity of land uses. Per CEQA Guidelines Section 15043.3(b.3):

> If existing models or methods are not available to estimate the vehicle miles traveled for the particular project being considered, a lead agency may analyze the project's vehicle miles traveled qualitatively. Such a qualitative analysis would evaluate factors such as the availability of transit, proximity to other destinations, etc. For many projects, a qualitative analysis of construction traffic may be appropriate.

In accordance with CEQA Guidelines section 15043.3(b.3), a qualitative analysis of construction traffic would be appropriate for the Proposed Project. The Proposed Project would generate temporary vehicle trips during construction. As discussed in Chapter 2, Project Description (Section 2.4.15 Construction Traffic), construction crews would be transported to and from construction work areas in construction vehicles or helicopters. Temporary workers needed for construction are expected to reside in Kern County and Los Angeles communities adjacent the Proposed Project alignment, including the city of Bakersfield and the city of Alvin. Workers are not expected to commute for long distances to reach the Proposed Project area because they would be residing in areas along the Proposed Project alignment.

Construction of the Proposed Project would generate a daily VMT of 1,598 for worker vehicles. VMT created by construction of the Proposed Project would be temporary. Construction of the Proposed Project would not generate any permanent VMT, and there would be no net increase in VMT once construction is complete. The impact would be less than significant. No mitigation is required.

Operation and Maintenance

The Proposed Project would be unattended, and operation of the subtransmission line would not generate VMT. SCE maintenance and inspection activities would be substantially the same in intensity, frequency, duration, and type as existing maintenance and inspections activities for the existing subtransmission line. Because the Proposed Project would not result in any new or increased VMT relative to the existing substransmission line, the Proposed Project would not conflict with CEQA Guidelines section 15064.3 subdivision (b), and the impact would be less than significant.

Required APMs and MMs: None required.

c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

Construction

Conductor Stringing

The Proposed Project would involve conductor stringing across roads, railroads, and highways along the alignments. Activities that pose a risk of falling objects would occur overhead of public and private roadways, residential properties, driveways, parking lot entrances, and parks. Conductor stringing across roadways during construction could cause a hazard to vehicles, pedestrians, and bicyclists in the area. Hazards to trains could occur where conductor stringing would occur across railroads. The Proposed Project would temporarily increase hazards in these areas during construction as helicopters carrying loads and stringing conductor could drop materials on the road during work.

APM TRA-1 requires SCE to implement traffic control measures consistent with the CA MUTCD and CATTCH, where necessary. A traffic control plan would be developed in accordance with APM TRA-1, which would include traffic control measures such as positioning flaggers or installing signage to minimize hazards during conductor stringing. If access to private driveways must be temporarily closed during construction activities, SCE would coordinate the timing of such activities with the affected property owners. SCE would consult with the FAA to develop helicopter flight plans that would include measures to ensure load operations avoid occupied structures and roadways and identify locations of traffic control where external load operations would cross public roadways. Implementation of helicopter flight plans would reduce hazards from helicopter use during construction.

As discussed above, conductor stringing across railroads would be conducted in accordance with CPUC's General Order 26-D which details the required overhead and side clearances for railroads. Mitigation Measure Transportation-2 requires SCE to coordinate with railroad companies for construction activities that would impact railroad operations. Compliance with General Order 26-D and implementation of Mitigation Measure Transportation 2 would reduce hazards to trains from conductor stringing. Impacts would be less than significant. No mitigation is required.

Road and Lane Closures

Overhead cable removal and installation activities would require temporary road and lane closures. The circulation system could be disrupted from lane closures during construction activities, including pedestrian pathway and bikeway closures, which would temporarily increase traffic hazards. The increased traffic hazard from lane closures may be significant. However, in accordance with APM TRA-1, SCE would be required to implement traffic control measures consistent with the CA MUTCD and the CATTCH. Hazards from temporary lane and road closures would be less than significant.

Road Damage
The use of heavy construction equipment could damage the surface of roadways adjacent staging areas, where there would be a higher volume of heavy construction vehicle entry and exit. Damage to roadways would create a road hazard should the damaged area not be repaired, which would result in a significant impact. Mitigation Measure Transportation-2 requires SCE to assess road conditions adjacent staging areas before construction and to repair any damages caused by the Proposed Project no more than 30 days after activities in the staging area are complete. If any damage creates a substantial transportation hazard, the damages must be adequately marked and repaired within 48 hours. Impacts from roadways damage would be less than significant with implementation of Mitigation Measure Transportation 3. The impact would be less than significant with implementation of Mitigation Measure Transportation-3.

Helicopter
Construction of the Proposed Project would require the use of light, medium, and heavy helicopters to reach construction areas with limited access. Helicopters would be used for the duration of construction activities (i.e., dropping of construction crew members and materials, assembling and lifting structure sections, and dropping off and pickup conductor and conductor pull rope). Any of the Proposed Project staging yards could potentially be used as helicopter fly yards. Refer to Section 2.4.2 of Chapter 2: Project Description for further details on helicopter use and access.

The use of helicopters for up to 2 years could impact air traffic patterns. Helicopters would be carrying loads over congested areas, which could increase safety risks, causing a significant impact. APM TRA-2 requires SCE to consult with the FAA regarding helicopter flight plans that would take place during construction. The consultation with the FAA would include establishing flight corridors between staging and work areas, identifying locations where Congested Area Plans may be required and any flight restrictions recommended/required by the FAA, and determining locations of traffic control where external load operations would cross public roadways. Impacts to air traffic would be less than significant. No mitigation is required.

Operation and Maintenance

The Proposed Project would not involve changes to public roadway design. The presence of the overhead transmission line would not create any hazards to vehicles, pedestrians, or bicyclists. Inspection or maintenance activities for the Proposed Project would be similar to existing conditions. Operation and maintenance of the Proposed Project would not increase hazards to bicyclists or pedestrians. All substation improvements would occur within the existing fenced substation yard and off of area roads; therefore, the substation improvements would not increase traffic hazards. Operation and maintenance activities for the proposed project would be similar as those conducted for the existing facilities.

Helicopters would be utilized during operation and maintenance activities for transporting workers, delivery of equipment and materials to work sites, structure placement, hardwater installation, and conductor and OPGW stringing operations. Helicopter flights for inspection of

the Proposed Project facilities would not impact the volume of air traffic or air traffic safety in the area. SCE would be required to consult with the FAA regarding helicopter flight plans for operation and maintenance activities, in accordance with APM TRA-2. Impacts would be less than significant. No mitigation is required.

Required APMs and MMs: APM TRA-1, APM TRA-2, MM Transportation– 2

Mitigation Measure

Mitigation Measure Transportation- 2 Roadway Damage
SCE shall conduct a Pre-Construction Road Condition Assessment along roadways adjacent to all staging areas to document any existing roadway damage to the asphalt or concrete curbs. SCE shall submit photos and coordinates of any existing roadway damage to the CPUC, Caltrans, and Kern County no less than 30 days prior to construction. If roadways adjacent to staging areas are damaged by construction activities, the damaged area(s) shall be documented and repaired no more than 60 days following construction activities. If the damage could cause a substantial transportation hazard, the location shall be marked appropriately and repaired within 48 hours. Any roadway damages shall be repaired to pre-project conditions and following applicable Caltrans and Kern County repair standards.
Applicable Locations: Public roadways where construction would occur
Performance standards and timing: **Before construction:** Existing roadway damages are assessed and SCE submits documentation to the CPUC, Caltrans, and Kern County no less than 30 days prior to construction. **During construction**: Any roadway damage that could cause a substantial traffic hazard is marked and repaired within 48 hours. **After construction:** Any roadway damage that would not cause a substantial traffic hazard is repaired no more than 60 days after construction.

d) Result in inadequate emergency access?

Construction

Construction of the Proposed Project would require overhead cable removal and installation activities across roadways. These roadways would require temporary lane and road closures during stringing to reduce potential hazards to vehicle traffic. The temporary closure of roadways could restrict emergency access, which may result in significant impacts. APM TRA-1 requires the preparation and implementation of a traffic control plan that would include traffic control measures for emergency vehicle access, such as emergency-vehicle traffic control signals and traffic detours. Mitigation Measure Transportation-3 requires SCE to notify local emergency service providers before construction and provide them with key information identifying where lane closures and detour routes could occur, including the approximate timing of construction activities that may impact traffic and emergency access. Impacts on emergency access would be less than significant with implementation of Mitigation Measure Transportation-4. The impact would be less than significant with mitigation.

Operation and Maintenance

Temporary road and lane closures may occur during operation and maintenance activities that could restrict emergency vehicle access, including activities such as repairing conductors, replacing structures and towers, and conducting emergency repairs. Operation and maintenance activities for the proposed project would be similar to those conducted for the existing facilities. APM TRA-1 requires SCE to implement traffic control measures in accordance with CATTCH and CA MUTCD. Additionally, Mitigation Measure Transportation-4 would require SCE to notify local emergency service providers at least one week prior to any lane or road closures. Impacts would be less than significant with mitigation.

Required APMs and MMs: APM TRA-1, MM Transportation– 3

Mitigation Measure

Mitigation Measure Transportation- 3 Notify Emergency Personnel of Road Closures.
SCE shall notify local emergency personnel (i.e., fire departments, police departments, ambulance, and paramedic services) at least 1 week prior to lane or road closures. The notice shall include location(s), date(s), time(s), and duration of closure(s) and a contact number for SCE Project personnel.
Applicable locations: All Project areas
Performance standards and timing: **Before construction**: Notify emergency service providers of lane closures and detour routes no less than 1 week before any lane or road closures. **During construction:** N/A **After construction:** N/A

3.17.5 References

California High-Speed Rail Authority. 2021. "Final Environmental Impact Report/Environmental Impact Statement (EIR/EIS) for the Bakersfield to Palmdale Section of the California High-Speed Rail (HSR) Project." Bakersfield to Palmdale. Available: https://hsr.ca.gov/programs/environmental-planning/project-section-environmental-documents-tier-2/.

———. 2023. "2023 Project Update Report." https://hsr.ca.gov/about/project-update-reports/2023-project-update-report/.

California Inter-Utility Coordinating Committee. 2018. "California Temporary Traffic Control Handbook 7th Edition." Available: https://www.sce.com/sites/default/files/inline-files/tcm.pdf.

County of Los Angeles Department of Public Works. 2012. "County of Los Angeles Bicycle Master Plan Final Plan." Available: https://pw.lacounty.gov/tpp/bmp/.

Governor's Office of Planning and Research (OPR). 2018. "Technical Advisory on Evaluting Transportation Impacts in CEQA."

Kern County. 2012a. "Kern County Bicycle Master Plan and Complete Streets Recommendations." Volume 1: Bicycle Master Plan. Bicycle Master Plan. Available: https://www.kerncog.org/bicycle-plans/.

———. 2012b. "Airport Land Use Compatibility Plan."
Kern County GIS. 2018. "Bike Transportation." Kern County GIS. https://services5.arcgis.com/Y8jwjGUWbRjuqpG5/arcgis/rest/services/Bike_Transportation/FeatureServer.
Kern County Planning Department. 2009. "Kern County General Plan." Bakersfield, CA. Available.
Kern Transit. 2023a. "Route 100–250: Southeast Kern." https://kerntransit.org/routes-and-schedules/.
———. 2023b. "Route 130: Frazier Park Area Santa Clarita." https://kerntransit.org/routes-and-schedules/.
———. 2023c. "Route 150–220–227: Kern River Vallley." https://kerntransit.org/routes-and-schedules/.
———. n.d. "Routes and Schedules." https://kerntransit.org/.
Los Angeles County Department of Regional Planning. 2015. "Los Angeles County 2035 General Plan." Available: https://planning.lacounty.gov/long-range-planning/general-plan/.
MS2. n.d. "Traffic Count Database System (TCDS)." https://kerncog.public.ms2soft.com/tcds/tsearch.asp?loc=Kerncog&mod=TCDS.
U.S. Department of Transportation, Federal Aviation Administration-Aeronautical Information Services. 2021. "Airports." Feature Service. Point digital data. Using Arc GIS (6/15/2023). https://services6.arcgis.com/ssFJjBXIUyZDrSYZ/arcgis/rest/services/US_Airport/FeatureServer/0.

3.18 Tribal Cultural Resources

This section presents the environmental setting and impacts on tribal cultural resources resulting from implementation of the Proposed Project. This section includes existing tribal cultural resource information present in the Proposed Project area, applicable regulations, environmental impacts, and mitigation measures to reduce or avoid significant effects.

3.18.1 Definitions

Tribal Cultural Resources

Assembly Bill (AB) 52, enacted in September 2014, recognizes that California Native American tribes have expertise with regards to their tribal history and practices. The bill established a new category of cultural resources known as *tribal cultural resources* to consider tribal cultural values when determining impacts on cultural resources. CEQA now requires an analysis of impacts on tribal cultural resources to consider Native American tribes' knowledge and concerns. *Tribal cultural resources* is defined as follows under PRC §21074(a):

1. Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
   a. Included or determined to be eligible for inclusion in the CRHR; or
2. Included in a local register of historical resources as defined in PRC §5020.1(k).
   i. A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in PRC §5024.1(c). In applying the criteria set forth in PRC §5024.1(c), the lead agency shall consider the significance of the resource to a California Native American tribe.
   ii. A cultural landscape that meets the criteria of PRC §21074(a) is also a tribal cultural resource if the landscape is geographically defined in terms of the size and scope.
   iii. A historical resource as described in PRC §21084.1, a unique archaeological resource as defined in PRC §21083.2, or a non-unique archaeological resource as defined in PRC §21083.2 may also be a tribal cultural resource if it meets the criteria of PRC §21074(a).

3.18.2 Environmental Setting

Regional Setting

Ethnography

The *area of potential effect/area of potential impact* (APE/API) is located within the shared/transitional ethnographic territory of the Yokut, Kitanemuk, Kawaiisu, Interior/Emigdio Chumash, and Tatavium groups of Native Americans. The following section briefly summarizes characteristics of each group.

Yokuts

Portions of the Proposed Project alignment runs parallel to the ancestral territory for Yokuts, specifically Southern Valley Yokuts (Yowlumne) (Material Culture Consulting [2021] 2019). The Yokuts population have historically inhabited the San Joaquin Valley as well as the lower Sierra Nevada foothills and are usually divided into three large general groups—Northern Valley, Southern Valley, and Foothills—that comprise approximately sixty tribelets (Moratto 1984). Southern Valley Yokuts are stated to traditionally occupy the areas within Kern, Buena Vista, and Tulare Lakes, along with some rivers that originate from the southern Sierra Nevada Mountain range (Latta 1949; Monastero, Lloyd, and Armstrong 2014; Pearce et al. 2016). There are more than 40 autonomous, linguistically related triblets, with the Yokuts languages part of the Penutian family of languages (Harvey 2011). At the time of European contact, it is believed at least 15 different Yokut groups inhabited the southern San Joaquin Valley (Kroeber [1925] 1976). Known villages of the southern Valley Yokuts include their central village, known as *Woilu*, geographically overlapping downtown Bakersfield, and *Wawcoye*, located on the Rio Bravo Ranch property (Latta 1949). Yokuts lived in high-ground, permanent villages and practiced a mixed subsistence strategy based on fishing, hunting, and gathering (Wallace 1978; Moratto 1984; Harvey 2011). Yokut basketry is highly developed and is distinguished by the coiled jar-like vessel with flat shoulder and constricted or re-flaring neck commonly referred to as a "Tulare bottleneck". Pottery work is sporadic, with some regions making pottery and others with limited or no information regarding pottery. Social organization appears centered in moiety-based unilineal kin groups (Kroeber [1925] 1976). Tribal groups that surrounded the Yokuts often engaged in socialization, trade, intermarriage, and conflict, with a long history of trade and interaction between Yokuts and the Kawaiisu tribe (Latta 1949; Orfila 2011; Pearce et al. 2016). Warfare, both internal and with neighboring tribes, appears infrequent, with the Yokuts being described as "on the whole a peaceable people".

Kitanemuk

The Kitanemuk are Takic language speakers, part of the Northern Uto-Aztecan linguistic family (Blackburn and Sturtevant 1978; Shipley 1978; Moratto 1984; Harvey 2011). The Kitanemuk population have historically inhabited portions of the Tehachapi Mountains and the southwestern portion of the Mojave Desert/Antelope Valley, beginning with the proto-historic period. Consensus suggests the mountains have been the primary occupation areas, with the desert region utilized on a seasonal basis (Kroeber [1925] 1976; Blackburn and Sturtevant 1978; Sutton 1980) (Kroeber 1976; Blackburn and Bean 1978; Sutton 1980). It has also been suggested that the Kitanemuk have occupied lower elevation canyons in the western foothills of the Tehachapi Mountains as compared with the Kawaiisu, who have occupied higher elevations to the northeast. However, it should be stated that settlement patterns of the pre-contact Kitanemuk are not fully understood (Material Culture Consulting [2021] 2019).

Based on the known ethnographic data, it has been suggested the historic Kitanemuk subsistence pattern was based mostly on gathering, with minimal mammal hunting and a settlement pattern comprising semi-permanent villages located within the mountain region and small seasonal sites used for exploitation of specific resources. Acorn and pinyon harvest, along

with seed, berry, root, and shoot collection were central in the Kitanemuk's subsistence strategy (Underwood and Cleland 2002). Large game, primarily deer, mountain sheep, and antelope, were hunted with bow and arrow while smaller game was trapped. The Kitanemuk have historically had a complex social organization. Two known villages of the Kitanemuk include Hihi keave, on Caliente Creek, and Na-kwalki-ve, located at the confluence of Chanac and Tejon creeks. The Kitanemuk have collectively been referred to as "Tejon Indians" along with other native people from the Tejon Ranch area. Known archaeological data suggests that, starting about BP 300, the territorial base of the Kitanemuk moved from Antelope Valley to the Tehachapi Mountains although reasons are currently undetermined (Sutton 1980).

Kawaiisu

The Kawaiisu are part of the Numic-speaking branch of the Uto-Aztecan, with their population occupying the southern Sierra Nevada, south of the Kern River; the northern Tehachapi Mountains, south of the Tehachapi Pass; and portions of the western Mojave Desert (Orfila 2011). It is believed that the Kawaiisu migrated out of the Mojave Desert sometime before contact and settled within the Tehachapi Mountains while still claiming the western Mojave Desert region (Zigmond 1986; Macko et al. 1993; Sutton 1996). Higher elevations to the south of the Tehachapi Valley have been noted as a boundary between the Kawaiisu and Kitanemuk, with a system of seasonal rounds throughout the Tehachapi Mountain valleys into the Antelope and San Joaquin valleys and permanent winter settlements at lower elevations (Macko et al. 1993). Winter homes made with willow poles covered with brush and mats of bark or tule, earth-covered sweat houses, and circular brush enclosures are some of the structures observed among the Kawaiisu settlements (Mason et al. 2001).

Chumash

At the time of European contact in 1542, the Chumash population inhabited an area of California that stretched from the coast to its inland extensions and the four northern Channel Islands. Eight distinct groups make up the Chumash population, with the interior Chumash inhabiting portions of the APE/API south of the Southern Valley Yokuts (Hudson and Blackburn 1984). The interior Chumash can be further divided into three groups—Emigdio, Castac, and Cuyam—with the APE/API straddling between the Emgidio and Castac Chumash (Grant 1978; Harvey 2011). Archaeological and historical data is sparse concerning the interior Chumash population compared to the wealth of knowledge on the coastal and island Chumash, due to few regional surveys and fewer intensive excavations documented; however, recent research is beginning to rectify this paucity of knowledge (Bernard 2008; Robinson 2006).

Loose affiliation between towns and villages was achieved through political ties, ritual and ceremonial practices, and extensive trade relationships (McLendon and Johnson 1999; Arnold 2001). Coastal and island groups subsisted mostly on marine resources such as fish, shellfish, and marine mammals, in addition to terrestrial flora and fauna. In comparison, inland groups' subsistence strategies were based on localized terrestrial foods while still engaging in frequent trips to the coastal region for food, trade, and socialization. *Olivella* species beads were a highly valuable trading commodity within the Chumash region and beyond; their presence has been documented within the Proposed Project's boundary. Historical accounts characterized

Chumash culture with hereditary inequality, high population density, regional village hierarchy and some religious integration. However, this form of culture is considered a later development starting within the Middle period (2600 BP to 1885 BP) to the Late period (700 BP to AD 1782) and did not crystallize until the latter period of Chumash history, forming during the time referred to as the Middle period, approximately 2600 BP to 850 BP (Arnold 2001; Bernard 2008).

Within the APE/API's boundary, the known geographical groups are Emigdiano and Castac Chumash. The Castac Chumash are considered the smallest of the interior Chumash population, with known occupation around Castac Lake and the Tejon Pass up to the mouth of the Grapevine Canyon (*Cañada de las Uvas*). Few historic village names are known within this region and what information is known of these villages comes after secularization of the area. The Emigdiano Chumash are believed to have occupied the mountains and north-flowing streams and drainages that extend from the San Emigdio Mountains, bordering the Castac Lake on the east. There is ethnographic research that places Emigdiano Chumash villages 2.9 miles south of the state park at Castac Lake and north within the Grapevine Creek region. Ethnographic data is limited for both groups, but knowledge of basic elements of daily life, material culture and ritual activities demonstrate an overall similarity between Chumash groups and some similarity with Kitanemuk culture (Bernard 2008).

Tataviam

Minimal information is known of the Tataviam. Located south of the Kitanemuk, the Tataviam spoke a language of the Takic family of Uto-Aztecan, which was closely related to the Serrano and to a lesser degree the Luiseño (Underwood and Cleland 2002). It has been suggested that the core territory of the tribe is north of the Los Angeles metropolitan area, overlapping the western part of the Angeles National Forest and including the northwest portion of Los Angeles County and parts of Ventura County (King and Blackburn 1978; BioSystems Analysis, Inc 1989; Johnson and Earle 1990). The Tataviam may have also inhabited the La Liebre area during the historic period (King et al. 1974; Sutton 1980; Johnson and Earle 1990). Based on mortuary data in the region, Tataviam possibly held only portions of the foothills and valley floors near Palmdale during the late prehistoric period (Sutton 1980). However, the precise extent of their territory has not been determined and the overlapping geographic area of the Castac Alliklik and Tatviam is known as the Castac/Alliklik/Tataviam problem (Bernard 2008).

One Tataviam site, Bowers Cave, located between present-day Newhall and Piru, is located approximately 4.9 miles south of the Gorman Substation. Bowers Cave contained ritual objects that appear to be identical to historically described Chumash ritual objects, leading evidence that the Tataviam participated in Chumash ceremonies (Harvey 2011). Due to their location within the mountains, it is likely that the Tataviam relied heavily on yucca (*Yucca whipplei*) as a major resource, as well as exploiting similar plant and animal resources like their neighbors (King and Blackburn 1978; Harvey 2011; Switalksi and Larkin 2013) . The Tataviam were early victims of the Mission system, one of the first group of Native American recruited, with almost complete extinction by the mid-1800s and the few survivors being absorbed into larger Native

American groups either at the mission or in the Tejon region (King and Blackburn 1978; Biosystems Analysis 1989; Switalski and Larkin 2013).

Native American Coordination

Overview

SCE and the CPUC contacted the Native American Heritage Commission (NAHC) and local Native American tribes in an effort to obtain information on tribal cultural resources in the Proposed Project area.

SCE Coordination

On January 23, 2020, a Sacred Lands File (SLF) search was requested within the Proposed Project area and was submitted to the Native American Heritage Commission (NAHC). On February 13, 2020, the NAHC responded stating that there are no Native American tribal cultural resources recorded in the NAHC Sacred Lands file within a 0.5-mile radius of the Proposed Project area. Along with the response, the NAHC enclosed a list of 26 local Native American individuals and/or organizations that might have further knowledge of cultural resources within or near the Proposed Project. Records of SCE's written correspondence and phone notes are provided in Appendix E of their PEA.

CPUC Coordination

The CPUC contacted the NAHC for an updated list of local Native American tribal groups on August 27, 2021. The NAHC responded to CPUC's request on October 4, 2021, and provided an updated contact list for the Proposed Project area identifying the tribes listed in Table 3.18-1 as affiliated with the geographic region (see Appendix E for a copy of the NAHC response and initial outreach letters).

On January 11, 2022, the CPUC sent letters to the tribes identified by the NAHC to notify the tribe that SCE had filed an application for the Proposed Project, request the tribes' response if they wished to consult with the CPUC on the Proposed Project in the future, and establish initial lines of communication.

Table 3.18-1 Tribes Contacted During Native American Coordination

Tribes	CPUC outreach	Tribal response
Big Pine Paiute Tribe of the Owens Valley	Pre-consultation notice issued on 1/11/22; Follow-up on 1/27/22	None
Chumash Council of Bakersfield	Pre-consultation notice issued on 1/11/22; Follow-up on 1/27/22	None
Coastal Band of Chumash Nation	Pre-consultation notice issued on 1/11/22; Follow-up on 1/27/22	None
Fernandeno Tataviam Band of Mission Indians	Pre-consultation notice issued on 1/11/22; Follow-up on 1/27/22	Email received 1/27/22 requesting additional consultation

Tribes	CPUC outreach	Tribal response
Gabrieleno Band of Mission Indians – Kizh Nation	Pre-consultation notice issued on 2/7/22; Follow-up on 2/21/22	None
Kern Valley Indian Community	Pre-consultation notice issued on 1/11/22; Follow-up on 1/27/22	None
Kitanemuk & Yowlumne Tejon Indians	Pre-consultation notice issued on 1/11/22; Follow-up on 1/27/22	None
Morongo Band of Mission Indians	Pre-consultation notice issued on 2/7/22; Follow-up on 2/21/22	None
Quechan Tribe of the Fort Yuma Reservation	Pre-consultation notice issued on 1/11/22	No/Denied further consultation (email 1/21/22)
San Fernando Band of Mission Indians	Pre-consultation notice issued on 1/11/22; Follow-up on 1/27/22	No/Denied further consultation (email 1/27/22)
San Manuel Band of Mission Indians	Pre-consultation notice issued on 1/11/22	No/Denied further consultation (email 1/19/22)
Santa Ynez Band of Chumash Indians	Pre-consultation notice issued on 1/11/22; Follow-up on 1/27/22	None
Tejon Indian Tribe	Pre-consultation notice issued on 1/11/22	No/Denied further pre-consultation (email 1/24/22)
Tubatulabals of Kern Valley	Pre-consultation notice issued on 1/11/22; Follow-up on 1/27/22	None
Tule River Indian Tribe	Pre-consultation notice issued on 1/11/22; Follow-up on 1/27/22	None
Twenty-Nine Palms Band of Mission Indians	Pre-consultation notice issued on 2/7/22; Follow-up on 2/21/22	None

3.18.3 Applicable Regulations, Policies and Standards

Federal Regulations, Policies, and Standards

There are no federal regulations applicable to tribal cultural resources.

State Regulations, Policies and Standards

Native American Heritage Commission

Public Resources Code (PRC) Section 5097.91 established the Native American Heritage Commission (NAHC), the duties of which include inventorying places of religious or social significance to Native Americans and identifying known graves and cemeteries of Native Americans on private lands. Section 5097.98 of the Public Resource Code specifies a protocol to be followed when the NAHC receives notification of a discovery of Native American human remains from a county coroner.

Assembly Bill 52

AB 52 amended PRC Section 5097.94 and added PRC Sections 21073, 21074, 21080.3.1, 21080.3.2, 21082.3, 21083.09, 21084.2, and 21084.3. AB 52 established that tribal cultural resources must be considered under CEQA and provided for additional Native American consultation requirements for the lead agency. PRC Section 21074 describes a tribal cultural resource as a site, feature, place, cultural landscape, sacred place, or object that is considered of cultural value to a California Native American tribe. A tribal cultural resource meets either of the following criteria:

- On the California Register of Historical Resources or a local historic register or eligible for the California Register of Historical Resources or a local historic register.
- A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in PRC Section 5024.1(c).

AB 52 formalizes the lead agency–tribal consultation process, requiring the lead agency to initiate consultation with California Native American groups that are traditionally and culturally affiliated with a project site, including tribes that may not be federally recognized. Lead agencies are required to begin consultation prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report for a proposed project. Section 1(a)(9) of AB 52 establishes that "a substantial adverse change to a tribal cultural resource has a significant effect on the environment." Effects on tribal cultural resources should be considered under CEQA. Section 6 of AB 52 adds Section 21080.3.2 to the PRC, which states that parties may propose mitigation measures "capable of avoiding or substantially lessening potential significant impacts to a tribal cultural resource or alternatives that would avoid significant impacts to a tribal cultural resource." Further, if a California Native American tribe requests consultation regarding project alternatives, mitigation measures, or significant effects to tribal cultural resources, the consultation must include those topics (PRC § 21080.3.2(a)). The environmental document and the mitigation monitoring and reporting program (where applicable) must include any mitigation measures that are adopted (PRC Section 21082.3(a)).

Senate Bill 18

Senate Bill 18 (SB 18) (Statutes of 2004, Chapter 905), which went into effect January 1, 2005, requires local governments (city and county) to consult with Native American tribes before making certain planning decisions and to provide notice to tribes at certain key points in the planning process. The intent is to "provide California Native American tribes an opportunity to participate in local land use decisions at an early planning stage, for the purpose of protecting, or mitigating impacts to, cultural places" (OPR 2005). The purpose of involving tribes at these early planning stages is to allow consideration of cultural places in the context of broad local land use policy, before individual site-specific, project-level, land use designations are made by a local government. The consultation requirements of SB 18 apply to general plan or specific plan processes proposed on or after March 1, 2005. According to the Tribal Consultation Guidelines: Supplement to General Plan Guidelines (Governor's Office of Planning and

Research, 2005), the following are the contact and notification responsibilities of local governments (OPR 2005):

- Prior to the adoption or any amendment of a general plan or specific plan, a local government must notify the appropriate tribes (on the contact list maintained by the NAHC) of the opportunity to conduct consultations for the purpose of preserving, or mitigating impacts to, cultural places located on land within the local government's jurisdiction that is affected by the proposed plan adoption or amendment. Tribes have 90 days from the date on which they receive notification to request consultation, unless a shorter timeframe has been agreed to by the tribe (Government Code § 65352.3).
- Prior to the adoption or substantial amendment of a general plan or specific plan, a local government must refer the proposed action to those tribes that are on the NAHC contact list and have traditional lands located within the city or county's jurisdiction. The referral must allow a 45-day comment period (Government Code § 65352). Notice must be sent regardless of whether prior consultation has taken place. Such notice does not initiate a new consultation process.
- Local government must send a notice of a public hearing, at least 10 days prior to the hearing, to tribes who have filed a written request for such notice (Government Code § 65092).

Local Regulations, Policies and Standards

The CPUC has sole and exclusive State jurisdiction over the siting and design of the Proposed Project because it authorizes the construction, operation, and maintenance of investor-owned public utility facilities. Pursuant to GO 131-D section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters." Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the counties' and cities' regulations are not applicable as the counties and cities do not have jurisdiction over the Proposed Project. Accordingly, the following discussion of local land use laws, regulations, and policies is provided for informational purposes only.

Kern County

No Kern County regulations are applicable to tribal cultural resources.

Los Angeles County

The Los Angeles County General Plan was adopted by the Board of Supervisors on October 6, 2015, and provides the policy framework for how and where the unincorporated County will grow through the year 2035. The Conservation and Natural Resources Element provides strategies and policies regarding historic, cultural and paleontological resources. The following

policies may be applicable to the Proposed Project (Los Angeles County Department of Regional Planning 2015):

- Policy C/NR 14.1: Mitigate all impacts from new development on or adjacent to historic, cultural, and paleontological resources to the greatest extent feasible.
- Policy C/NR 14.4: Ensure proper notification procedures to Native American tribes in accordance with Senate Bill 18 (2004).
- Policy C/NR 14.6: Ensure proper notification and recovery processes are carried out for development on or near historic, cultural, and paleontological resources.

3.18.4 Applicant Proposed Measures and CPUC Measures

SCE has proposed measures (i.e., APMs) to reduce environmental impacts. The significance of a given impact is considered, and a significance determination made, prior to application of any APMs. The implementation of the APMs is then considered as part of the design of proposed project when determining whether impacts would be significant and thus require mitigation. APMs would be incorporated as part of any CPUC project approval, and SCE would be required to adhere to the APMs as well as any additional imposed mitigation measures. The APMs are included in the MMRP for the Proposed Project, and the implementation of the measures would be monitored and documented in the same manner as mitigation measures. The APMs that are applicable to tribal cultural resources are provided in Table 3.18-2.

CPUC Environmental Measures

The CPUC has developed additional standard measures to reduce potential impacts on tribal cultural resources. The CPUC standard measures will be included in the MMRP for the Proposed Project and implemented during Proposed Project construction. The CPUC measure applicable to tribal cultural resources is listed in Table 3.18-3.

Table 3.18-2 Applicant Proposed Measure

APM Number	Requirements
CUL-1	**Develop a Cultural Resource Management Plan (CRMP).** SCE will prepare and submit for approval a Cultural Resource Management Plan (CRMP) to guide all cultural resource management activities during project construction. Management of cultural resources will follow all applicable federal and state standards and guidelines for the management of historic properties/historical resources, including as identified or determined through the Section 106 review process. The CRMP will be submitted to the CPUC for review and approval at least 90 days prior to the start of construction. The CRMP will be prepared by a qualified archaeologist who meets the Secretary of Interior's standards for archaeology and include, but not be limited to, the following sections: • Cultural Resources Management Plan: The CRMP will define and map all known NRHP- and CRHR-eligible properties in or within 100 feet (30.5 meters) of the

APM Number	Requirements
	proposed project APE/API. A cultural resources protection plan will be included that details how NRHP- and CRHR-eligible properties will be avoided and protected during construction. Measures will include, at a minimum, designation and marking of Environmentally Sensitive Areas (ESAs), archaeological monitoring, personnel training, and reporting. The plan will also detail which avoidance measures will be used, where and when they will be implemented, and how avoidance measures and enforcement of ESAs will be coordinated with construction personnel. • Cultural Resource Monitoring and Field Reporting: The CRMP will detail procedures for archaeological monitoring and Tribal participation, define the reporting matrix, and establish criteria for when the monitoring effort should increase or decrease if monitoring results indicate that a change is warranted. The CRMP will also include guidelines for monitoring in areas of high sensitivity for the discovery of buried NRHP- and/or CRHR eligible cultural resources, burials, cremations, tribal cultural resources, or sacred sites. • Unanticipated Discovery Protocol: The CRMP will detail procedures for temporarily halting construction, defining work stoppage zones, notifying stakeholders (e.g. agencies, Native Americans, utilities), and assessing NRHP and/or CRHR eligibility in the event unanticipated discoveries are encountered during construction. It will include methods, timelines for assessing NRHP and/or CRHR eligibility, formulating mitigation plans, and implementing treatment. Mitigation and treatment plans for unanticipated discoveries will be reviewed by tribal stakeholders and approved by the CPUC, prior to implementation. Data Analysis and Reporting: The CRMP will detail methods for data analysis in a regional context, reporting of results within one year of completion of field studies, curation of artifacts and data (maps, field notes, archival materials, recordings, reports, photographs, and analysts' data) at a facility that is approved by CPUC, and dissemination of reports to appropriate repositories.
CUL-2	**Avoid Environmentally Sensitive Areas (ESA).** SCE will perform cultural resource surveys for any portion of the proposed project APE/API not yet surveyed (e.g. new or modified staging areas, pull sites, or other work areas). Cultural resources discovered during surveys will be subject to APM CUL-1 (Develop CRMP). Where operationally feasible, all NRHP- and CRHR-eligible resources will be protected from direct project impacts by project redesign (i.e., relocation of the line, ancillary facilities, or temporary facilities or work

APM Number	Requirements
	areas). In addition, all historic properties/historical resources will be avoided by all project construction, operation and maintenance, and restoration activities, where feasible. Avoidance measures will include, but not be limited to, fencing off ESAs for the duration of the proposed project or as outlined in the CRMP.
CUL-5	**Cultural Resources Awareness Worker Training.** Prior to initiating construction, all construction personnel will be trained by a qualified archaeologist regarding the recognition of possible buried cultural resources (i.e., prehistoric and/or historical artifacts, objects, or features) and paleontological resources (i.e., fossils), and protection of these resources during construction. Training will also inform all construction personnel of the procedures to be followed upon the discovery of cultural materials. All personnel will be instructed that unauthorized removal or collection of artifacts is a violation of federal and state laws. Any excavation contract (or contracts for other activities that may have subsurface soil impacts) will include clauses that require construction personnel to attend a Workers Environmental Awareness Training Program (WEAP). The WEAP will include the project's potential for the post-discovery review of archaeological deposits, how to operate adjacent to and avoid all ESAs, and procedures to treat post-discovery reviews.
TCR-1	**Tribal Monitoring.** An archaeological monitor, and tribal monitor that is culturally affiliated with the project area, may be present for all ground-disturbing activities within or directly adjacent to identified TCR(s). The archaeological and tribal monitors will consult the CRMP to determine when to increase or decrease the monitoring effort should the monitoring results indicate a change is warranted. Monitoring reports will be prepared and submitted to the CPUC on a monthly basis.
TCR-2	**Tribal Engagement Plan.** A tribal engagement plan shall be prepared, which will detail how Native American tribes will be engaged and informed throughout the proposed project. The tribal engagement plan will be included in the CRMP (MM Cultural -1).

Table 3.18-3 CPUC Environmental Measures

CPUC Draft Environmental Measure	Requirement
Human Remains (Construction and Maintenance)	Avoidance and protection of inadvertent discoveries that contain human remains shall be the preferred protection strategy with complete avoidance of such resources ensured by redesigning the project. If human remains are

CPUC Draft Environmental Measure	Requirement
	discovered during construction or maintenance activities, all work shall be diverted from the area of the discovery, and the CPUC shall be informed immediately. The Applicant shall contact the County Coroner to determine whether or not the remains are Native American. If the remains are determined to be Native American, the Coroner will contact the Native American Heritage Commission (NAHC). The NAHC will then identify the person or persons it believes to be the most likely descendant of the deceased Native American, who in turn would make recommendations for the appropriate means of treating the human remains and any associated funerary objects. If the remains are on federal land, the remains shall be treated in accordance with the Native American Graves Protection and Repatriation Act (NAGPRA). If the remains are not on federal land, the remains shall be treated in accordance with Health and Safety Code Section 7050.5, CEQA Section 15064.5(e), and Public Resources Code Section 5097.98.

3.18.5 Environmental Analysis

Summary of Impacts

Table 3.18-4 presents a summary of the CEQA significance criteria and impacts on tribal cultural resources that would occur during construction, operation, and maintenance of the Proposed Project.

Table 3.18-4 Summary of Proposed Project Impacts to Tribal Cultural Resources

Would the Proposed Project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a. Cause a substantial adverse change in the significance of a tribal cultural resource as defined in PRC §21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: i. Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in PRC §5020.1(k)?, or ii. A resource determined by the lead agency, in its discretion and supported by substantial evidence and with consideration of the significance of the resource to a California Native American tribe, to be significant pursuant to criteria set forth in subdivision (c) of PRC §5024.1?	☐	☐	☒	☐

Impact Discussion

a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

i. 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

ii. 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 § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

Construction

No tribal cultural resources, as defined in Public Resources Code Section 21074, have been identified in the Proposed Project area through archival research, field survey, or subsurface survey. However, based on initial discussions with the Fernandeno Tataviam Band of Mission

Indians, the Proposed Project may contain sensitive tribal resources along Segment 3, and therefore construction may impact tribal cultural resources listed or eligible for listing in the California Register or a local register of historical resources.

The Proposed Project would involve ground-disturbing activities that may extend into undisturbed soil. It is possible that such activities could unearth, expose, or disturb subsurface archaeological resources that have not been identified on the surface. Because previously unrecorded archaeological deposits could be present in the Proposed Project area, and they could be found to qualify as tribal cultural resources, pursuant to Public Resources Code section 21074, impacts of the Proposed Project to tribal cultural resources could be potentially significant.

Mitigation Measure Cultural -1 would require the development of a CRMP that would include a cultural resources protection plan, designation and marking of *environmentally sensitive areas* (ESAs) (APM CUL-2), archaeological monitoring, personnel training (APM CUL-5), and reporting. In addition, Mitigation Measure Tribal-1 and APM CUL-2 would also help reduce any potential impacts to undocumented archaeological resources that could qualify as tribal cultural resources by requiring adherence to a protocol in the event of the discovery of any such resources during Proposed Project implementation. Adherence to these APMs and Mitigation Measures, as well as the CPUC Environmental Measure Human Remains (Construction and Maintenance) (see Table 3.18-3) would reduce impacts to less than significant.

Operation and Maintenance

Operation and maintenance activities associated with the Proposed Project would be conducted in areas that would be disturbed during construction activities. Operation and maintenance activities would not differ from those currently conducted for the existing line. Maintenance vehicles would use access routes, and all maintenance activities would be conducted within previously disturbed areas. There would be no potential to impact tribal cultural resources from project operation and maintenance. No impact would occur.

Required APMs and MMs: Mitigation Measure Cultural-1, APM CUL-2, APM CUL-5, APM TCR-2, Mitigation Measure Tribal -1 and CPUC Environmental Measure Human Remains (Construction and Maintenance)

Mitigation Measure

Mitigation Measure Tribal-1: Native American Monitoring
Interested Tribes shall be invited to conduct Native American monitoring during all ground-disturbing activities associated with portions of or the entirety of Segment 3 of the project. A Native American monitor shall be invited to be onsite daily to coordinate with the archaeological monitors and to provide tribal perspectives in the event a discovery occurs. The Native American monitor shall be free to visit different activity areas throughout the course of a given day, notwithstanding any limitations based on safety concerns. Native American monitors shall be afforded a minimum of 1 weeks' notice prior to the commencement of project-related ground-disturbing activities. During project activities, Native American monitors shall be provided with weekly work forecasts to facilitate scheduling of monitors. Because project implementation activities are often unpredictable, there may be changes in work activities. Native American monitors shall be notified by the Construction Contractor of any scheduling

changes as soon as possible. The Construction Contractor will use daily field meetings, telephone, and email as methods of communicating work schedules. Native American monitors shall be alerted at the end of each workday whether work activities will be taking place the following day. If cultural resources are encountered, the Native American monitor will have the authority to request that ground-disturbing activities cease within 60 feet of discovery and a qualified archeologist meeting Secretary of Interior standards, as well as the Native American monitor shall assess the find.

SCE shall, in good faith, consult with the Tribes on the disposition and treatment of any Tribal Cultural Resource encountered during all ground disturbing activities.

Applicable locations: Segment 3

Performance Standards and Timing:

Before construction: Native American monitors notified no less than 10 days before construction.

During construction: Native American monitors shall be alerted at the end of each workday whether work activities will be taking place the following day.

After construction: N/A

3.18.6 References

Arnold, Jeanne E. 2001. "Social Evolution and the Political Economy in the Northern Channel Islands." In *The Origins of a Pacific Coast Chiefdom : The Chumash of the Channel Islands*, 287–96. Salt Lake City: University of Utah Press.

Bernard, Julienne Lorraine. 2008. *An Archaeological Study of Resistance, Persistence, and Culture Change in the San Emigdio Canyon, Kern County, California*. University of California, Los Angeles.

Biosystems Analysis. 1989. "Technical Report of Cultural Resources Studies for the Proposed Wtg-West, Inc. Los Angeles to San Francisco and Sacramento, California Fiber Optic Cable Project."

Blackburn, Thomas, and William C Sturtevant. 1978. *Handbook of North American Indians*. Edited by William C Sturtevant.

Governor's Office of Planning and Research (OPR). 2005. "Tribal Consultation Guidelines Supplement to General Plan Guidelines."

Grant, Campbell. 1978. "Interior Chumash." In *Handbook of North American Indians*, edited by R.F. Heizer, 8 California: 530–34. Washington D.C.

Harvey, Victoria. 2011. "Archaeological Investigations at the Hospital/Commissary Site, Fort Tejon State Historic Park, Kern County, California." California State University, Bakersfield. https://scholarworks.calstate.edu/concern/theses/ms35td77f?locale=en.

Hudson, Travis, and Thomas C. Blackburn. 1984. *The Material Culture of the Chumash Interaction Sphere, Vol. II: Food Preparation and Shelter*. Vol. 6.

King, C, and Thomas C. Blackburn. 1978. "Tataviam." In *Handbook of North American Indians*, edited by William C Sturtevant, Thomas Blackburn, and William C Sturtevant. Vol. Vol 8 California.

Kroeber, A. L. (1925) 1976. "Handbook of the Indians of California." *Bureau of American Ethnology Bulletin*. http://repository.si.edu/xmlui/handle/10088/15545.

Latta, Frank Forrest. 1949. "Handbook of Yokuts Indians."

Los Angeles County Department of Regional Planning. 2015. "Los Angeles County 2035 General Plan." Available: https://planning.lacounty.gov/long-range-planning/general-plan/.

Macko, M.E., J.D. Binning, D.D. Earle, and P.E. Langenwalter. 1993. "National Register Eligibility Determinations for Historic Resources Along the Proposed AT&T Lightguide System, Victorville to Bakersfield, California." Prepared for Lilburn Corporation.

Mason, R.D., W.H. Bonner, S.L. Popper, V.S. Popper, T.M. Origer, and M.S. Shackely. 2001. "Results of Archaeological Data Recovery at CA-KER-3367, CA-KER-3370, and CA-KER-1558 Level (3) Long Haul Project, Segment WS04 Tehachapi Workaround, Kern County, California." Prepared for Level (3) Project Office.

Material Culture Consulting. (2021) 2019. "Archeological Resources Inventory: Southern California Edison Company Transmission Line Rating and Remediation Effort Gorman–Kern River 66kV Project." Los Angeles and Kern counties, CA: Southern California Edison Company.

McLendon, Sally, and John Johnson. 1999. *Cultural Affiliation and Lineal Descent of Chumash Peoples in the Channel Islands and the Santa Monica Mountains*.

Monastero, A.P., J.B. Lloyd, and M.D. Armstrong. 2014. "Cultural Resource Studies for the Redwood Cluster Solar Project, Kern County, California." Prepared for 61LK 8ME, LL.

Moratto, Michael J. 1984. *California Archaeology*. Academic Press.

Orfila, Rebecca S. 2011. "A Phase I Cultural Resources Assessment of Telecommunications Lines, Subtransmission Extension Lines, and Proposed Substation Locations for the Banducci 66/12kV "B" Substation Project in Kern County, California." Substation Project in Kern County, California. Prepared by RSO Consulting Cultural and Historical Resource Management.

Pearce, Dustin, James Strittholt, Terry Watt, and Ethan Elkind. 2016. "A Path Forward: Identifying Least-Conflict Solar PV Development in California's San Joaquin Valley," May. https://escholarship.org/uc/item/543174qd.

Robinson, David Wayne. 2006. "Landscape, Taskscape, and Indigenous Perception: The Rock-Art of South-Central California." PhD Thesis.

Shipley, William F. 1978. "Native Languages of California." *Handbook of North American Indians* 8: 80–90.

Sutton, Mark Q. 1980. "Some Aspects of Kitanemuk Prehistory." *Journal of California and Great Basin Anthropology* 2 (2). https://escholarship.org/uc/item/3mm1r5kt.

Sutton, Mark Q. 1996. "The Current Status of Archaeological Research in the Mojave Desert." *Journal of California and Great Basin Anthropology*, 221–57.

Switalski, H., and R. Larkin. 2013. *Archaeological Survey Report for the Proposed Plains All American Pipeline, L.P. Consent Decree Line 63 Repair Project*. Los Angeles Counties, California: Garlock Fault/Tejon Gully and Tejon Pump Station), Tejon Ranch, Kern and.

Underwood, J., and J.H. Cleland. 2002. "Cultural Resources Survey of Line 1903, All American Pipeline Conversion Project from Mettler, Kern County California to Daggett, San Bernardino County, California." Prepared for ENSR International.

Wallace, William James. 1978. "Southern Valley Yokuts." *Handbook of North American Indians. California* 8: 448–61.

Zigmond, M. L. 1986. "Kawaiisu." In *Handbook of North American Indians*, edited by Warren L D'Azevedo and William C Sturtevant, 11 Great Basin:398–411. Washington, D.C.: Smithsonian Inst.

3.19 Utilities and Service Systems

This section presents the environmental setting and impact analysis for utilities and service systems that would be affected by the Proposed Project. The section includes background information, applicable regulations, environmental impacts, and mitigation measures to reduce or avoid significant effects.

3.19.1 Environmental Setting

Telecommunications

A number of underground telecommunications cable lines are located adjacent the Proposed Project within Segments 1, 2 and 5, as shown in Figure 3.19-1. There are no other telecommunication facilities in the vicinity of the Proposed Project.

Electricity

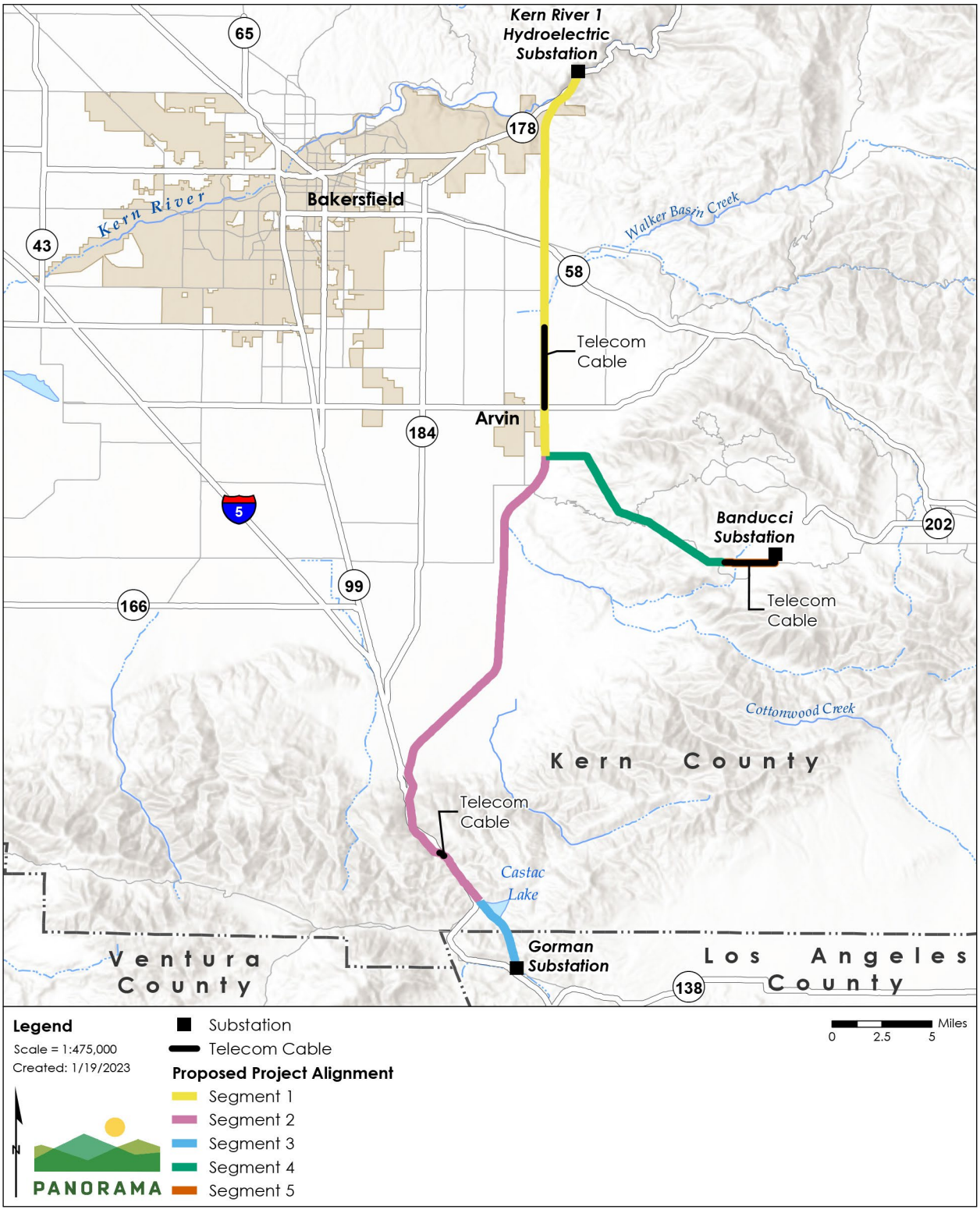
SCE delivers power to 15 million people over 50,000 square miles in central, coastal, and southern California (SCE, 2022). SCE infrastructure includes over 118,000 circuit miles of electric distribution and bulk transmission lines (SCE, 2022). Electrical lines in the vicinity of the Proposed Project include the following:

- Two 220 kV SCE transmission lines in Segment 1
- Three 220 kV SCE transmission lines in Segment 2
- One SCE 500 kV SCE transmission line in Segment 2
- One 70 kV Pacific Gas and Electric Company line in Segment 2
- Two SCE 220 kV transmission lines parallel Segment 4
- One distribution line crossing or co-located as underbuild on the existing structure in Segment 5

Natural Gas

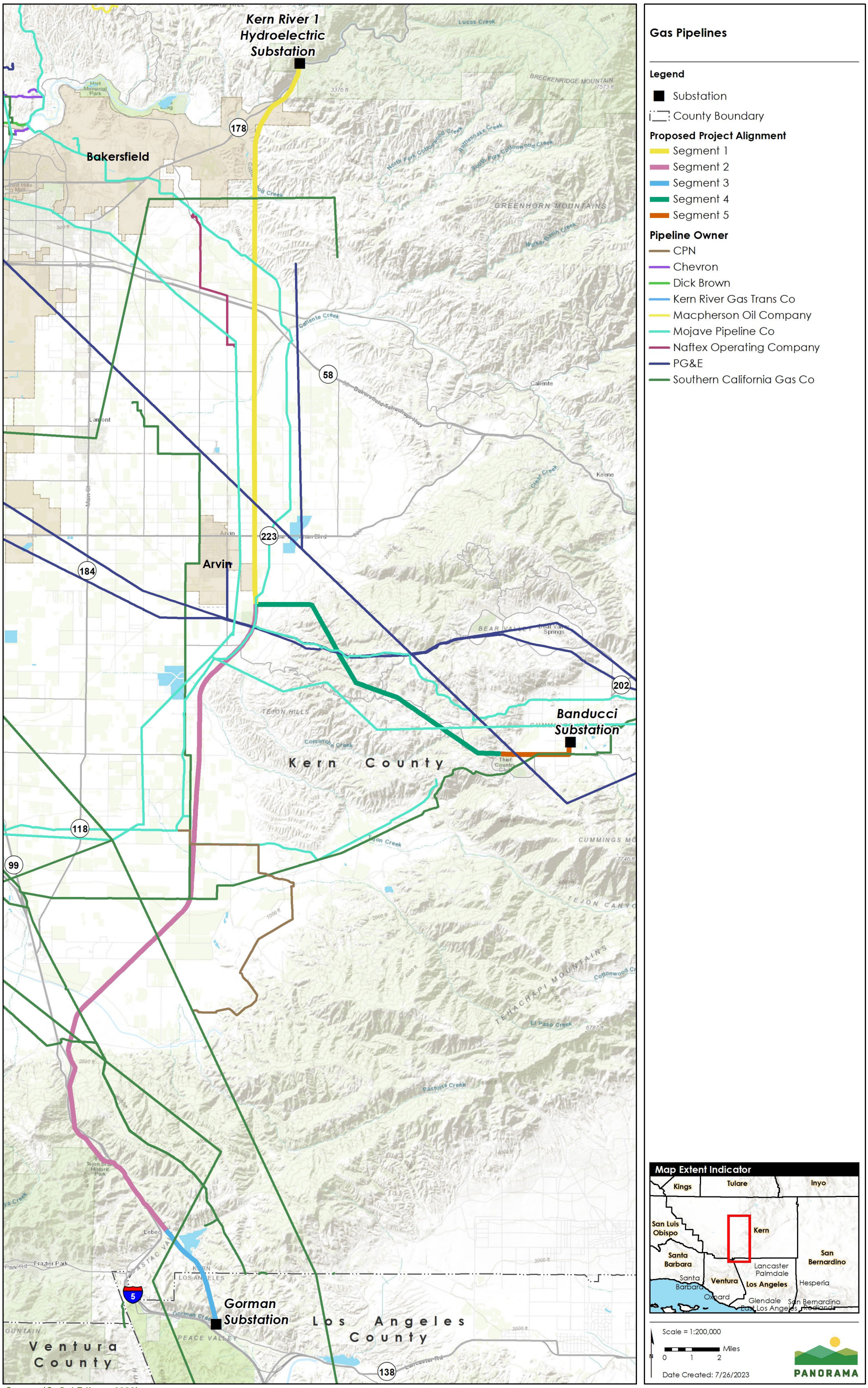
Southern California Gas (SoCalGas) provides gas services to all segments of the Proposed Project. SoCalGas delivers gas services to 21.8 million people over a service territory of 24,000 square miles via 5.9 million meters in more than 500 communities (SoCalGas, 2022). Numerous gas pipelines are located in proximity to the Proposed Project in all segments. Crude oil pipelines cross Segments 2 and 3 of the Proposed Project. Gas and crude oil pipelines within the vicinity of the Proposed Project are shown in Figure 3.19-2. Approximately 0.4 mile of the Mojave Pipeline parallels the Proposed Project. The distance between the Mojave Pipeline and Proposed Project where the pipeline parallels the Proposed Project alignment is approximately 50 feet.

Figure 3.19-1 Telecommunication Lines in Proximity to the Proposed Project.



Source (Arcadis & Southern California Edison, 2021):

Figure 3.19-2 Gas Pipelines in the Vicinity of the Proposed Project



Source: (SoCal Edison, 2022)

This page is intentionally left blank.

Water Supply

The Kern County Water Agency (KCWA) participates in the State Water Project (SWP) that is operated by the DWR (KCWA, 2021). The KCWA has a long-term contract with thirteen local water districts for SWP water (Provost & Pritchard Consulting Group, 2020). The SWP is a water storage and delivery system that delivers water via canals, pipelines, reservoirs, and hydroelectric power facilities. Approximately 33 million acre-feet of water has been delivered for use within Kern County through the SWP (KCWA, 2021). The amount of water delivered through the SWP to the KCWA has ranged from 91,918 acre-feet to 1,398,797 acre-feet depending on year and the SWP supply availability (Provost & Pritchard Consulting Group, 2020). Requests for SWP water have increased over time and increase competition for SWP water supplies during dry years.

Segment 1

The northeastern portion of the City of Bakersfield that intersects Segment 1 of the Proposed Project alignment is within the CalWater Bakersfield District. Water supply for the CalWater Bakersfield District comes from groundwater wells, surface water from the Kern River, and treated water purchased from the KCWA.

Segment 2

Segment 2 of the Proposed Project is located within the Arvin-Edison Water Storage District, Wheeler Ridge-Maricopa Water Storage District, and the Arvin CSD. The Arvin-Edison Water Storage District provides irrigation to 132,000 acres of agricultural land in the southeastern portion of the San Joaquin Valley (Arvin-Edison Water Storage District, n.d.). Both water districts are members of the KCWA contract for SWP water supply. The Arvin CSD provides water to the city of Arvin.

Segment 3

The northern portion of Segment 3, in Kern County, is within the Tejon-Castac Water District and the Lebec County Water District. The Lebec County Water District sources its water from three groundwater wells (Provost & Pritchard Consulting Group, 2016). The southern portion of Segment 3, located in Los Angeles County, is within the Antelope Valley-East Kern Water Agency (AVEK) service area that encompasses nearly 2,400 square miles. Similar to the KCWA, AVEK signed a contract with the California Department of Water Resources to import water supplies from the SWP. AVEK also sources water from the Antelope Valley Groundwater Basin (Antelope Valley - East Kern Water Agency, 2018).

Segments 4 and 5

Segments 4 and 5 of the Proposed Project are located within the Tehachapi-Cummings County Water District and Stallion Springs CSD. The western portion of Segment 4 is also located within the Bear Valley CSD. Water supplies for the Tehachapi-Cummings County Water District come from the SWP and local groundwater resources (Greater Tehachapi Area, 2016). Water supplied to residents of the Stallion Springs CSD is from groundwater pumped from the Cummings Basin (Stallion Springs Community Services District, 2022). The Bear Valley CSD

provides water for domestic and commercial use via wells, storage tanks, and pipelines (Bear Valley Community Services District, 2020).

Stormwater

Kern County and the City of Bakersfield operate and maintain a stormwater conveyance system to serve the city and a small portion of the surrounding unincorporated Kern County. The stormwater conveyance system is approximately 0.9 mile west of Segment 1 of the Proposed Project along SR 178. Approximately 80 percent of urban stormwater is discharged into terminal basins, and the remaining 20 percent is discharged into the Kern River, East Side Canal, Carrier Canal, Stine Canal, and Kern Island Canal. The Kern County and City of Bakersfield stormwater conveyance system has 322 retention basins and 62 outfalls (City of Bakersfield and County of Kern, 2015). There are no stormwater conveyance systems within the vicinity of Segments 2, 3, 4, or 5 of the Proposed Project.

Sewer and Wastewater

The Kern Sanitation Authority provides sewer and wastewater services for Kern County. The Kern Sanitation Authority operates the Kern County Wastewater Treatment Plant in East Bakersfield near Segment 1 of the Proposed Project. The Kern County Wastewater Treatment Plant treats approximately 4 million gallons of wastewater daily (Kern County Public Works, n.d.).

The City of Bakersfield owns and operates two wastewater treatments plants in the vicinity of Segment 1 of the Proposed Project. Wastewater Treatment Plant Number 2 serves the City of Bakersfield to the east of Highway 99, and Wastewater Treatment Plant Number 3 services the City of Bakersfield to the west of Highway 99 (City of Bakersfield, 2023). Wastewater Treatment Plant Number 2 treats 13.7 million gallons of wastewater daily, and Wastewater Treatment Plant Number 3 processes 17.3 million gallons of wastewater per day (City of Bakersfield, 2023).

The City of Arvin owns the City of Arvin wastewater treatment plant that treats wastewater from residential and commercial properties within the city (City of Arvin, n.d.). The City of Arvin contracts Veolia West Operating Services, Inc., to operate and maintain the wastewater treatment plant (City of Arvin, 2019). Approximately 1.1 million gallons of wastewater are treated daily at the City of Arvin wastewater treatment plant (City of Arvin, 2019). The wastewater treatment plant is located 2.3 miles east of Segment 1 of the Proposed Project.

The City of Tehachapi and Stallion Springs CSD each operate a wastewater treatment plant in the vicinity of Segments 4 and 5 of the Proposed Project. Tehachapi's wastewater treatment plant treats a maximum flow of 1.25 million gallons per day (City of Tehachapi, n.d.).

The southern portion of Segment 3 located in Los Angeles County is not served by a sanitation district.

Solid Waste Disposal

Title 27 of the California Code of Regulations regulates the types of waste that can be disposed of at certain classes of landfills. Landfill classifications are as follows:

- Class I: accepts hazardous and non-hazardous wastes
- Class II: may accept "designated" and non-hazardous wastes
- Class III: may accept non-hazardous municipal wastes

The landfills within close proximity to the Proposed Project alignment are listed in Table 3.19-1.

Table 3.19-1 Landfills in Proximity to the Proposed Project

Landfill name	Landfill classification	Distance to the Proposed Project (miles)	Permitted capacity (cubic yards)	Closure date
Bena Landfill	III	2.6	53 million	2046
McKittrick Waste Landfill	II	46	5.5 million	2059
Tehachapi Sanitary Landfill	III	18	4 million	2025
Chiquita Canyon Landfill	II	26.5	63.9 million	2040
Kettlemans Landfill	I, II	78	10.7 million	N/A
Clean Harbors Buttonwillow Landfill	I	45	13.3 million	2040

Source: (CalRecycle, 2023)

3.19.2 Applicable Regulations, Policies and Standards

Federal, state, and local regulations were reviewed for applicability to the Proposed Project.

Federal Regulations, Policies and Standards

There are no federal laws or regulations for utilities and service systems or public services that are applicable to the Proposed Project.

State Regulations, Policies and Standards

Assembly Bill 939

The Integrated Waste Management Act of 1989 (Cal. Pub. Res. Code §§ 40050 et seq.) requires all local and county governments to adopt a Source Reduction and Recycling Element in general plans to identify means of reducing the amount of solid waste sent to landfills. This law set reduction targets at 25 percent by 1995 and 50 percent by 2000. Senate Bill 1016 (2007) built on the Integrated Waste Management Act of 1989 by implementing simplified performance measures for meeting solid waste reduction goals.

Assembly Bill 341
California's Commercial Recycling Bill (AB 341) went into effect July 1, 2012, and set a recycling goal of 75 percent diversion by 2020. The bill is intended to reduce GHG emissions by diverting recyclable materials and to expand the opportunity for increased economic activity and green industry job creation.

California Health and Safety Code § 25150.7(d)(1)
If treated wood is developed as a waste product, the California Health and Safety Code requires treated wood to be disposed of in either a Class I hazardous waste landfill or in a composite-lined portion of a solid waste landfill that meets RWQCB-specified requirements.

California Code of Regulations (Title 27)
Title 27 (Environmental Protection) of the California Code of Regulations defines regulations for the treatment, storage, processing, and disposal of solid waste. The SWRCB maintains and regulates compliance with Title 27 (Environmental Protection) of the California Code of Regulations.

Local Regulations, Policies, and Standards

The CPUC has sole and exclusive State jurisdiction over the siting and design of the Proposed Project because it authorizes the construction, operation, and maintenance of investor-owned public utility facilities. Pursuant to GO 131-D section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters." Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the counties' and cities' regulations are not applicable as the counties and cities do not have jurisdiction over the Proposed Project. Accordingly, the following discussion of local land use laws, regulations, and policies is provided for informational purposes only.

Kern County General Plan
The Kern County General Plan provides policies for providing adequate public services and utilities for Kern County residents. The Land Use, Conservation, and Open Space Element contains the following goals related to utilities and service systems relevant to the Proposed Project.

Goals:

- Ensure that adequate supplies of quality (appropriate for intended use) water are available to residential, industrial, and agricultural users within Kern County.
- Provide a healthful and sanitary means of collecting, treating, and disposing of sewage and refuse for the residents and industries of Kern County.
- Facilitate the provision of reliable and cost effective utility services to residents of Kern County.
- Ensure landfill capacity for Kern County residents and industries.

Kern County and Incorporated Cities Integrated Waste Management Plan
The Kern County and Incorporated Cities Integrated Waste Management Plan addresses issues pertaining to nonhazardous waste disposal and other waste facilities. The Plan was established in response to the California Integrated Waste Management Act of 1989 (AB 939) and includes the following solid waste elements: Source Reduction and Recycling Element, Household Hazardous Waste Element, Non-disposal Facility Element, Countywide Siting Element, and the Countywide Integrated Waste Management Summary Plan. The solid waste elements do not contain any relevant goals or policies relevant to the Proposed Project.

Los Angeles County General Plan
The Los Angeles General Plan provides goals and policies for providing adequate utilities and public services for Los Angeles County residents. The Public Services and Facilities Element contains the following goals and policies related to utilities and service systems that are relevant to the Proposed Project.

Goal:

- Goal PS/F 5: Adequate disposal capacity and minimal waste and pollution

Policies:

- **Policy PS/F 5.1**: Maintain an efficient, safe and responsive waste management system that reduces waste while protecting the health and safety of the public.
- **Policy PS/F 5.2**: Ensure adequate disposal capacity by providing for environmentally sound and technically feasible development of solid waste management facilities, such as landfills and transfer/processing facilities.
- **Policy PS/F 5.5**: Reduce the County's waste stream by minimizing waste generation and enhancing diversion.
- **Policy PS/F 5.7**: Encourage the recycling of construction and demolition debris generated by public and private projects.
- **Policy PS/F 6.4**: Protect and enhance utility facilities to maintain the safety, reliability, integrity and security of utility services.
- **Policy PS/F 6.5**: Encourage the use of renewable energy sources in utility and telecommunications networks.
- **Policy PS/F 6.6**: Encourage the construction of utilities underground, where feasible.
- **Policy PS/F 6.7**: Discourage above-ground electrical distribution and transmission lines in hazard areas.

Metropolitan Bakersfield General Plan
The Metropolitan Bakersfield General Plan contains the Public Services and Facilities Element that provides goals and policies for providing adequate utilities for the City of Bakersfield (City of Bakersfield, 2002). The following goals related to utilities and service systems are relevant to the Proposed Project:

Goals:

- **Goal 1**: Maintain a coordinated planning and implementation program for the provision of public utilities to the planning area.
- **Goal 2:** Coordinate the planning and implementation of planning area municipal-type utility facilities and services.
- **Goal 3:** Develop continuing agreement between the local government agencies providing municipal-type public utility services to the planning area as to service area boundaries and responsibilities.

City of Arvin General Plan

The City of Arvin General Plan discusses goals and policies that ensure the availability of utilities for its residents. The following goal and policies related to utilities and service systems are relevant to the Proposed Project.

Goal:

- Goal 8: Maintain solid waste collection and disposal services in accordance with California state standards.

Policies:

- Policy CO-8.1: Implement diversion programs related to business collection including commercial onsite recycling and commercial onsite green waste pick up.
- Policy CO-8.3**:** Continue waste management practices that meet or exceed requirements specified by the California Integrated Waste Management Act.

3.19.3 Applicant Proposed Measures

SCE has proposed measures to reduce environmental impacts. The significance of the impact is first considered prior to application of *applicant proposed measures* (APMs), and a significance determination is made. The implementation of the APMs is then considered as part of the Proposed Project when determining whether impacts would be significant and thus would require mitigation. These APMs would be incorporated as part of any CPUC project approval, and SCE would be required to adhere to the APMs as well as any identified mitigation measures. The APMs are included in the MMRP for the Proposed Project, and the implementation of the measures would be monitored and documented in the same manner as mitigation measures. The APMs that are applicable to the utilities and service systems analysis are provided in Table 3.19-2

CPUC Environmental Measures

The CPUC has developed additional standard measures to reduce potential impacts to utilities and service systems. The CPUC standard measures will be included in the MMRP for the Proposed Project and implemented during Proposed Project construction. The CPUC measure applicable to utilities and service systems is listed in Table 3.19-3.

Table 3.19-2 Applicant Proposed Measures Relevant to Utilities and Service Systems

APM number	Requirements
HAZ-1	Prepare a Hazardous Materials Management Plan. SCE will prepare and implement a Hazardous Materials Management Plan (HMMP)/Hazardous Materials Business Plan (HMBP) during project construction. The plan will outline proper hazardous materials handling, use, storage and disposal requirements, as well as hazardous waste management procedures. This plan will be developed to ensure that all hazardous materials and wastes will be handled and disposed of according to applicable rules and regulations. The HMMP will address the types of hazardous materials to be used during the project, hazardous materials storage, employee training requirements, hazard recognition, fire safety, first aid/emergency medical procedures, hazardous materials release containment/control procedures, hazard communication training, PPE training, and release reporting requirements. It will also include fueling and maintenance procedures for helicopters and construction equipment. If on site refueling is necessary, BMPs shall be implemented in accordance with the project SWPPP. Refueling stations and fuel tanks will be located, maintained, and operated during construction in accordance with applicable laws and regulations pertaining to hazardous materials. If more than 1,320 gallons of petroleum products in containers greater than 55-gallons, a SPCC plan must be created prior to products being brought on-site. All construction personnel, including environmental monitors, will be made aware of local, state and federal emergency response reporting guidelines for accidental spills.

Table 3.19-3 CPUC Environmental Measure

CPUC environmental measure	Requirement
Notify utilities with facilities above and below ground	The Applicant shall notify all utility companies with utilities located within or crossing the project ROW to locate and mark existing underground utilities along the entire length of the project at least 14 days prior to construction. No subsurface work shall be conducted that would conflict with (i.e., directly impact or compromise the integrity of) a buried utility. In the event of a conflict, areas of subsurface excavation or pole installation shall be realigned vertically and/or horizontally, as appropriate, to avoid other utilities and provide adequate operational and safety buffering. In instances where separation between third-party utilities and underground excavations is less than 5 feet, the Applicant shall submit the intended construction methodology to the owner of the third-party utility for review and approval at least 30 days prior to construction. Construction methods shall be adjusted as necessary to assure that the integrity of existing utility lines is not compromised.

3.19.4 Environmental Analysis

Summary of Impacts

Table 3.19-4 presents a summary of the CEQA significance criteria and impacts on utilities and service systems that would occur during construction, operation, and maintenance of the Proposed Project.

Table 3.19-4 Summary of Proposed Impacts to Utilities and Service Systems

Would the proposed project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environment effects?	☐	☐	☒	☐
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	☐	☐	☒	☐
c) Result in determination by the waste water treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
d) 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?	☐	☐	☒	☐
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	☐	☐	☒	☐

Impact Discussion

a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environment effects?

Construction

Water and Wastewater

Construction of the Proposed Project would require an estimated 350 acre-feet of water for dust control, restoration activities, equipment washing, and the construction of TSP foundations. SCE would use recycled or reclaimed water where possible for construction water supply. If sufficient quantities of recycled or reclaimed water is not available for construction of the Proposed Project, SCE would purchase water from commercial purveyors. Construction water use would be temporary, and the volume of water used would not exceed the capacity of the

existing water treatment systems in the area. The Proposed Project would not require or result in the construction or relocation of new or expanded water facilities, and the impact on water would be less than significant. No mitigation is required.

Construction would generate minimal wastewater. Portable restrooms would be provided for construction workers at work sites. The small amount of wastewater generated by the portable restrooms would be transported off site and disposed of at a wastewater treatment plant. The Proposed Project would require up to 85 workers, which would generate approximately 25,000 gallons of liquid waste. The amount of effluent generated by construction crews would not cause wastewater treatment plants to exceed treatment capacity because wastewater treatment plants within the vicinity of the Proposed Project treat between 1.1 million and 17 million gallons daily. In addition, the use of recycled or treated wastewater for construction water would not necessitate expansion of any wastewater treatment facility because water could be purchased from commercial purveyors if recycled water was not available. Impacts to wastewater treatment facilities would therefore be less than significant. No mitigation is required.

Excavations for the installation of TSPs or LWS poles and foundations may require dewatering. Dewatering water would be discharged on site or be stored in Baker tanks or similar equipment before off-site disposal. The potential volume of water that could be discharged during dewatering would be far less than the available wastewater treatment capacity. As discussed above, there is sufficient capacity from wastewater treatment plants in the vicinity of the Proposed Project area to treat the minimal amount of groundwater produced during temporary construction dewatering. Dewatering from Project excavations may also be used for dust control. The impact on wastewater treatment facilities would be less than significant. No mitigation is required.

Storm Water Drainage

The Proposed Project would include the installation of TSP and LWS structures along the alignment. The installation of foundations for these structures would result in the addition of 4.8 acres of impervious surface at each new pole or H-frame. The Proposed Project does not drain into any stormwater infrastructure. The nearest stormwater conveyance system is approximately 0.9 mile west of Segment 1. Stormwater would not be able to infiltrate the soil where foundations would be located; however, the area of each new foundation (150 to 622 square feet) is relatively small, and the foundations would be spaced out over the length of the proposed alignment. Furthermore, the Proposed Project would abandon approximately 44.9 acres of existing permanent disturbance, which would result in a net disturbance area of -19.8 acres. The installation of TSP and LWS structures would not increase the amount of impervious surface in the Proposed Project area to the extent that new stormwater drainage facilities would be required or stormwater drainage patterns would be affected. The impact would be less than significant. No mitigation is required.

Electric Power, Natural Gas, and Telecommunications

Gas, electric, and telecommunication lines run parallel with or cross the Proposed Project alignment. The Proposed Project would rebuild or modify the existing subtransmission lines, existing poles, and structures and would install OPGW, which would provide fiber optic telecommunication. In Segment 5, the distribution circuit underbuild on one pole would be modified. Existing underbuild elsewhere along Segment 5 may be modified (i.e., the underbuild may be raised or lowered on the pole) during installation of ADSS fiber optic cable. The replacement structures installed under the Proposed Project would be installed proximate to existing structures. During OPGW installation, the subtransmission circuit on one side of the existing structures would be deenergized. Once the replacement conductor and OPGW are installed, the newly installed circuit on replacement and reused structures would be energized, and the remaining existing circuit on the existing structures would be deenergized. As a result, interruptions to service would not occur.

The fiber optic cable would also be located underground at and adjacent the existing Banducci, Gorman, and Kern River 1 hydroelectric substations. The fiber optic cable would be approximately 0.2 mile in length, and the trenches for the fiber optic cable would be 12 inches wide and 36 inches deep. Because the Proposed Project crosses and is located in proximity to buried gas and electric lines, construction of the Proposed Project foundations and underground fiber optic cable could impact buried utilities. CPUC's Environmental Measures for utilities and service systems requires SCE to notify the appropriate utility companies of construction activities at least 14 days prior to construction, and the Proposed Project work area would be adjusted to avoid buried pipelines, if necessary. Impacts would be less than significant. No mitigation is required.

Operation

Water would be used during operation and maintenance of the Proposed Project. Water used for operation and maintenance of the Proposed Project would be similar in quantity to that for the current operation and maintenance of the existing subtransmission line. Water used during operation and maintenance activities would not result in the construction of new water or wastewater facilities.

SCE would perform routine inspections and maintenance along the subtransmission line, as needed. Operation and maintenance activities could result in ground disturbance from the replacement of towers and other structures and the location of some structures and/or laydown areas in previously undisturbed areas. As discussed above, ground disturbing activities could damage or rupture existing gas and utility lines that intersect the Proposed Project. CPUC Environmental Measures for utilities and service systems requires SCE to notify all utility companies with utilities located within or crossing the Proposed Project ROW. In accordance with the CPUC Environmental Measures, SCE would not conduct subsurface work where a conflict with buried utilities would occur. Additionally, the Applicant would be required to realign the Proposed Project to avoid conflict with other utilities in the event of a conflict. The impact would be less than significant. No mitigation is required.

Required APMs and MMs: CPUC Measure Notify Utilities

b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

Construction

Water would be used during construction of the Proposed Project for dust control, restoration activities, and concrete TSP foundations. Higher volumes of water would be required for dust control along the northern portion of Segment 1, the southern portion of Segment 2, and Segments 3 and 4 due to the higher number of dirt access roads and work areas. Work along Segment 5 would likely be performed from paved roadways and would require smaller volumes of water. An estimated 350 acre-feet of water would be required during the 2-year construction period. SCE would use recycled or reclaimed water to the extent feasible, if available. If sufficient quantities of recycled or reclaimed are not available to supply the entire Project, SCE would purchase water from commercial purveyors to supplement the recycled or reclaimed water available. The use of reclaimed water would increase the demand for treated wastewater.

Water purchased from commercial purveyors could be sourced from surface water or groundwater sources. Approximately 11 water service districts and CSDs are within the vicinity of the Proposed Project, and water demand would be distributed geographically across the Proposed Project alignment. The SWP delivers approximately 980,000 acre-feet of water to the KCWA annually. The 2020 Kern County Integrated Regional Water Management Plan indicates the KCWA is projected to supply 611,000 acre-feet of water in an average year and 334,000 in multiple dry years (Provost & Pritchard Consulting Group, 2020). Therefore, the KCWA has sufficient water supplies to meet Proposed Project water demands. The Proposed Project's short-term demand for water would be minimal compared to overall water demand for Kern County, and SCE would primarily use recycled water for the construction water. Because there are sufficient water supplies for the Proposed Project construction, the impact on water supplies would be less than significant. No mitigation is required.

Operation and Maintenance

Operation and maintenance activities for the Proposed Project would be similar to the operation and maintenance activities performed along the existing subtransmission line. Water would be periodically utilized for insulator washing. The Proposed Project would not require additional water supplies for operation and maintenance activities beyond what is already available for the existing subtransmission line. Therefore, the Proposed Project would have sufficient water supplies for operation and maintenance activities, and the impact would be less than significant. No mitigation is required.

Required APMs and MMs: None

c) Result in determination by the waste water treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

Construction

Wastewater services would be provided for construction workers by a licensed sanitation company, which would provide portable restrooms at work sites. The volume of liquid waste generated by construction of the Proposed Project would be approximately 25,000 gallons. Sanitary waste would be transported off site and disposed of at a wastewater treatment plant with adequate capacity to accept the waste. Wastewater treatment plants within the vicinity of the Project site treat between 1.1 million and 17 million gallons daily. The small amount of liquid waste generated during Project construction would be minimal compared to the amount of wastewater treated daily. The portable restrooms would be provided in accordance with applicable sanitation regulations established by OSHA, which generally require one portable restroom for every 20 workers. Impacts to wastewater treatment requirements would be less than significant. No mitigation is required.

Operation and Maintenance

Operation and maintenance activities for the Proposed Project would be conducted in the same manner as operation and maintenance of the existing subtransmission line and facilities. The use of portable restrooms during operation and maintenance of the Proposed Project is not anticipated. Therefore, there would be no additional wastewater generated during operation and maintenance. No impact would occur.

Required APMs and MMs: None

d) 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?

Construction

Wastes generated by the Proposed Project would include metals, wood poles, wood pallets, cardboards/papers, worker-generated solid waste, and organic waste. The Proposed Project would generate approximately 2,021 tons of solid waste. Approximately 35 percent of waste generated by Project construction would consist of recyclable content and would be hauled to a recycling facility for disposal. All non-hazardous solid waste would likely be disposed of at one of the landfills within the vicinity of the Proposed Project alignment, including the Bena Landfill, Tehachapi Sanitary Landfill, and Chiquita Canyon Landfill. The aforementioned landfills have a combined remaining permitted capacity of approximately 94 million cubic yards and would be able to accept construction waste from the Proposed Project (CalRecycle, 2023).

Construction of the Proposed Project would generate small amounts of hazardous waste. Approximately 149 wood poles would be removed and reused by SCE, returned to the manufacturer, disposed of in a Class I hazardous waste landfill, or disposed of in the lined portion of an RWQCB-certified landfill. Per APM HAZ-1, hazardous wastes would be

transported and disposed of in accordance with applicable rules, regulations, and SCE standard protocols. Class I hazardous waste facilities that may be used include the Harbors Buttonwillow Landfill and Kettleman Landfills, with a combined permitted capacity of 23 million cubic yards. The Harbors Buttonwillow and Kettleman Landfills have sufficient capacity to accommodate the 298 tons of hazardous waste. Because there is sufficient capacity for the Proposed Project solid waste at local landfills and because Proposed Project waste would be recycled or reused where feasible, the impact would be less than significant. No mitigation is required.

Operation
Operation and maintenance of the Proposed Project would not change from current operation and maintenance of the existing subtransmission line. Therefore, there would be no change in waste volume that would affect the capacity of solid waste disposal facilities. No impact would occur.

Required APMs and MMs: APM HAZ-1

e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

The Proposed Project would generate approximately 2,021 tons of solid waste from existing steel towers, hardwater, subtransmission conductors, OHGW, concrete from the foundations of existing towers, and miscellaneous solid waste. As discussed in Impact Utilities (d), the Proposed Project would generate solid waste (e.g., LSTs, fittings, packaging, removed vegetation, conductors) and hazardous waste (i.e., wood poles) during construction. In addition, the Proposed Project would generate a small amount of solid waste during operation and maintenance activities from crew lunches, packaging materials, and old parts from replacement activities. All waste would be recycled or disposed of in accordance with all applicable federal, state, and local laws regarding solid and hazardous waste. APM HAZ-1 includes the preparation and implementation of a HMBP, which includes hazardous waste management activities. Waste would be transported to the appropriate licensed landfill or recycling facility if the materials cannot be reused on site. SCE would comply with all federal, state, and local statutes and regulations related to solid waste. The impact would be less than significant. No mitigation is required.

Required APMs and MMs: APM HAZ-1

3.19.5 References

Antelope Valley - East Kern Water Agency. (2018, April). Annual Water Resources Report 2017.

Arcadis & Southern California Edison. (2021). Unconnected Utilities and Other Infrastructure.

Arvin-Edison Water Storage District. (n.d.). *Facts About the District*. Retrieved June 9, 2022, from https://aewsd.org/about/facts/

Bear Valley Community Services District. (2020). *About the Bear Valley Community Services District*. Retrieved from https://www.bvcsd.com/

CalRecycle. (2023, April 24). *SWIS Facility/Site Search*. Retrieved from https://www2.calrecycle.ca.gov/SolidWaste/Site/Search

City of Arvin. (2019). 2019 Sewer Master Plan Volume 1. City of Arvin, California.

City of Arvin. (2019, November 8). Sewer System Management Plan. City of Arvin, California.

City of Arvin. (n.d.). Wastewater. Retrieved June 9, 2022, from https://www.arvin.org/203/Wastewater#:~:text=The%20City%20of%20Arvin%20treats,to%20grow%20non%2Dfood%20crops.

City of Bakersfield. (2002, December). Metropolitan Bakersfield General Plan.

City of Bakersfield. (2023). *Wastewater Treatment Plants*. Retrieved June 9, 2022, from https://www.bakersfieldcity.us/679/Wastewater-Treatment-Plants

City of Bakersfield and County of Kern. (2015, October). 2014 Storm Water Management Plan.

City of Tehachapi. (n.d.). *Wastewater*. Retrieved June 9, 2022, from https://liveuptehachapi.com/92/Wastewater#:~:text=Tehachapi's%20wastewater%20treatment%20plant%20is,utilized%20is%20called%20Activated%20Sludge.

Greater Tehachapi Area. (2016, June). 2015 Regional Urban Water Management Plan.

KCWA. (2021). *Agency Functions*. Retrieved June 9, 2022 , from https://www.kcwa.com/agencyfunction/

Kern County Public Works. (n.d.). *Sewer Information*. Retrieved June 9, 2022, from https://www.kernpublicworks.com/services/development/sewer-information

Provost & Pritchard Consulting Group. (2016). 2016 Municipal Service Review Lebec County Water District.

Provost & Pritchard Consulting Group. (2020). Kern Integrated Regional Water Management Plan.

SCE. (2022). About Us. *Who We Are*. Retrieved June 7, 2022, from https://www.sce.com/about-us/who-we-are

SoCal Edison. (2022, September 21). Pipelines. SoCal Edison.

SoCalGas. (2022). Company Profile. Retrieved June 7, 2022, from https://www.socalgas.com/about-us/company-profile

Stallion Springs Community Services District. (2022). *Water*. Retrieved June 9, 2022, from https://www.stallionspringscsd.com/water

3.20 Wildfire

This section presents the wildfire risk environmental setting and impact analysis for the Proposed Project. This section includes existing wildfire conditions in the Proposed Project area, applicable regulations, environmental impacts, and mitigation measures required to reduce or avoid significant effects.

3.20.1 Environmental Setting

Wildfires (or wildland fires) are unplanned and uncontrolled fires that occur in natural areas. Wildfires can occur from natural phenomenon (e.g., lightning); however, most wildfires are caused by human activities. Wildfires can be beneficial to ecosystems, but large, severe wildfires pose a threat to people, property, and the environment. The susceptibility of an area to wildfires is dependent on three factors—topography, fuel loads, and weather conditions—that contribute to the intensity, rate of spread, and severity of wildfires. Topographical features can exacerbate wildfire conditions as wildfire spread accelerates upslope. Fuel load is the amount of live or dead vegetation that is consumed during a wildfire. Of the three factors that affect wildfire risk as weather conditions influence (i.e., temperature, humidity, fuel moisture, and wind direction, wind is one of the most important factors for wildfire because it can bring a fresh supply of oxygen to the fire and push the fire toward a new fuel source (Holsinger, Parks, & Miller , 2016). The temperature of fuels is determined by the ambient temperature because fuels attain their heat by absorbing surrounding solar radiation. In general, fuels will ignite more readily at high temperatures than at low temperatures. Humidity, which is the amount of water vapor in the air, affects the moisture level of a fuel. At low humidity levels, fuels become dry and, therefore, catch fire more easily and burn more quickly than when humidity levels are high. Lastly, topographical features such as elevation, slope (the steepness of the land), aspect (the direction a slope faces), or other land features can promote or hinder the spread of fire. Elevation and aspect can determine how hot and dry a given area will be. For example, higher elevations will be drier but colder than low ones, and a north-facing slope will be slower to heat up or dry out. Slope can determine how quickly a fire will move through hills in a landscape. For example, if a fire ignites at the bottom of a steep slope, it will spread up the slope much more quickly than down because it can pre-heat the upslope fuels with rising hot air, and upward drafts are more likely to create spot fires (National Park Service, 2017)

Information on wildfire was obtained through a review of literature, maps, *geographic information system* (GIS) data, and online sources published by the California Department of Forestry and Fire Protection (CAL FIRE, United States Department of Agriculture's Forest Service (USDA Forest Service), and CPUC.

Vegetation (Fuels)

For the purpose of predicting the behavior and effects of wildfire using fire behavior fuel model (FBFMs), fuels are classified into four groups: grasses, brush (or shrubs), timber litter, and slash (Anderson 1982). The area of the Proposed Project alignment is primarily dominated by grasses

or a mixture of grasses and shrubs. The modeled spread rate and flame length along the Proposed Project alignment vary greatly depending on the fuel type composition and fuel loads.

Topography

The topography along the Proposed Project alignment is generally flat at an elevation of approximately 1,000 feet *above mean sea level* (msl). The elevation increases where the alignment traverses more mountainous areas toward the Gorman and Banducci substations. The Proposed Project alignment reaches an elevation of approximately 3,600 feet amsl towards the Gorman substation and an elevation of 3,800 feet amsl towards the Banducci substation.

Winds

The Proposed Project alignment is located within the San Joaquin Valley Air Basin (SJVAB), Mojave Desert Air Basin (MDAB), and South Coast Air Basin (SCAB). The MDAB and SJVAB basins are separated by the Tehachapi Mountains to the east; the SJVAB and SCAB basins are separated by the San Gabriel Mountains to the south. During the summer, the wind generally flows in a south–southeasterly direction through the San Joaquin Valley. In the winter, the winds flow in a north–northwesterly direction. High winds may occur in the spring and summer seasons that could result in erosion (i.e., windblown dust) and increase the potential for wildfire risk (SJVUAPCD, 2003).

The 40 Scott and Burgan Fire Behavior Fuel Model (FBFM40) predicts spread rate and flame length for based on fuel composition, fuel loads along with other factors including humidity and conditions following different treatment scenarios. Figure 3.20-1 shows the FBFM40 assigned within the area along the Proposed Project alignment.

High Fire Threat Districts

In response to the CPUC's Fire Safety Rulemaking, the CPUC mapped high fire threat areas where more stringent requirements would be implemented due to the elevated risk for power line fires (CPUC n.d.). The CPUC High Fire Threat District (HFTD) maps to identify zones of utility-associated wildfire risk throughout the state. The HFTD maps consist of three fire-threat layers:

- Tier 1: High hazard zones on the USDA Forest Service/CAL FIRE joint map of tree mortality high hazard zones
- Tier 2: Elevated fire risk (including likelihood and potential impacts on people and property) from utility-associated wildfires
- Tier 3: Extreme fire risk (including likelihood and potential impacts on people and property) from utility-associated wildfires.

The HFTDs designate areas where fire-safety regulations apply. These fire-safety regulations include expanding vegetation clearance around power lines and requiring investor-owned utilities in southern California to prepare a plan to reduce the risk of fire ignitions by overhead facilities in high fire-threat areas during extreme fire weather events (CPUC, 2023).

Figure 3.20-2 shows the fire hazard severity zones (FHSZ) within the project alignment. The northern portion of Segment 1, the southern portion of Segment 2, and the entire length of Segment 3 is located within a Tier 2 HTFD. The western portion of Segment 4 is located in a Tier 2 HFTD and the eastern third of Segment 4 is located within a Tier 3 HFTD. The entirety of Segment 5 is located in a Tier 3 HTFD.

Historic Fire Occurrence

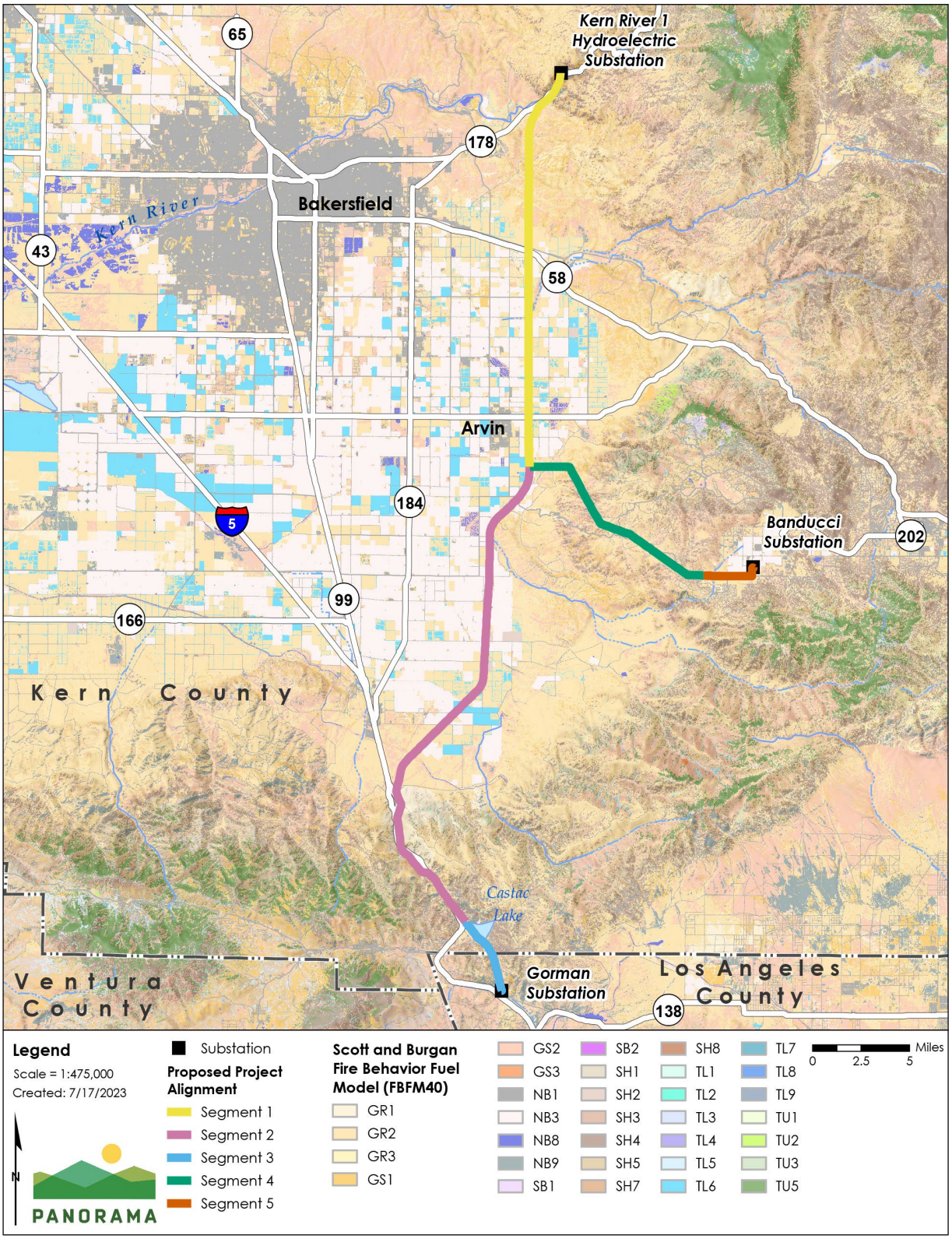
Fire history can provide information on fire frequency, ignition sources, and areas susceptible to wildfires. Ten fires have occurred along the Proposed Project alignment from 2010 to the present (CalFIRE, 2013; CalFIRE, 2023). Details of those fires and their ignition sources are presented in Table 3.20-1. The largest fires that occurred along the alignment were the Comanche and the Breckenridge Complex. The Breckenridge Complex fire occurred along the northern portion of Segment 1 in the SNF, and the Comanche fire occurred along Segments 2 and 4 of the Proposed Project alignment.

Table 3.20-1 Wildfire Occurrences Along the Proposed Project Alignment

Wildfire name	Year	Location	Ignition source/location	No. acres burned
Base	2010	Kern County	Equipment use/unknown	150
Breckenridge Complex	2011	Kern County	Lightning/unknown	25,230
Comanche	2011	Kern county	Lightning/unknown	25,939
Rancho	2013	Kern County	Smoking/unknown	712
Water	2013	Kern County	Unknown/unknown	613
Gorman	2016	Los Angeles County	Unknown/unknown	5
Gorman	2017	Los Angeles County	Unknown/unknown	150
Switch	2017	Kern County	Unknown/unknown	10
Tejon	2017	Kern County	Unknown/unknown	8
Towerline	2017	Kern County	Unknown/unknown	2
Crane	2021	Kern County	Unknown/unknown	47
Canyon	2021	Kern County	Unknown/unknown	217
Shell	2021	Kern County	Unknown/unknown	1,828

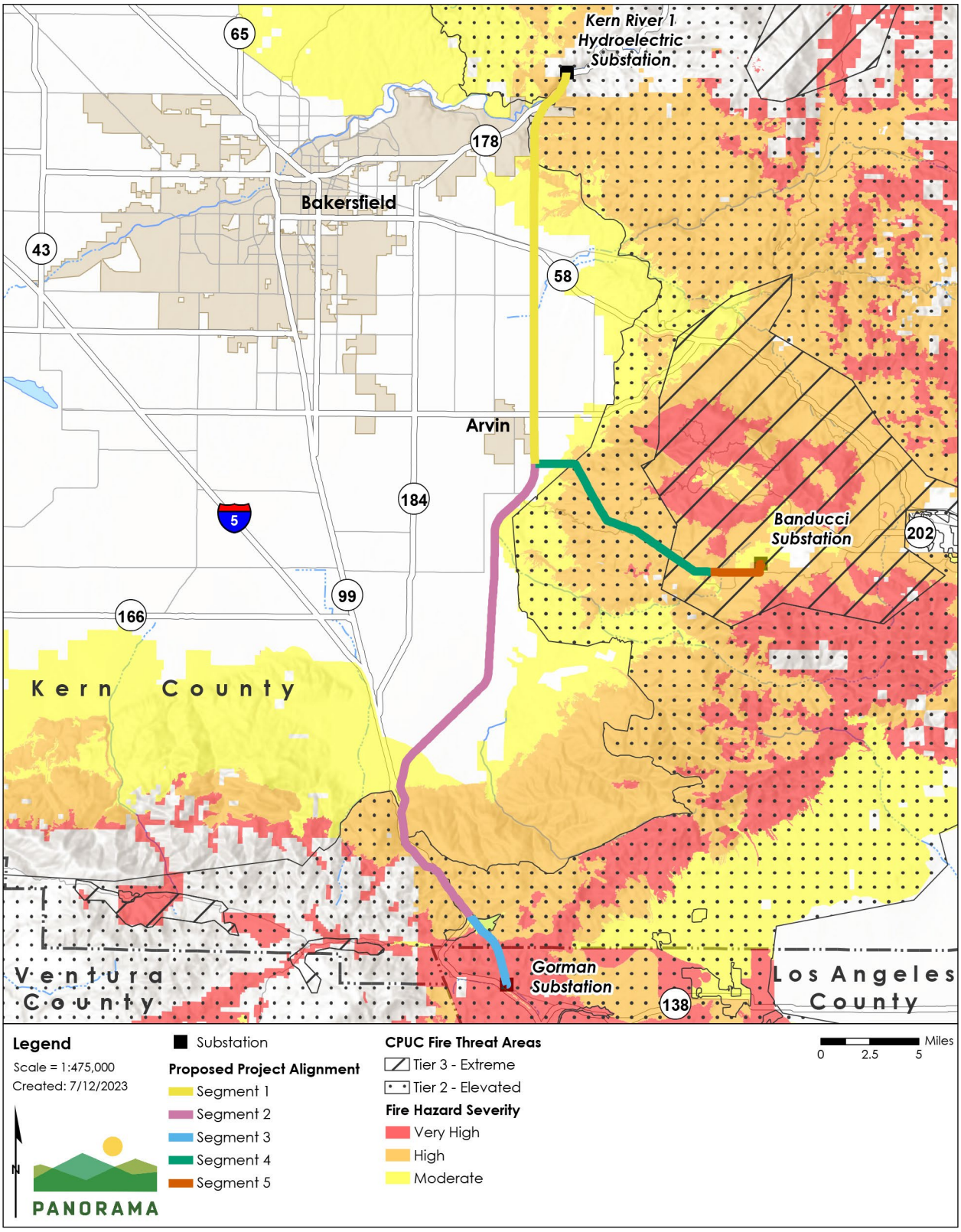
(CalFIRE, 2013)

Figure 3.20-1 40 Scott and Burgan Fire Behavior Fuel Model



Source: (EROS, U.S. Geological Survey 2023)

Figure 3.20-2 Fire Hazard Severity Zones and CPUC Fire Threat Areas



Source: (CAL FIRE 2023; CPUC 2021)

Wildland Urban Interface

A Wildland Urban Interface (WUI) is defined an area where homes and structures are located in close proximity to or along the boundary of wildlands. Communities in the WUI are at greater risk for loss of life and property. Approximately 22 percent of the Proposed Project alignment is located within the WUI. The northern portion of Segment 1 and southern portion of Segment 2 are located within the WUI. The entirety of Segment 3 is located in the WUI. The eastern section of Segment 4 and most of Segment 5 are also located in the WUI. WUI designations in the project area are shown in Figure 3.20-3.

Emergency Response and Evacuation

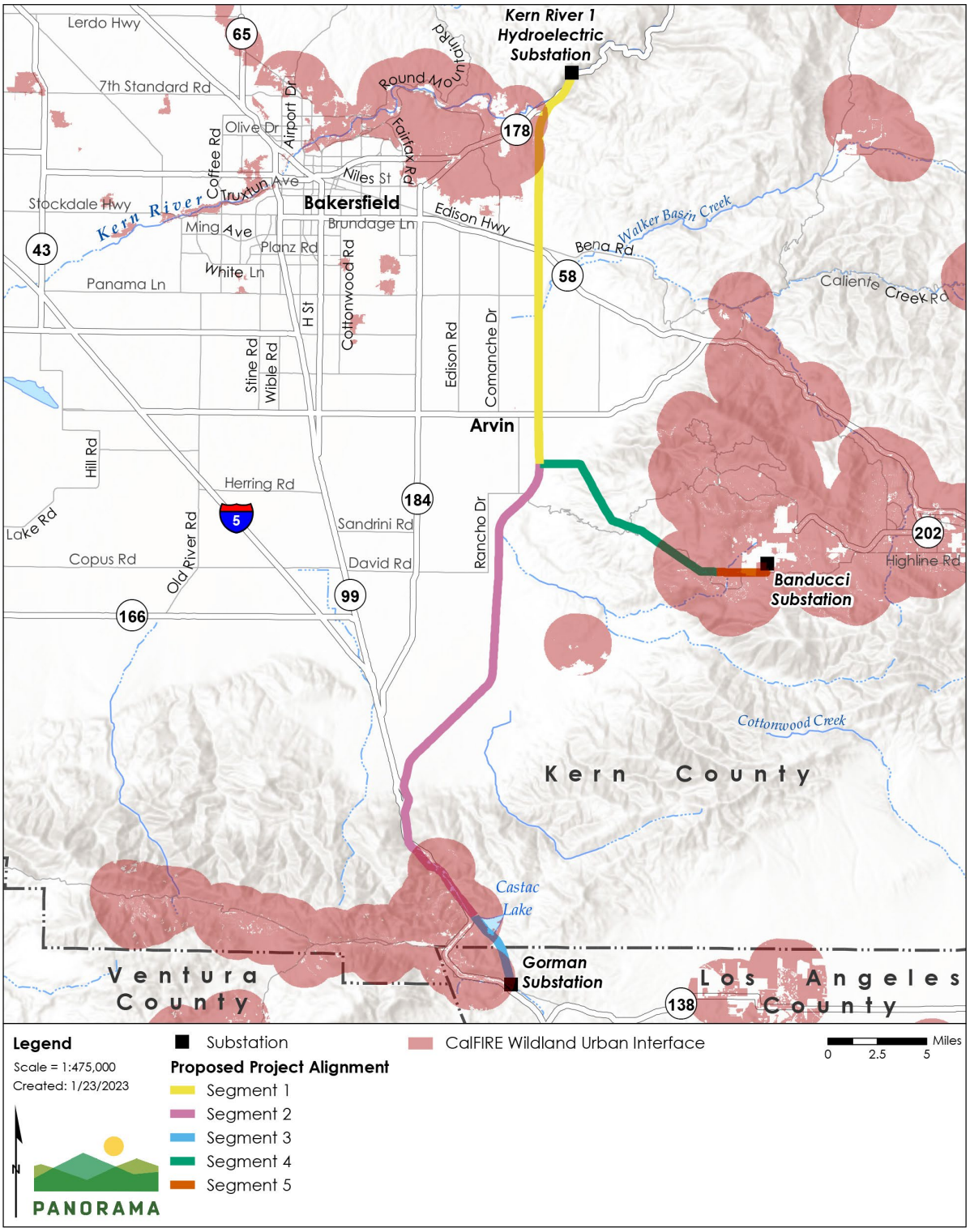
The California Governor's Office of Emergency Services (Cal OES) is responsible for overseeing and coordinating emergency preparedness, response, recovery and homeland security activities within the State of California. Cal OES established a Standard Emergency Management System (SEMS) to harmonize incident command, mutual aid agreements, roles, responsibilities, and training. Kern County and Los Angeles County each have developed and implemented emergency response plans.

There are several designated evacuation routes that are crossed by the Proposed Project along Segment 1. These evacuation routes include SR 178, Edison Highway, SR 58, East Panama Lane, Panama Road, Buena Vista Road, and SR 223 (SCE, 2022; Robert Olson Associates, 2009). The Proposed Project alignment also crosses Interstate 5, which is identified by Los Angeles County as a disaster route (Los Angeles County, n.d.). The following public roadways crossed by the Proposed Project alignment lack a secondary point of access or exit: Badger Court, Quail Drive, Jacks Hill Road, Elkhorn Place, Longhorn Lane, Angus Court along Segment 4, and Birkdale Court in Segment 5.

Environmental Setting by Segment

The wildfire risk for the Proposed Project area and planned evacuation routes are summarized by segment in Table 3.20-2.

Figure 3.20-3 Wildland Urban Interface Areas



Source: (FRAP 2015)

Table 3.20-2 Environmental Setting by Segment

Segment	CAL FIRE FHSZ	CAL FIRE Responsibility Area [a]	CPUC Fire Threat District	WUI area	Planned emergency evacuation routes
Segment 1	Moderate or high (northern portion) Unzoned (southern portion)	FRA[b] SRA[c] LRA[d]	Tier 2 (northern portion)	The northern portion along the boundary of the City of Bakersfield	SR 178 SR 58 SR 223 East Panama Lane Panama Road Buena Vista Road
Segment 2	Moderate or high (northern and southern portion) Unzoned (central portion)	FRA SRA LRA	Tier 2 (southern portion)	Southern portion of the segment	None
Segment 3	Moderate or high (northern and central portion) Very high (southern portion)	SRA	Tier 2 (entire segment)	Majority of the segment	None
Segment 4	Moderate or high (entire segment)	SRA LRA	Tier 2 (western portion) Tier 3 (eastern portion)	Eastern portion near the city of Tehachapi and Stallion Springs CSD	None
Segment 5	Moderate or high (entire segment)	SRA LRA	Tier 3 (entire segment)	Majority of the segment	None

Notes:

a. FRA: federal responsibility area; SRA: state responsibility area; LRA: local responsibility area

b. Federal Responsibility Area (FRA) are areas where federal agencies have jurisdiction over fire prevention and suppression.

c. State Responsibility Areas (SRA) are areas where CalFIRE is the primary emergency response agency for fire prevention.

d. Local Responsibility Area (LRA) are areas where the local agency, city, county, or district is responsible for fire prevention and suppression.

Source: (FRAP 2015; 2023; CPUC 2021; CAL FIRE 2017 (Robert Olson Associates, 2009))

3.20.2 Applicable Regulations, Policies and Standards

Federal, State, and local regulations were reviewed for applicability to the Proposed Project.

Federal Regulations, Policies and Standards

National Electric Safety Code and American National Standards Institute Guidelines

A variety of line and tower clearance standards are used throughout the electric transmission industry. Nationally, most transmission line owners follow the National Electric Safety Code rules or American National Standards Institute guidelines, or both, when managing vegetation around transmission system equipment. The National Electric Safety Code governs electric safety rules, including transmission wire clearance standards, whereas the applicable American National Standards Institute code governs the practice of pruning and removal of vegetation.

State Regulations, Policies and Standards

California State Hazard Mitigation Plan

The Cal OES 2018 California State Hazard Mitigation Plan (SHMP) represents the State's primary hazard mitigation guidance document. The 2018 SHMP continues to build upon the State's commitment to reduce or eliminate potential risks and impacts of natural and human-caused disasters to help communities with their mitigation and disaster resiliency efforts. The 2018 plan includes the following: an updated statewide risk assessment, disaster history, and statistics; recent mitigation progress, success stories, and best practices; updated State hazard mitigation goals, objectives, and strategies; and updated climate mitigation progress and adaptation strategies. The Federal Emergency Management Agency (FEMA) approved California's 2018 SHMP on September 28, 2018. The SHMP identifies and profiles wildfire hazards throughout the state and includes a comprehensive statewide fire hazards risk assessment. The SHMP emphasizes that preparation and implementation of local hazard mitigation plans with linkage to a jurisdiction's general plan play an important role in the fire mitigation process (Cal OES, 2018).

California Department of Forestry and Fire Protection

Pursuant to Public Resources Code (PRC) sections 4201 to 4204 and California Government Code (CGC) sections 51175 to 51189, CAL FIRE has created statewide FHSZ maps that identify areas of state and local responsibility for preventing or suppressing fires. Within state responsibility areas (SRAs), the director of Cal Fire has designated areas as moderate, high, or very high FHSZ (PRC § 4202). Outside of SRAs and within local responsibility areas (LRAs), the director of Cal Fire is charged with recommending areas to be designated as very high FHSZ (CGC § 51178). These recommendations are to be reviewed and adopted in ordinances by local agencies (CGC § 51179); however, not all local agencies have complied. Responsibility area designations are available as a GIS data set the State Geoportal (California Department of Technology n.d.) or through FRAMP's FHSZ viewer (FRAP n.d.).

California Public Utilities Commission General Order 95

CPUC's GO 95 is the key standard governing the design, construction, operation, and maintenance of overhead electric lines in the State. GO 95 Rule 35 governs tree trimming

requirements, including minimum vegetation clearances around power lines in extreme and very high fire threat zones in Southern California. The rule requires radial clearances to be 120 inches from vegetation for bare line conductors in extreme and very high fire threat zones in southern California. GO 95 Rule 31.2 requires that lines be inspected frequently and thoroughly to ensure that they are in good condition, and that lines temporarily out of service be inspected and maintained in such condition so as not to create a hazard.

California Public Utilities Commission General Order 166

The purpose of the standards contained in GO 166 is to ensure that jurisdictional electric utilities are prepared for emergencies and disasters in order to minimize damage and inconvenience to the public which may occur as a result of electric system failures, major outages, or hazards posed by damage to electric distribution facilities. The standards require, among others, that each jurisdictional electric utility prepare an emergency response plan and update the plan annually; conduct annual emergency training and exercises using the utilities emergency response plan; and coordinate emergency plans with State and local public safety agencies.

California Public Resources Code Sections 4292 and 4293

PRC section 4292 requires a 10-foot area of clearance of any tree branches or ground vegetation around the base of power poles carrying more than 110 kV. The firebreak clearances required by PRC section 4292 are applicable within an imaginary cylindrical space surrounding each pole or tower on which a switch, fuse, transformer or lightning arrester is attached and surrounding each dead end or corner pole. PRC section 4293 dictates guidelines for line clearance, including a minimum of 10 feet of vegetation clearance around any conductor operating at 110 kV or higher.

California Health and Safety Code Section 13009

Health and Safety Code Section 13009 permits CAL FIRE to file civil actions to recover fire suppression costs from a party who causes a fire (1) negligently or (2) in violation of a law or an order to correct a fire hazard. CAL FIRE established the Civil Cost Recovery Program to satisfy the statute's intent to assign financial responsibility to culpable parties and to prevent fires through deterrence.

Senate Bill 901

Signed into law in September 2018, SB 901, among other things, amends the Public Utilities Code to require utilities to prepare wildfire mitigation measures if the utilities' overhead electrical lines and equipment are located in an area that has a significant risk of wildfire resulting from those electrical lines and equipment. The bill requires the wildfire mitigation measures to incorporate specified information and procedures and utilities to prepare a wildfire mitigation plan.

SCE submits its wildfire mitigation plan to the CPUC annually in compliance with SB 901. The wildfire mitigation plan describes strategies, programs and activities that are in place, being implemented or are under development by SCE to proactively address and mitigate the threat of electrical-infrastructure-associated ignitions that could lead to wildfires, further harden the

electric system against wildfires, and enhance wildfire suppression efforts. The latest Wildfire Mitigation Plan (2023–2025) emphasizes the need to reduce Public Safety Power Shutoff impacts and wildfire risk associated with utilities.

Fire Prevention Standards for Electric Utilities

The Fire Prevention Standards for Electric Utilities (CCR Title 14, §§ 1250–1258) mandate definitions, maps, specifications, and clearance standards for applying the requirements of PRC sections 4292 to 4296 to projects in SRAs under the jurisdiction of CAL FIRE.

California Fire Code

The California Fire Code 2016 (CCR Title 24, part 9) is based on the International Fire Code from the International Code Council and contains consensus standards related to establishing good practices to safeguard the public health, safety, and general welfare from the hazards of fire, explosion, or dangerous conditions in new or existing buildings, structures, and premises.

Government Code Section 51175 to 51189

Government Code sections 51175 to 51189 direct Cal Fire to identify areas of very high fire hazard severity zones (VHFHSZ) within LRAs. Mapping of the areas is based on data and models of potential fuels over a 30-to-50-year time horizon along with their associated expected fire behavior and expected burn probabilities to quantify the likelihood and nature of vegetation fire exposure to buildings.

LRA VHFHSZ maps were initially developed in 1996 and are now being updated based on improved science, mapping techniques, and data. Local governments had 120 days from receiving the CAL FIRE recommendations to designate, by ordinance, very high fire hazard severity zones within their jurisdictions. Local governments were able to add additional VHFHSZs. There was no requirement for local government to report their final action to CAL FIRE once recommended zones are adopted. Consequently, users are directed to the appropriate local entity (county, city, fire department, or fire protection district) to determine the status of the local fire hazard severity zone ordinance.

Local Regulations, Policies and Standards

The CPUC has sole and exclusive State jurisdiction over the siting and design of the Proposed Project because it authorizes the construction, operation, and maintenance of investor-owned public utility facilities. Pursuant to GO 131-D section XIV.B, "Local jurisdictions acting pursuant to local authority are preempted from regulating electric power line projects, distribution lines, substations, or electric facilities constructed by public utilities subject to the CPUC's jurisdiction. However, in locating such projects, the public utilities shall consult with local agencies regarding land use matters." Consequently, public utilities are directed to consider local regulations and consult with local agencies, but the counties' and cities' regulations are not applicable as the counties and cities do not have jurisdiction over the Proposed Project. Accordingly, the following discussion of local land use laws, regulations, and policies is provided for informational purposes only.

Kern County Multi-Jurisdiction Hazard Mitigation Plan

Kern County and several participating jurisdictions prepared in 2020 a Comprehensive Update to the Multi-Jurisdiction Hazard Mitigation Plan (MHMP), originally approved by FEMA in 2006. The purpose of this plan is to guide hazard mitigation planning, including wildfire hazards, to better protect the people and property of the County from the effects of hazard events. The plan demonstrates the commitment of each participating jurisdiction to reducing risks from hazards and serves as a tool to help decision makers direct mitigation activities and resources.

Kern County Emergency Operations Plan

Kern County Fire Department maintains and implements the Kern County EOP, which provides a framework for performing emergency functions in preparation for, during, and after and emergency event. The EOP complies with State and federal emergency management systems, including the Standardized Emergency Management System (SEMS) and the National Incident Management Systems (NIMS). The EOP comprises four sections: (1) Basic Plan; (2) General Procedures; (3) Emergency Operations Center Procedures and Annexes; and (4) Contingency Plans. The Fire, Rescue, and HazMat Branch of the Emergency Operations Center coordinates the activities of all personnel engaged in fire, rescue and hazardous materials response (County of Kern 2022).

Kern County Fire Department Unit Strategic Fire Plan

The Kern County Fire Department Strategic Fire Plan documents the assessment of wildland fire risk and mitigation throughout the SRA within the county (Kern County Fire Department 2021). It includes stakeholder contributions and priorities and identifies strategic targets for pre-fire solutions as defined by the people who live and work with the local fire problem. The goal of the plan is to reduce costs and losses from wildfire by protecting assets at risk through focused pre-fire management prescriptions and increasing initial attack success (Kern County Fire Department, 2018).

Los Angeles All-Hazards Mitigation Plan

The Los Angeles All-Hazards Mitigation Plan assesses risks from natural hazards and develops mitigation plans for reducing the risks. The plan meets the requirements of the Disaster Management Act and was developed using FEMA's Local Mitigation Plan Review Tool, which provides guidance for designing local hazard mitigation plans to meet Disaster Management Act regulations. The plan identifies wildfire risk for Los Angeles County and establishes mitigation strategies and actions that could be utilized to minimize wildfire risk (Los Angeles County, 2020).

Kern County General Plan

The Kern County General Plan Safety Element guides public safety and wildland fire planning within Kern County (County of Kern 2009). The Safety Element contains goals, policies, and

implementation measures relevant to the analysis of wildfire for the Proposed Project, including the following:

Goals:

- Minimize injuries and loss of life and reduce property damage.
- Assist in the allocation of public resources in Kern County to develop information regarding geologic, fire, and flood safety hazards and to develop a systematic approach toward the protection of public health, safety, and welfare from such hazards.
- Create an awareness of the residents in Kern County through the dissemination of information about geologic, fire, and flood safety hazards.
- Reduce the public's exposure to fire, explosion, blowout, and other hazards associated with the accidental release of crude oil, natural gas, and hydrogen sulfide gas.

Policies:

- The County shall encourage extra precautions be taken for the design of significant lifeline installations, such as highways, utilities, and petrochemical pipelines.
- The adopted Kern County, California Multi-Hazard Mitigation Plan is incorporated by reference. This multi-jurisdictional plan, approved in compliance with the Disaster Mitigation Act of 2000, provides long-term planning to reduce the impacts of future disasters.

Implementation Measures:

- All hazards (geologic, fire, and flood) should be considered whenever a Planning Commission or Board of Supervisor's action could involve the establishment of a land use activity susceptible to such hazards.
- The adopted multi-jurisdictional Kern County, California Multi-Hazard Mitigation Plan, as approved by FEMA, shall be used as a source document for preparation of environmental documents pursuant to CEQA, evaluation of project proposals, formulation of potential mitigation, and identification of specific actions that could, if implemented, mitigate impacts from future disasters and other threats to public safety.

The Metropolitan Bakersfield General Plan

The Metropolitan Bakersfield General Plan Safety Element guides public safety and wildland fire planning within the City of Bakersfield (City of Bakersfield 2022). The Safety Element contains the following goal, policy, and implementation measure relevant to the analysis of wildfire for the Proposed Project:

Goal:

- Develop sustainable communities to preserve life, protect property, the environment, and the economy from natural hazards.

Policy:

- The adopted Kern County, California Multi-Hazard Mitigation Plan is incorporated by reference. This multi-jurisdictional plan, approved in compliance

with the Disaster Mitigation Act of 2000, provides long-term planning to reduce the impacts of future disasters.

Implementation Measure:

- The adopted multi-jurisdictional Kern County, California Multi-Hazard Mitigation Plan, as approved by FEMA, shall be used as a source document for preparation of environmental documents pursuant to CEQA, evaluation of project proposals, formulation of potential mitigation and identification of specific actions that could, if implemented, mitigate impacts from future disasters and other threats to public safety.

3.20.3 Applicant Proposed Measures

SCE has proposed measures to reduce environmental impacts. The significance of the impact is first considered prior to application of APMs and a significance determination is made. The implementation of the APMs is then considered as part of the Proposed Project when determining whether impacts would be significant and thus would require mitigation. These APMs would be incorporated as part of any CPUC project approval, and SCE would be required to adhere to the APM as well as any identified mitigation measures. The APMs are included in the MMRP for the Proposed Project, and the implementation of the measures would be monitored and documented in the same manner as mitigation measures. The APMs that are applicable to the wildfire impact analysis are provided in Table 3.20-3.

CPUC Environmental Measures

The CPUC has developed additional standard measures to reduce potential impacts from wildfires. The CPUC standard measures will be included in the MMRP for the Proposed Project and implemented during Proposed Project construction. The CPUC measure applicable for wildfire is listed below in .

Table 3.20-3 Applicant Proposed Measures

APM Number	Requirements
HAZ-3	**Prepare and Implement a Project-Specific Fire Management Plan.** A Fire Prevention and Emergency Response Plan will be developed to ensure the health and safety of construction workers, SCE personnel, and the public during Project construction. The Plan shall cover: • The purpose and applicability of the plan • Responsibilities and duties • Project areas where the plan applies • Procedures for incorporating Red Flag Warnings, Fire Potential Index (FPI), Project Activity Level (PAL), and equivalent indicators in determining fire weather related work restrictions • Procedures for fire reporting, response, prevention, and evacuation routes • Coordination procedures with federal and local fire officials • Crew training, including fire safety practices and restrictions • Fire suppression and communication equipment required to be on hand during construction • Method for verification that Plan protocols and requirements are being followed • Post-construction fire prevention and response measures

APM Number	Requirements
	The Project-specific Fire Prevention and Emergency Response Plan for construction of the project will be prepared by SCE and submitted to CPUC, CalFIRE, Kern and Los Angeles counties, and local municipal fire agencies for review at least 30 days prior to initiation of construction. SCE will address all comments received from reviewing agencies and provide the final Fire Prevention and Emergency Response Plan to reviewing agencies for approval prior to initiating construction activities.
TRA-1	SCE will implement traffic control measures consistent with those published in the Manual on Uniform Traffic Control Devices, as written and amended by Caltrans for the State of California (CA MUTCD) and using standard templates from the California Temporary Traffic Control Handbook (CATTCH) (California Inter-Utility Coordinating Committee 2018). These measures will be implemented as and where necessary as described in the CA MUTCD and/or CATTCH, or in ministerial permits.
TRA-2	• Prior to construction, SCE will consult with the FAA regarding helicopter flight plans that will take place during construction. This consultation will include, but not be limited to: • Providing locations of helicopter construction staging and work areas. • Establishing designated flight corridors between staging and work areas. • Means to ensure external load operations avoid occupied structures and roadways. • Locations of traffic control where external load operations will cross public roadways. • Locations where Congested Area Plans may be required for filing with the FAA. • Identifying any flight restrictions recommended/required by the FAA. The results of this coordination will be provided to the CPUC.

Table 3.20-4 CPUC Environmental Measures

CPUC Draft Environmental Measure	Requirement
Construction Fire Prevention Plan	A project-specific Construction Fire Prevention Plan for both construction and operation of the project shall be submitted for review prior to initiation of construction. A draft copy of the Plan shall be provided to the CPUC and state and local fire agencies at least 90 days before the start of any construction activities in areas designated as Very High or High Fire Hazard Severity Zones. Plan reviewers shall also include federal, state, or local agencies with jurisdiction over areas where the project is located. The final Plan shall be approved by the CPUC at least 30 days prior to the initiation of construction activities. The Plan shall be fully implemented throughout the construction period and include the following at a minimum: • The purpose and applicability of the Plan • Responsibilities and duties • Preparedness training and drills • Procedures for fire reporting, response, and prevention that include: – Identification of daily site-specific risk conditions – The tools and equipment needed on vehicles to be on hand at sites – Reiteration of fire prevention and safety considerations during tailboard meetings.

CPUC Draft Environmental Measure	Requirement
	– Daily monitoring of the red-flag warning system with appropriate restrictions on types and levels of permissible activity. • Coordination procedures with federal and local fire officials. • Crew training, including fire safety practices and restrictions • Method(s) for verifying that all Plan protocols and requirements are being followed A project Fire Marshal or similar qualified position shall be established to enforce all provisions of the Construction Fire Prevention Plan as well as perform other duties related to fire detection, prevention, and suppression for the project. Construction activities shall be monitored to ensure implementation and effectiveness of the Plan.
Fire Prevention Practices (Construction and Maintenance)	The Applicant shall implement ongoing fire patrols during the fire season as defined each year by local, state, and federal fire agencies. These dates vary from year to year, generally occurring from late spring through dry winter periods. During Red Flag Warning events, as issued daily by the National Weather Service, all construction/maintenance activities shall cease, with an exception for transmission line testing, repairs, unfinished work, or other specific activities which may be allowed if the facility/equipment poses a greater fire risk if left in its current state. All construction/maintenance crews and inspectors shall be provided with radio and cellular telephone access that is operational in all work areas and access routes to allow for immediate reporting of fires. Communication pathways and equipment shall be tested and confirmed operational each day prior to initiating construction/maintenance activities at each work site. All fires shall be reported to the fire agencies with jurisdiction in the area immediately upon discovery of the ignition. All construction/maintenance personnel shall be trained in fire-safe actions, initial attack firefighting, and fire reporting. All construction/maintenance personnel shall be trained and equipped to extinguish small fires in order to prevent them from growing into more serious threats. All construction/maintenance personnel shall carry at all times a laminated card and be provided a hard hat sticker that list pertinent telephone numbers for reporting fires and defining immediate steps to take if a fire starts. Information on laminated contact cards and hard hat stickers shall be updated and redistributed to all construction/maintenance personnel and outdated cards and hard hat stickers shall be destroyed prior to the initiation of construction/maintenance activities on the day the information change goes into effect. Construction/maintenance personnel shall have fire suppression equipment on all construction vehicles. Construction/maintenance personnel shall be required to park vehicles away from dry vegetation. Water tanks and/or water trucks shall be sited or available at active project sites for fire protection during construction. The Applicant shall coordinate with applicable local fire departments prior to construction/maintenance activities to determine the appropriate amounts of fire equipment to be carried on vehicles and, should a fire occur, to coordinate fire suppression activities.

3.20.4 Environmental Analysis

Approach to Impact Analysis

This impact analysis considers whether implementation of the Proposed Project would result in significant wildfire impacts. In assessing impacts during construction, consideration is given to

existing conditions, including vegetation and existing transmission lines and equipment, and how those may be altered as a result of implementing the Proposed Project. Consideration is also given to the fire-safety related procedures and practices that would apply during construction. In assessing impacts during operations and maintenance, consideration is given to ongoing vegetation management and equipment maintenance and safety practices, procedures, and training.

Summary of Impacts

Table 3.20-5 presents a summary of the CEQA significance criteria and impacts related to wildfires that would occur during construction, operation, and maintenance of the Proposed Project.

Table 3.20-5 Summary of Proposed Project Impacts to Wildfires

Would the proposed project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Substantially impact 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.	☐	☐	☒	☐
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes.	☐	☐	☒	☐

Impact Discussion

a) Substantially impact an adopted emergency response plan or emergency evacuation plan

Construction

As discussed in 4.9: Hazards and Hazardous Materials and Section 4.17: Transportation and Traffic, the Proposed Project would not significantly impact traffic circulation or increase demands on existing emergency response services during construction activities. However, replacing and rebuilding the subtransmission lines may require temporary closure of travel lanes on roadways during structure or conductor installation. Guard structures would be installed at road crossings to generally maintain vehicle access on roadways along the alignment; however, there may be locations where temporary lane or road closure is necessary

for worker and vehicle safety. Because the Proposed Project crosses roads and highways that are part of an emergency evacuation plan, temporary closure of a roadway or travel lane could impact an emergency evacuation plan. Construction would also involve the movement of oversize vehicles that could affect emergency vehicle access to and through construction areas, which has the potential to impact emergency response.

SCE has proposed implementation of APMs as part of the Proposed Project. Implementation of APM TRA-1 requires the implementation of traffic control measures consistent with those in the Manual on Uniform Traffic Control Devices. Traffic control measures would include coordinating with local authorities, including emergency responders, regarding temporary lane or road closures. Vehicle movements along, and use of, access roads would be communicated to and coordinated with the appropriate agencies as necessary. At construction work areas, equipment would be situated or attended to facilitate adequate emergency vehicle access. In the event of an emergency, construction would halt and access would be restored for emergency responders. Additionally, MM Traffic-3 requires SCE to notify local emergency personnel at least 1 week prior to lane or road closures. With implementation of APM TRA-1 and MM Traffic-5, construction of the Proposed Project would not interference with emergency response or evacuation plans, and the impact would be less than significant.

Operation and Maintenance

Operation and maintenance activities for the Proposed Project would be similar to existing operation and maintenance performed at the existing subtransmission line and substations. Similar to existing facilities, operation and maintenance of the Proposed Project would generally not occur in roadways but may, under limited circumstances, require temporary lane closures to access to the alignment. No additional impact would occur as a result of the Proposed Project because the Proposed Project would not require increased frequency of temporary lane closures. There would be no impact on emergency response or evacuation plans from operation and maintenance of the Proposed Project.

Required APMs and MMs: APM TRA-1 and MM Traffic-3

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.

As shown in Figure 3.20-2, portions of Segments 4 and all of Segment 5 are in CPUC Tier 3 (Extreme) HFTDs, and portion of Segments 1, 2, 3, and 4 are in Tier 2 (Elevated) HFTDs. As described above under Section 3.20.1, the primary factors that impact wildfire intensity and behavior include weather (e.g., wind, humidity), fuel conditions (e.g., vegetation type and age, accumulation of dead material), and topography (e.g., steep slopes). As discussed above, topography along the Proposed Project alignment is generally flat except for the mountainous areas near the Gorman and Banducci Substations. Hot, dry summer winds in the San Joaquin Valley could contribute to the uncontrolled spread of a wildfire as well as carry pollutant concentrations to communities to the southeast of the alignment.

Construction

Construction activities for replacement of subtransmission line structures would require use of heavy ignition equipment and hot work in areas with high and very high fire risk. Vehicle engine starting or idling in a vegetated area, workers smoking in a vegetated area, and hot work (e.g., welding) activities during construction could ignite a fire in the nearby vegetation. Construction activities in combination with hot, windy weather conditions could exacerbate wildfire risk.

SCE has proposed implementation of APMs as part of the Proposed Project. APM HAZ-3 requires development and implementation of a Fire Prevention and Emergency Response Plan. The Fire Prevention and Emergency Response Plan would require procedures for fire reporting, response, prevention, and evacuation. In addition, the plan would include crew training on fire safety practices and restrictions and would require fire suppression and communication equipment to be onsite during Project construction to avoid igniting a fire and suppress a fire if one started. In accordance with APM HAZ-3, the Project-specific Fire Prevention and Emergency Response Plan for construction of the Proposed Project would be submitted to CPUC, CAL FIRE, Kern and Los Angeles counties, and local municipal fire agencies for review prior to initiation of construction.

SCE would also implement standard fire prevention protocols during construction activities. Protocols during construction activities include vegetation clearing before equipment staging that would minimize the potential for construction equipment or vehicles from igniting a fire. In the event that the National Weather Service issues a Red Flag Warning during Project construction, additional measures would be implemented to address smoking and fire rules, storage and parking areas, the use of gasoline-powered tools, the use of spark arresters on construction equipment, road closures, the use of a fire guard, fire suppression tools, fire suppression equipment, and training requirements.

Construction of the Proposed Project would not exacerbate wildfire risks with implementation of APM HAZ-3 and standard fire prevention protocols. The impact from exacerbated wildfire risk would be less than significant.

Operation and Maintenance

The Proposed Project involves replacing and modifying existing electric transmission infrastructure and would not involve the placement of occupants where they may be exposed to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire. The Proposed Project would replace wood poles and H-frames with TSP or LWS poles. Replacing sub transmission line poles with nonflammable materials would reduce future wildfire risk along the alignment. The Proposed Project would increase system reliability by updating aging infrastructure with infrastructure that meets current safety standards, including line clearance standards, thereby reducing the potential for ignitions compared to existing conditions.

Once constructed, the Proposed Project would be operated remotely, and no personnel would be located permanently on site. SCE would continue to perform the same or similar

maintenance activities for the Proposed Project as are currently performed along the existing subtransmission lines and substations. Maintenance would include asset management and inspections within these areas in accordance with SCE's 2023–2025 Wildfire Mitigation Plan (SCE, 2023). The Proposed Project would also be required to comply with California PRC sections 4292 and 4293, which require SCE to maintain clearance distances between vegetation and all conductors. The Proposed Project would also be required to fell, cut, or trim trees that are considered dead, diseased, or rotten and pose a hazard to the subtransmission line. Additionally, SCE is required to design electrical lines in accordance with safety requirements of the CPUC's GO 95 and other applicable requirements, including the implementation of vegetation management activities in order to establish minimum clearances between conductors and vegetation. In accordance with the CPUC Environmental Measures, the CPUC requires the preparation of a Fire Prevention Plan that addresses procedures for fire reporting, response, and prevention for construction and operation activities. Because the Proposed Project would reduce wildfire risk by replacing wooden infrastructure with metal infrastructure, and the Project would be operated in compliance with SCE's Wildfire Mitigation Plan, operation and maintenance of the Proposed Project would not exacerbate wildfire risks, and impacts would be less than significant.

Required APMs and MMs: APM HAZ-3

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.

Construction

Most construction activities associated with the Proposed Project would occur within existing subtransmission line ROWs and easements that have been cleared of vegetation. Access to construction areas would rely primarily on existing paved roads and unpaved access roads. No fuel breaks or emergency water sources would be required.

As previously discussed, a majority of the Proposed Project alignment is located within CAL FIRE's moderate FHSZ. However, portions of the Proposed Project are within an undesignated or high FHSZ. The eastern portion of Segment 4 and the entirety of Segment 5 are located in CPUC-designated Fire Threat Area Tier 3 (Extreme) areas. The northern portion of Segment 1, the southern portion of Segment 2, the entirety of Segment 3, and the central portion of Segment 4 are located in CPUC-designated HFTD Tier 2 (Elevated) areas No other portion of the Proposed Project is located in a CPUC-designated HFTD.

Construction of the Proposed Project in high FHSZs and HFTDs, may increase potential risk of fire ignition due to sparks or high heat that could ignite surrounding vegetation, as discussed in response b, above. SCE has proposed implementation of APMs as part of the Proposed Project. Per APM HAZ-3, SCE would develop and implement a project-specific Fire Prevention and Emergency Response Plan, which would include specific fire prevention protocols and emergency procedures to reduce wildfire risk during construction of the Proposed Project.

Additionally, SCE would implement standard fire prevention protocols during construction activities and would comply with applicable laws and regulations. Therefore, with implementation of APM HAZ-3 and compliance with standard fire prevention protocols, construction of the Proposed Project would not exacerbate wildfire risks. Impacts would be less than significant.

Operation and Maintenance

The Proposed Project itself involves the replacement and modification of existing power lines and associated infrastructure. The Proposed Project would rebuild the existing subtransmission lines in the same alignment as the existing lines. Since the proposed subtransmission lines are replacing the existing lines, the subtransmission lines are an inherent component of the baseline fire risk of the area, and rebuilding the subtransmission lines with modern infrastructure installed to current CPUC guidelines would not exacerbate the fire risk in the area.

Operation and maintenance activities for the Proposed Project would be carried out in the same or similar manner as those conducted for the existing infrastructure. However, in some cases, rebuilt structures would not be accessible via existing access roads, and could only be accessed on foot, by helicopter, or by creating temporary access areas. New temporary access that would be created during operation of the Proposed Project could exacerbate fire risk by allowing new vehicle and equipment access that could ignite fire in vegetated areas.

SCE would continue to implement its standard fire prevention protocols during O&M activities, comply with applicable laws and regulations, and participate in the Red Flag Fire Prevention Program. Among the O&M activities that would continue after construction of the Proposed Project would be ongoing implementation of SCE's 2023–2025 Wildfire Mitigation Plan in areas designated by the CPUC as Fire Threat Area Tier 3 (Extreme) or Tier 2 (Elevated). The Wildfire Mitigation Plan describes strategies, programs, and activities that are in place, being implemented or under development by SCE to proactively address and mitigate the threat of electrical infrastructure associated ignitions that could lead to wildfires. Therefore, operation and maintenance of the Proposed Project would not exacerbate fire risks. Impacts would be less than significant.

Required APMs and MMs: APM HAZ-3

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.

Construction

A majority of the Project area is located in valley areas that would not be susceptible to post-fire slope instability. The Proposed Project is located in areas of relatively steep slopes at the southern end of the alignment, where it climbs into the mountains around the Gorman and Banducci substations. These steeper slopes allow fire to spread quickly upwards and burn up hillsides. These localized areas may be susceptible to post-fire slope instability; however, these areas are generally sparsely populated or have few structures that are susceptible to fire. The

Stallion Springs Community Services District (CSD) is downslope of Segments 4 and 5 and is surrounded by mountain ranges. Due to the proximity of Stallion Springs CSD to the Proposed Project and the steep slopes surrounding the community, the Proposed Project could expose people or structures to risks as a result of runoff, post-fire slope instability, or drainage changes if the Proposed Project caused a wildfire on the hillslope adjacent the Stallion Springs CSD. SCE has proposed implementation of APMs as part of the Proposed Project. Implementation of APM HAZ-3 requires the development of a Fire Prevention and Emergency Response Plan that covers procedures for fire reporting and response, crew training, and fire suppression and communication equipment requirements.

Therefore, due to the generally flat topography and implementation of APM HAZ-3 to prevent a fire in steeply sloping area, construction of the Proposed Project would not cause post-fire slope instability such as downstream or downslope flooding or landslides. Impacts would be less than significant.

Operation and Maintenance

Operation and maintenance activities for the Proposed Project would be carried out in the same or similar manner as the existing infrastructure. As discussed previously, the Proposed Project would replace an existing subtransmission line with infrastructure that would present reduced fire risk; therefore, no impacts would occur.

Required APMs and MMs: APM HAZ-3

3.20.5 References

Cal OES. (2018, September 28). 2018 California State Hazard Mitigation Plan. Retrieved from https://www.caloes.ca.gov/wp-content/uploads/002-2018-SHMP_FINAL_ENTIRE-PLAN.pdf

CalFIRE. (2007, May). Fact Sheet: California's Fire Hazard Severity Zones . California Department of Forestry and Fire Protection Office of the State Fire Marshal.

CalFire. (2007). Kern County Fire Hazard Severity Maps.

CalFIRE. (2013). *Incident Archive*. Retrieved from https://www.fire.ca.gov/incidents/2022/

CalFIRE. (2023, August 31). California Fire Perimeters (all). Retrieved from https://gis.data.ca.gov/datasets/CALFIRE-Forestry::california-fire-perimeters-all-1/about

California Department of Forestry and Fire Protection. (2015). Fire and Resource Assessment Program. *Wildland Urban Interface, Intermix, and Wildfire Influence Zones*.

CPUC. (2019, May 13). CPUC Fire Threat Areas.

CPUC. (2023, May 30). *Fire-Threat MAps and Fire-Safety Rulemaking*. Retrieved from https://www.cpuc.ca.gov/industries-and-topics/wildfires/fire-threat-maps-and-fire-safety-rulemaking

Holsinger, L., Parks, S. A., & Miller , C. (2016). Weather, fuels, and topography impede wildland fire spread in wetern US landscapes. *Forest Ecology and Management*, 59-69.

Kern County. (2014). *Kern Multi-Jurisdiction Hazard Mitigation Plan.* Retrieved from https://mitigatehazards.com/county-of-kern/documents/

Kern County Fire Department. (2008). Emergency Operations Plan.

Kern County Fire Department. (2008). *Emergency Operations Plan.* Retrieved from https://www.kerncounty.com/community/emergency/emergency-operations-plan

Kern County Fire Department. (2018, March). Unit Strategic Fire Plan.

Kern County Fire Department. (2018, March). *Unit Strategic Fire Plan.* Retrieved from https://www.dropbox.com/s/38ao2nvk24w6coy/Kern%20County%20Fire%20Department%20Unit%20Strategic%20Fire%20Plan.pdf?dl=0

LANDFIRE. (2016). *Map Viewer*. Retrieved from Data Distribution Site: https://landfire.gov/viewer/

Los Angeles County. (2020). 2020 County of Los Angeles All Hazards Mitigation Plan.

Los Angeles County. (n.d.). *Disaster Routes with Road Districts.* Retrieved September 8, 2023, from https://pw.lacounty.gov/dsg/disasterroutes/

Los Angeles County Public Works. (2023). *Disaster Routes*. Retrieved from Los Angeles County Operational Area: https://pw.lacounty.gov/dsg/disasterroutes/

National Park Service. (2017, February). *Wildland Fire Behavior*. Retrieved September 8, 2023, from https://www.nps.gov/articles/wildland-fire-behavior.htm

NWCG. (2019, July 7). National Wildfire Coordinating Group Glossary of Wildland Fire. *PMS 205*. Retrieved March 10, 2020, from https://www.nwcg.gov/publications/pms205/nwcg-glossary-of-wildland-fire-pms-205

Robert Olson Associates. (2009, December). *Lake Isabella Dam Failure Evacuation Plan.* Retrieved September 8, 2023, from https://kerncountyfire.org/wp-content/uploads/Isabella-Dam-Failure-Plan.pdf

SCE. (2022, February 18). 2022 Wildfire Mitigation Plan Update.

SCE. (2022). Proponent's Environmental Assessment for Southern California Edison Company's TLRR Gorman Kern River 66 kV Project.

SCE. (2023, March 27). 2023–2025 Wildfire Mitigation Plan. Retrieved from https://www.sce.com/sites/default/files/custom-files/SCE%202022%20WMP%20Update.pdf

SJVUAPCD. (2003). *2003 PM10 Plan*.

3.21 Mandatory Findings of Significance

3.21.1 Summary of Impacts

Table 3.21-1presents a summary of the significant impacts for each element of the Environmental Checklist as provided in Appendix G of the CEQA Guidelines for Mandatory Findings of Significance.

Table 3.21-1 Summary of Proposed Project Impacts for Mandatory Findings of Significance

Would the Proposed Project:	Potentially Significant Impact	Less than Significant Impact with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
b) Have impacts that are individually limited, but cumulatively considerable? "Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	☐	☒	☐	☐
c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

Impact Discussion

a) Would the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

Fish and Wildlife Species Habitat

The Proposed Project would involve rebuilding existing subtransmission lines, replacing/modifying individual existing poles, and reuse of individual existing subtransmission structures along portions of existing subtransmission lines within existing SCE easements.

The Proposed Project area contains suitable habitat for common and special status wildlife species. Construction activities would result in temporary and permanent impacts on habitat for wildlife at pole work areas where vegetation would be cleared. While the loss of habitat around each pole would be small, the impact could be significant for very rare species that already have limited habitat. MM Biology-2 requires restoration of areas of temporary impacts, MM Biology-6 requires compensatory mitigation for blunt-nosed leopard lizard habitat, and MM Biology-13 requires compensatory mitigation for San Joaquin kit fox habitat. The impact on wildlife habitat would be less than significant with mitigation.

Fish and Wildlife Populations

The proposed pole replacements would occur in upland areas. Proposed culvert replacements would occur within ephemeral or intermittent streams but not within perennial streams. Work within fish habitat would be performed only when the stream is dry. The Proposed Project would thus have no effect on fish populations. Grading, excavation, and equipment access during construction of the Proposed Project could cause mortality or injury of individual wildlife if wildlife were to occur in work areas at the time of construction. Project construction would occur over a period of 18 months. Project construction activities would occur in pole work areas, existing and proposed access routes, and staging areas. The existing access routes and staging areas are currently disturbed or developed and do not contain suitable habitat for wildlife. Construction activities at each pole work area would last for only a few days. While it is unlikely for wildlife to occur within the work area at the time of construction, the impact on very rare species populations could be significant. MMs Biology-1 through Biology-15 define procedures to protect special status wildlife in addition to SCE APMs and blunt-nosed leopard lizard avoidance and minimization. The impact on wildlife population levels, including special-status wildlife, would be less than significant.

Plant and Animal Communities

Impacts on plant and animal communities are discussed in Section 3.4: Biological Resources. Construction impacts would be isolated to the individual work areas and would not eliminate an entire plant or animal community due to the small area of disturbance at each pole. The

potential impacts on individual plants or animals would not eliminate or threaten to eliminate an entire plant or animal population or community. The impact would be less than significant.

Rare or Endangered Plants and Animal Numbers and Range

Range of Rare and Endangered Species

The Proposed Project is located within the range of rare and endangered species as discussed in Section 3.4: Biological Resources. The Proposed Project would have impacts on habitat for rare and endangered species at each work area/pole location in species habitat; however, the Proposed Project would not create a barrier to species movement. and the small area of impact at each proposed replacement pole would not restrict the range of any rare or endangered plant or animal species. The impact on the range of rare or endangered species would be less than significant.

Rare and Endangered Plants

The Proposed Project has the potential to reduce the number of rare and endangered plant species through direct removal of rare and endangered plants during grading and construction and through indirect impacts such as invasive weed introduction (refer to the discussion of direct and indirect impacts on special status plants in Section 3.4: Biological Resources). Direct and indirect impacts on special status plants could reduce the number of rare and endangered plants in the project study area, which would be a significant impact. MM Biology-1 requires specific criteria for pre-construction surveys during blooming season, avoidance measures, and a Salvage and Replanting Plan for special status plants that cannot be avoided. MM Biology-2 requires that, during restoration, performance standards and timeframes are met that would allow populations of these species to remain viable in disturbed areas.

MM Biology-1 and MM Biology-2 would reduce the potential for the Proposed Project to substantially reduce the number of any rare or endangered plant species. The impact would be less than significant with mitigation.

Rare or Endangered Wildlife

The Proposed Project has the potential to impact rare or endangered wildlife. Construction activities could injure or kill rare or endangered wildlife individuals, resulting in a reduction in the number of rare or endangered wildlife species occurring in the project study area. Construction activities would also result in noise and light impacts, which could affect wildlife breeding behavior or cause nest abandonment and, therefore, cause a reduction in rare or endangered species numbers, which would be a significant impact. APM BIO HERP-5, APM BIO MAM-2, MM Biology-3, MM Biology-4, MM Biology-5, MM Biology-6, MM Biology-7, MM biology-8, MM Biology-9, MM Biology-10, MM Biology-11, MM Biology-12, MM Biology-13, MM Biology-14, and MM Biology-15 would reduce potential impacts on Tehachapi slender salamander, Kern Canyon slender salamander, San Joaquin kit fox, Tipton kangaroo rat, Crotch's bumblebee, blunt-nosed leopard lizard, American badger, special status and protected avian species, and special status and protected bat species, respectively, to less-than-significant levels. Potential impacts on rare and endangered wildlife species would be less than significant with mitigation.

California History or Prehistory
The CRHR is used to catalog important examples of California history and prehistory. No CRHR eligible resources are known to occur in the Proposed Project area. as discussed in Section 3.5: Cultural Resources. Pole removal and installation, grading of access roads, vegetation removal, and other ground-disturbing activities have the potential to substantially damage or destroy previously undiscovered CRHR-eligible resources. Destruction or substantial damage of CRHR-eligible resources could eliminate an important example of California history or prehistory, which would be a significant impact. Cultural resource training, monitoring, evaluation, avoidance of eligible cultural resources, and data recovery, as necessary, would reduce the impact of construction activities on these resources (MM Cultural-1, APM CUL-2, APM CUL-3, APM CUL-4 and APM CUL-5). The Proposed Project would not eliminate important examples of the major periods of California history or prehistory with implementation of mitigation.

Required APMs and MMs: APM BIO HERP-5, APM BIO MAM-2, MM Biology-3, MM Biology-4, MM Biology-5, MM Biology-6, MM Biology-7, MM biology-8, MM Biology-9, MM Biology-10, MM Biology-11, MM Biology-12, MM Biology-13, MM Biology-14, and MM Biology-15,MM Cultural-1, APM CUL-2, APM CUL-3, APM CUL-4 and APM CUL-5

b) Would the project have impacts that are individually limited, but cumulatively considerable? "Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?

Introduction
The CEQA Guidelines (section 15130) require a discussion of the cumulative impacts of a project. Cumulative impact analysis accounts for the combined impacts associated with two or more projects in a given area. The following cumulative analysis evaluates the potential cumulative impacts from the Proposed Project in combination with other past, present, and probable future projects in the area. Based on the cumulative impacts analysis provided below, the Proposed Project would not result in a significant cumulative environmental impact.

Approach to Cumulative Impact Analysis
CEQA Guidelines Section 15130(b) presents two approaches for analyzing cumulative impacts, using either:

- A list of past, present, and probable future projects producing related or cumulative impacts, including those projects outside the control of the agency; or
- A summary of projections contained in an adopted local, regional, or statewide plan, or related planning document that describes or evaluates conditions contributing to the cumulative effect.

A hybrid approach is used in this IS/MND, where a list of probable future projects is considered in combination with the baseline conditions, agency projections, and adopted planning

documents. The cumulative analysis considers, but does not exclusively rely on, planning documents to establish the cumulative scenario for the analysis.

Area of Analysis

The analysis of potential cumulative impacts is generally limited to projects occurring within an approximately 2-mile-wide corridor centered on the approximately 65-mile-long Project alignment (i.e., 1 mile on each side of the Project alignment). Additional projects outside of this radius were also considered if they were determined to be relevant to the geographic scope of an environmental resource topic (e.g., air quality, greenhouse gases). The analysis area represents the physical extent of the limits in which indirect impacts of the Proposed Project may occur. For these reasons, the approximately 1-mile buffer is an appropriate distance to determine the potential for other probable future projects to be cumulatively considerable.

Data Collection

Projects were identified through review of websites, by contacting the surrounding local and state agencies (Caltrans, Kern County, Los Angeles County, City of Bakersfield, and City of Arvin), reviewing the Governor's Office of Planning & Research's CEQAnet database of the State Clearinghouse (SCH), reviewing the LPNF and SNF NEPA project websites, and by contacting private developers to inquire whether any projects were recently constructed, are being constructed, or are currently planned near the Proposed Project or its alternatives.

Cumulative Projects List

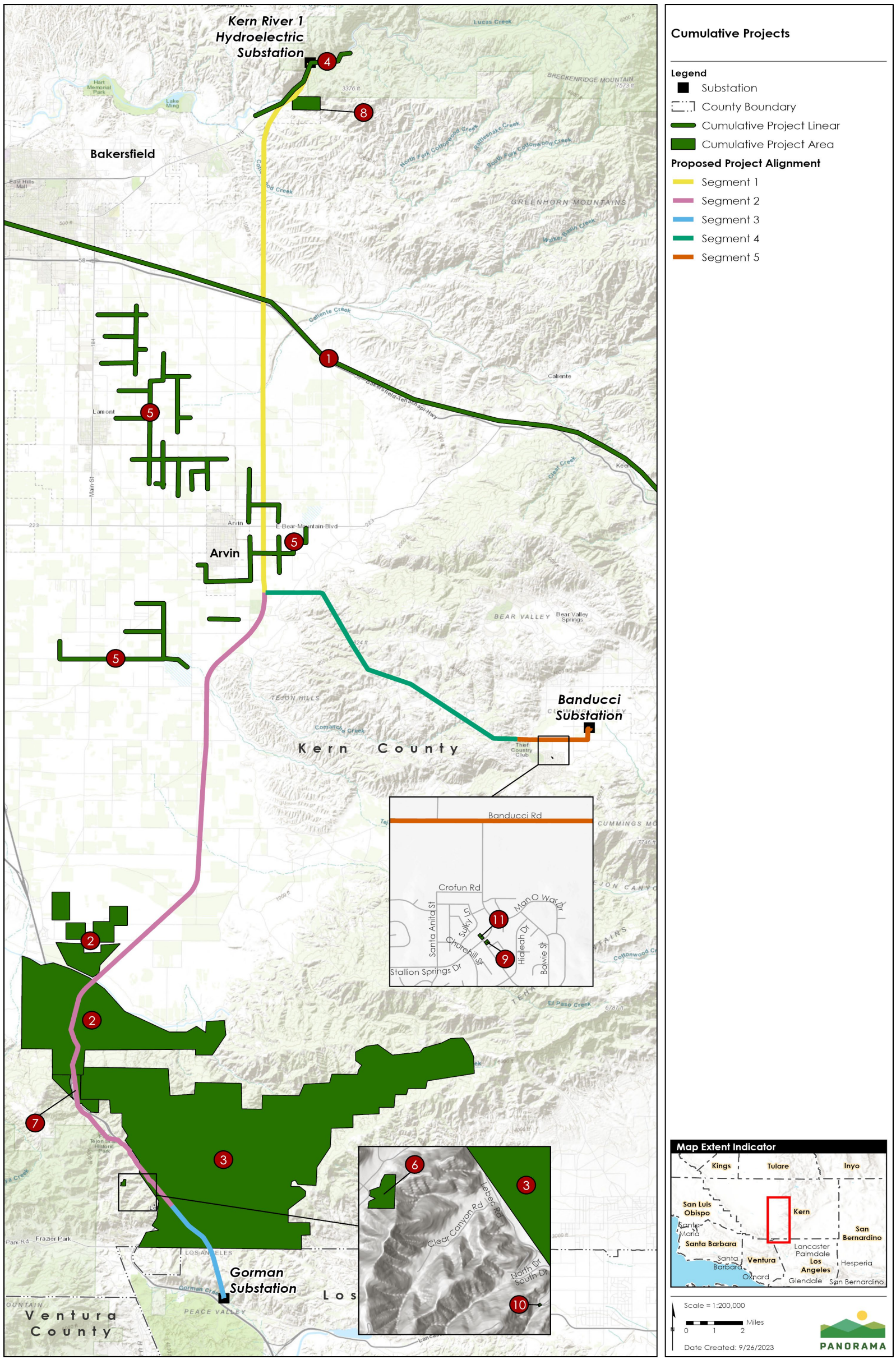
Table 3.21-2 includes a list of present (i.e., under construction) and probable future projects considered in this cumulative analysis. The table lists the project name, project type, a description of the project, its location and status. The locations of cumulative projects in relation to the Proposed Project are shown on Figure 3.21-1. Each project in Table 3.21-2 has an assigned number that is keyed to Figure 3.21-1.

Table 3.21-2 Cumulative Projects List

No.	Project name (project type)	Project components	Location	Status
1	High-speed rail	Construct high-speed rail infrastructures between Bakersfield and Palmdale.	Segment 1	In permitting
2	Grapevine at Tejon Ranch	Master planned development	Segment 2 (Lebec)	Approved
3	Mountain Village at Tejon Ranch	Master planned development	Segment 2 and 3 (Lebec)	Approved

No.	Project name (project type)	Project components	Location	Status
4	Kern Canyon culvert rehabilitation	Repair, replace, and clean culverts. Two new culverts and one overside drain will be built, 355 roadside signs will be replaced, and various Intelligent Transportation Systems will be installed at 11 locations.	Segment 1	In design
5	Expansion of District distribution system pipelines into groundwater service area lands	Construction of up to 44 miles of pipelines, manholes and turnouts	Segment 1	Approved
6	Cell tower	Construction of a cell tower in Lebec stealthed as a grain silo	Segment 3	Active
7	6-foot' monopole tower	Conditional Use Permit for the construction of a 60' Monopole Tower	Segment 3	Active
8	Mining sand and gravel	Conditional Use Permit to allow mining of sand and gravel in A zone and OS-S (Open Space - Slopes Exceeding 30%) (Previous mine CUP 6, Map 105)	Segment 1	In suspense
9	New automotive repair facility	Precise Development to permit a 1,500 square foot automotive repair shop	Segment 5: 18210 Bold Venture Drive, Stallion Springs area	Active
10	Residential bldg. minimum distance separation	Zoning Variance to allow a reduction in building separation setback	Segment 3: 601 Canyon Drive in the Lebec area.	Active
11	Child day care facility	Precise Development to allow a change of use to child day care operation previously utilized as a restaurant in a C-2 PD zone and 6.2/2.7 general plan designation on .37 acres.	Segment 5	Active

Figure 3.21-1 Cumulative Project Locations



Cumulative Impacts

Introduction

The cumulative impact analysis for the Proposed Project is provided for each of the environmental resource topics analyzed in this IS/MND.

Resources not considered further because they would have no cumulative impacts include the following:

- Energy: The Proposed Project would replace existing electrical power lines and would not increase the use of energy. The energy utilized during the Proposed Project's construction would require a short-term consumption of a limited amount of fossil fuel resources.
- Land use and planning: The Proposed Project would have no impact pertaining to the physical division of an established community nor would it conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Therefore, the Proposed Project would not cause or contribute to any cumulative impact related to Land Use and Planning.
- Mineral resources: The Proposed Project area is not located in a mineral resource area or within a locally important mineral resource recovery site delineated on any local land use plans. Therefore, the Proposed Project would not cause or contribute to any cumulative impact related to mineral resources.
- Public services: The Proposed Project would have no impact associated with the provision of or 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 schools, parks, or other public facilities. Therefore, the Project would not cause or contribute to any cumulative impact related to these considerations.
- Population and housing: The Proposed Project would not result in an increase in population and, therefore, would not necessitate the construction of new housing. The Proposed Project would continue to serve the existing service area and would not service additional areas or provide additional energy.

Aesthetics

Geographic Extent

The geographic extent for the analysis of cumulative impacts to aesthetic resources includes both local and regional viewsheds. The local viewshed includes projects, activities, and landscapes visible within the same field of view as the Proposed Project. Regional cumulative effects occur when viewers perceive that the general visual quality or landscape character of a regional area is diminished by the proliferation of visible similar structures or construction effects even if the changes are not within the same field of view as existing or known future structures or facilities. The result is a perceived "industrialization" or "urbanization" of the existing landscape character. Cumulative aesthetic impacts would occur within 1 mile or less of the Proposed Project alignment. Beyond 1 mile, structures become less distinct or not visible if

they blend in sufficiently with background forms, colors, and textures. Also, beyond 1 mile it is likely that sightlines would become impaired or blocked by intervening terrain and vegetation.

Impacts Avoided by the Proposed Project
The Proposed Project would have no impact on scenic vistas and would not contribute to a cumulative impact on scenic vistas.

Potential Cumulative Impacts
As described in Section 3.1: Aesthetics, many of the impacts pertaining to aesthetics would occur during construction as the presence of equipment and materials would present temporary visual intrusions during construction. The Proposed Project's pole replacement would affect the visual landscape. The Proposed Project includes design features that would minimize temporary impacts pertaining to construction lighting and reduce (potentially permanent) impacts associated with glare. Following construction, the new structures would be located within an existing utility corridor, in most cases within 5 to 10 feet of existing structures, and of comparable size and form to existing structures.

Soil disturbance, construction staging, and the presence of equipment and materials would presumably occur with most of the projects listed in Table 3.21-2, although many would not be visible from the Proposed Project alignment. The master-planned development in proximity to the Proposed Project would introduce new residential development or commercial development. The impacts of residential and commercial development on the viewshed could be significant; however, the Proposed Project would not contribute to that cumulative impact as the Proposed Project would replace an existing subtransmission line and would not result in substantial changes to the viewshed in combination with the master-planned development. The Proposed Project and high-speed rail project would overlap in one location. Because the Proposed Project would replace an existing subtransmission line, a significant cumulative visual impact would not occur from the Proposed Project and high-speed rail project. Cumulative visual impacts would be less than significant.

Agriculture and Forestry Resources
Geographic Extent
The geographic extent for the analysis of cumulative impacts associated with agriculture includes all of Kern County. This geographic extent accounts for regional cumulative impacts to agriculture, which is appropriate because agricultural production is a regional resource.

Impacts Avoided by the Proposed Project
The Proposed Project would not conflict with zoning for, or cause rezoning of, forest land, timberland, or timberland zoned as Timberland Production. The Proposed Project would not contribute to cumulative impacts on these resources.

Potential Cumulative Impacts
A few projects identified in Table 3.21-2 would result in a substantial loss of or impact on agricultural land, including the high-speed rail project, Grapevine at Tejon Ranch, and Mountain Village at Tejon Ranch, and other projects, including energy projects in Kern County,

would also result in conversion of agricultural land to other uses. The cumulative impact on agricultural land is potentially significant. The Proposed Project would replace an existing subtransmission line. The existing subtransmission structures would be removed so that the areas of impacted farmland would be offset with the areas of removed structures that would be available for farmland use. Therefore, the Proposed Project may result in minor and temporary impacts on farmland but would not permanently convert any land to non-farmland uses and would not contribute considerably to cumulative impacts on farmland.

Air Quality

Geographic Extent

Air quality is a regional resource and is neither defined nor limited by jurisdictional boundaries, political boundaries, or project boundaries. The cumulative study area for air quality primarily encompasses activities within the same air basins as the Proposed Project, specifically the San Joaquin Valley Air Basin (SJVAB), Mojave Desert Air Basin (MDAB), and South Coast Air Basin (SCAB), which are under the jurisdictions of the San Joaquin Valley Air Pollution Control District (SJVAPCD), Eastern Kern Air Pollution Control District (EKAPCD), and South Coast Air Quality Management District (SCAQMD), respectively.

The Proposed Project would not conflict with or obstruct implementation of the applicable air quality plan or result in other emissions such as those leading to odors. Therefore, the Project would not cause or contribute to any cumulative impact in this respect.

Potential Cumulative Impacts

Regional Air Quality.

Regional air quality is affected by all activities that occur within an air basin. The SJVAB is classified as nonattainment for state and national standards for ozone, PM_{10} and $PM_{2.5}$. The MDAB is classified as nonattainment for state and national standards for ozone and PM_{10}. The SCAB is classified as nonattainment for state and national standards for ozone, and $PM_{2.5}$, and state standards for PM_{10}, and national standards for lead. The Proposed Project area is within either an unclassified or attainment area for all other State and federally regulated air pollutants. See Table 3.3-3 for the current attainment status of the study area. The cumulative impact from past, present, and probable future projects on existing air quality violations in the SJVAB, MDAB, and SCAB and criteria pollutants for which they are in nonattainment, would be significant.

Cumulative impacts on regional air quality are addressed by the air districts thresholds of significance for criteria pollutant emissions in the respective air basins because SJVAB, MDAB, and SCAB considered all past, present, and probable future projects when they set the thresholds of significance. The construction thresholds represent the levels at which a project's individual combustion emissions of criteria air pollutants and precursors would result in a cumulatively considerable contribution to the existing nonattainment designations. None of the air districts in the Proposed Project area sets numerical thresholds for fugitive dust. If a project's emissions exceed the numerical thresholds in their respective air basins, or if the project

generates uncontrolled fugitive dust, the project would considerably contribute to the cumulatively significant air quality impact in the applicable air basin.

Emissions generated during construction activities of the Proposed Project would not exceed the SJVAPCD, EKAPCD, or SCAQMD significance thresholds for criteria air pollutants with controlled emission (refer to Section 3.3: Air Quality, Impact b). Uncontrolled PM_{10} and fugitive dust emissions could result in a significant impact. The Proposed Project's contribution to a significant cumulative impact to an existing air quality violation and nonattainment of particulate matter could be considerable. APM AIR-1 and CPUC Draft Environmental Measure for Dust Control During Construction require SCE to implement measures to reduce fugitive dust and diesel emissions. With implementation of APM AIR-1 the Proposed Project would not generate excessive emissions of fugitive dust and would comply with SJVAPCD, EKAPCD, and SCAQMD fugitive dust restrictions. The Proposed Project would thus not contribute considerably to a significant cumulative air quality impact.

*Local Air Quality***.** Carbon monoxide hotspots, fugitive dust emissions, or diesel emissions have the potential to result in localized impacts due to the toxic air contaminants (TACs) capable of causing short-term and long-term adverse human health effects. Diesel and jet fuel exhaust would be emitted from heavy equipment and helicopters operating at the Proposed Project work areas and the Proposed Project ground disturbing activities would generate fugitive dust. Health effects from TACs are typically framed in terms of incremental cancer risk.

Construction vehicles and equipment used during construction of the cumulative projects would generate localized diesel and fugitive dust emissions at the various staging areas that are near sensitive receptors (Table 3.3-10). Adjacent cumulative projects could affect the same sensitive receptors as the Proposed Project (sensitive receptors within 1,000 feet of cumulative project and Proposed Project construction areas) if the construction occurs at the same time. Construction of the cumulative projects, particularly large master planned communities, has the potential to subject sensitive receptors to elevated TAC emissions for a prolonged period if any sensitive receptors are adjacent to the projects. The only Proposed Project activities that would last more than 2 months would be staging activities. None of the Proposed Project staging yards are in proximity to the master planned development. In addition, there are very few receptors within 1,000 feet of the Proposed Project as illustrated in Section 3.3: Air Quality. Because the Proposed Project would not involve activities lasting more than 2 months within 1,000 feet of any cumulative project, the cumulative impact on sensitive receptors from air toxics would be less than significant.

Biological Resources

Geographic Extent

The geographic extent for the biological resources cumulative analysis includes vegetation and wildlife communities and special status species habitats within 1 mile of the Proposed Project alignment. This geographic extent is appropriate because it accounts for the cumulative degradation or loss of a particular vegetation community or special status species population from cumulative projects that have impacted, or would impact, vegetation communities of

concern or special status species and that could result in cumulative habitat degradation or fragmentation.

Impacts Avoided by the Proposed Project
The Proposed Project would not impact special status fish or the movement of migratory fish or wildlife species or conflict with any local policies or ordinances protecting biological resources or with any habitat conservation plan or natural community conservation plan. The Proposed Project would not contribute to cumulative impacts on these resources.

Potential Cumulative Impacts
Many of the cumulative projects listed in Table 3.17 2 are located in developed areas that do not provide suitable habitat for and would not impact special-status plants, amphibians, reptiles, or mammals. The high-speed rail project (#1), Grapevine at Tejon Ranch (#2), Mountain Village at Tejon Ranch (#3), and the cell tower (#6) are the only cumulative projects located within 1 mile of the Proposed Project area that could impact natural habitats that may support special status species. The cumulative impacts of these projects and the Proposed Project are described below.

Special Status Species: The high-speed rail project, Grapevine at Tejon Ranch, Mountain Village at Tejon Ranch, and the cell tower could impact the same special status plant and wildlife species as the Proposed Project. The high-speed rail project EIRs/EISs for the Fresno to Bakersfield section (California High-Speed Rail Authority 2014b) and for the Bakersfield to Palmdale Section (California High-Speed Rail Authority 2021a) include mitigation measures to reduce impacts on special status plants and wildlife. The Grapevine at Tejon Ranch and Mountain Village at Tejon Ranch projects are subject to the Tejon Ranch Habitat Conservation Plan (HCP), which includes conservation actions and measures to reduce impacts on special status plants and wildlife. The HCP is designed to address impacts at a regional scale to avoid significant cumulative impacts occurring from the Tejon Ranch Development. The cell tower project is an isolated project that would not create a cumulative impact with the Proposed Project. Because the larger cumulative projects include mitigation measures to offset their individual impacts and provide for habitat compensation to address cumulative habitat impacts on special status species and because the Proposed Project includes mitigation measures to avoid a significant loss of habitat, the cumulative impact of the Proposed Project and cumulative projects would be less than significant with implementation of the project-specific mitigation included in Section 3.4: Biological Resources.

Cultural Resources
Geographic Extent
The geographic extent for the cultural resources cumulative analysis includes the Proposed Project region. This geographic scope is appropriate because cultural resources are usually associated with both a particular tribe or historic settlement and a particular time period. The Proposed Project is not located in a historic or archaeological district.

Potential Cumulative Impacts
The loss of several resources from a particular tribe or representing one particular time period could result in significant impacts to the information that those resources possess. If any of the cumulative projects could each impact resources with similar information about a particular tribe or timeframe, a cumulatively significant impact could occur.

The Proposed Project would avoid impacts on any significant historic or archaeological resources and has some potential to impact previously undiscovered cultural resources, which could contribute to a significant cumulative impact on cultural resources. MM Cultural-1, APM CUL-2, APM CUL-3, APM CUL-4 and APM CUL-5 require procedures to conduct cultural resource surveys prior to construction in areas not previously surveyed, to train workers, to monitor qualifying ground disturbance, and to avoid eligible cultural resources as well as procedures to follow upon discovery of human remains and perform data recovery, as necessary. With this mitigation, any previously undiscovered resources would either be avoided or their information potential ascertained, and the Proposed Project's contribution to any cumulative impacts would be less than considerable.

Geology, Soils and Paleontological Resources
Geographic Extent
The geographic extent for the analysis of cumulative impacts associated with geology, soils, and paleontological resources includes projects within 0.5 mile of the Proposed Project site because nearby projects could contribute to slope instability or geologic hazards.

The geographic extent for cumulative paleontological impacts includes the extent of geologic units with high paleontological sensitivity: Tejon Formation, Tecuya Formation, Olcese Formation, Bena Gravel, Santa Margarita Formation, Chanac Formation, and Kern River Gravel. This geographic extent is appropriate because these contiguous geologic formations could contain similar paleontological resources that would contain the same research potential as resources found within the Proposed Project study area.

Impacts Avoided by the Proposed Project
The Proposed Project would not be located on expansive soils or require the use of septic tanks or alternative wastewater disposal systems. The Proposed Project would not contribute to cumulative impacts on these resources. The Proposed Project would avoid impacts on unique geologic features because none exist in the Proposed Project area. The Proposed Project would, therefore, not contribute to a cumulative impact to unique geologic formations.

Potential Cumulative Impacts
Active faults are located in the region. The risk of seismic hazards to the public would be localized and would not combine cumulatively. The risks from seismicity are existing risks, and none of the cumulative projects substantially increase seismic risks over baseline conditions.

All of the considered cumulative projects would occur in flat, previously graded and disturbed areas. In addition, all cumulative projects that exceed 1 acre would be required to obtain coverage under the California Stormwater General Permit and prepare a SWPPP. None of the

projects would result in substantial soil erosion or loss that could be cumulatively significant due to compliance with the California Stormwater General Permit requirements. Due to the flat terrain, destabilization of soils or geologic units is unlikely. The cumulative impacts would be less than significant.

Segments 1, 2, 3, and 5 are located within geologic units with moderate to very high paleontological sensitivity. Many of the cumulative projects listed in Table 3.21-2 are located in areas adjacent the Proposed Project site and may have high or very high paleontological sensitivity. Ground-disturbing activities for the Proposed Project and cumulative projects could result in cumulative significant impacts on paleontological resources. SCE has proposed APMs PAL-1, PAL-2, and PAL-3 to reduce impacts on paleontological resources. APM PAL-1 would require SCE to develop a Paleontological Resource Mitigation and Monitoring Plan (PRMMP) to guide all paleontological management activities during Project construction. The PRMMP would include a Paleontological Resource Monitoring and Reporting Plan, Unanticipated Discovery Protocol, and Data Analysis and Reporting and requires monitoring in areas with moderate to high paleontological sensitivity. APM PAL-2 requires Paleontology Resources Awareness Training that would require all construction personnel to be trained regarding the recognition of possible buried paleontological resources (i.e., fossils) and protection of all paleontological resources during construction. APM PAL-3 would require paleontological monitoring to be conducted by a qualified paleontologist familiar with the types of resources that could occur within the Proposed Project area. Implementation of these APMs would reduce the Project's contribution to a cumulative impact on paleontological resources to less than significant.

Greenhouse Gas Emissions

Geographic Extent

GHGs are global pollutants and have long atmospheric lifetimes of 1 year to several thousand years, which permits dispersal of GHGs around the globe. In contrast to air quality, which generally is a regional or local concern, human-caused emissions of GHGs have been linked to climate change on a global scale. The geographic extent for the GHG emissions cumulative analysis is therefore considered global.

Potential Cumulative Impacts

GHG emissions and climate change are inherently cumulative impacts. Past, present, and probable future projects worldwide contribute or would contribute to the cumulative conditions for GHG emissions. The cumulative impact of GHG emissions and climate change is significant.

Cumulative impacts from GHG emissions are addressed by SCAQMD, which is the most conservative GHG threshold of all three air districts in which the Proposed Project is located. SCAQMD thresholds of significance of 10,000 $MTCO_2e$ per year represent the levels at which a project's individual emissions of criteria air pollutants and precursors would result in a cumulatively considerable contribution to GHGs. SCAQMD considered the cumulative nature of greenhouse gases when setting thresholds for GHG.

The use of heavy equipment, construction-related vehicles, and helicopters during construction of the Proposed Project would generate GHG emissions. The Proposed Project would generate approximately 4,542 $MTCO_2e$ over the 3-year construction period. The Proposed Project's GHG emissions from operation and maintenance would primarily result from vehicle travel to and from the Proposed Project area to conduct routine inspections and maintenance. Since the operation and maintenance activities and associated emissions would be far less than that of the construction activities and emissions, the annual CO_2e emissions from operation and maintenance activities would be well below the threshold of 10,000 $MTCO_2e$ per year. GHG emissions generated by construction and operation of the Proposed Project would not exceed the SCAQMD GHG emissions threshold. The Proposed Project's contribution to GHG emissions would be less than cumulatively considerable.

Hazards and Hazardous Materials

Geographic Extent

The geographic extent for the analysis of cumulative impacts associated with hazards and hazardous materials is the area within approximately 0.25 mile of the Proposed Project alignment. This geographic extent is appropriate given the small volume of hazardous materials that would be used for construction of the Proposed Project and the potential hazardous material to be transported during upset or accident conditions.

Potential Cumulative Impacts

The high-speed rail (#1), Grapevine at Tejon Ranch (#2), Mountain Village at Tejon Ranch (#3), Kern Canyon culvert rehabilitation (#4), Expansion of District Distribution System Pipelines into Groundwater Service Area Lands (#5), 60-foot monopole tower (#7), and mining sand and gravel (#8) projects are the cumulative projects listed within 0.25 mile of the Proposed Project.

Routine transport, use, and disposal of hazardous materials and accidental hazardous materials releases: Construction and operation of the Proposed Project and cumulative projects would use equipment and vehicles that could leak hazardous materials including gasoline and diesel fuel, engine oil, coolant, lubricants, solvents and grease. Hazardous materials, particularly fuel, may be transported to and from

Project sites, which would increase the risk of accident and release. The hazard to the public from fuel leaks from the cumulative projects would be highly localized due to the small amount of hazardous materials that typical construction activities would use and would not overlap or compound. SCE would implement APM-HAZ 1, which requires implementation of an HMMP/HMBP for storage, use, and transport of hazardous materials to ensure that all hazardous materials and wastes would be handled and disposed of according to applicable rules and regulations. Additionally, APM HAZ-1 requires BMPs to prevent accidental spills. Because SCE would implement APM HAZ-1, the cumulative impact from routine use of hazardous materials would be less than significant.

Hazardous materials sites: A review of hazardous material investigation and cleanup site databases provided information regarding the hazardous material sites located in the Proposed

Project study area (Table 3.9-1). The cumulative projects would not disturb a hazardous materials site within 0.25 mile of the Proposed Project. No cumulative impact from accidental releases of hazardous materials from a known hazardous site would occur.

Air traffic hazard: Construction of the cumulative projects would not increase air traffic in the region. Although the Proposed Project would temporarily increase air traffic during helicopter operations, none of the other cumulative projects involve air traffic or the construction of tall structures. No cumulative impact would occur.

Wildland fire: The cumulative projects are located in various Fire Hazard Severity zones, including CPUC Extreme and Elevated Fire Threat Areas. The cumulative projects in high fire risk areas do not involve activities that would create a cumulative fire hazard when considered in combination with the Proposed Project. No cumulative impact from cumulative project activities in a high fire risk area would occur.

Hydrology and Water Quality

Geographic Extent

The geographic extent for this cumulative analysis is defined as the watersheds where the Proposed Project site is located, the majority being located within the Middle Kern–Upper Tehachapi–Grapevine watershed. This watershed represents both the hydrologic and administrative units for water quality control and protection of beneficial uses for water resources in the Proposed Project area.

Impacts Avoided by the Proposed Project

The Proposed Project would not construct houses or structures within a 100-year flood hazard area. The Proposed Project would not contribute to cumulative impacts from flooding on housing or structures.

Potential Cumulative Impacts

All projects listed in Table 3.21-2 contribute or would contribute to the cumulative conditions for hydrology and water quality within the cumulative analysis study area.

Water Quality Standards, Waste Discharge Requirements, Erosion, and Polluted Runoff.

The Proposed Project would involve ground-disturbing activities that could increase erosion and siltation. Ground-disturbing activities required to construct cumulative projects could result in soil erosion and sediment deposition into local streams. In addition, construction and operation of the Proposed Project and cumulative projects would require the use of hazardous materials such as diesel fuel and gasoline. Spilled materials and sedimentation from earth-moving activities could potentially be transported to waterways and adversely impact water quality in the watersheds. All of the cumulative projects and the proposed project would be required to obtain a Construction Stormwater General Permit and prepare an HMBP. Due to compliance with State laws for protection of water quality, the cumulative impact from spills of hazardous materials or sedimentation would be less than significant.

Groundwater: The master-planned development cumulative projects could result in a cumulative increase in impervious surfaces and use of groundwater, which could result in a cumulative significant impact on groundwater supplies. The Proposed Project would have a negligible increase in impervious areas and would not contribute considerably to any cumulative impact on groundwater recharge.

Construction of the Proposed Project would require water for dust control and compaction. The Proposed Project would not require long-term water use and would not contribute to long-term impacts on groundwater resources. The Proposed Project would not contribute considerably to a significant cumulative impact on groundwater supplies.

Drainage Pattern alterations. The Proposed Project would not alter drainage patterns of the area and thus would not contribute to cumulative impacts on drainage patterns.

Noise

Geographic Extent

The geographic extent for the analysis of cumulative impacts associated with noise is limited to areas within 0.5 mile of the Proposed Project site. This geographic extent is appropriate because noise levels attenuate rapidly with distance, and the noise generated by activities greater than 0.5 mile from the Proposed Project would not have the potential to combine with the noise generated by Proposed Project construction. Cumulative projects located within 0.5 mile of the Proposed Project include the high-speed rail (#1), Grapevine at Tejon Ranch (#2), Mountain Village at Tejon Ranch (#3), Kern Canyon culvert rehabilitation (#4), Expansion of District Distribution System Pipelines into Groundwater Service Area Lands (#5), 60-foot monopole tower (#7), mining sand and gravel (#8), and residential building minimum distance separation (#10) projects. The Proposed Project would contribute to a cumulative noise impact along with these projects only if their construction schedules coincide or overlap.

Impacts Avoided by the Proposed Project

The Proposed Project would not generate noise that would be located within an airport land use plan or within 2 miles of a private airstrip. The Proposed Project would not contribute to cumulative impacts from conflict with noise standards or proximity to an airport.

Ambient noise: Construction activities and equipment use associated with construction of the cumulative projects have the potential to generate substantial noise. The noise from construction of the cumulative projects could temporarily increase ambient noise levels. At this time, the construction schedules for the nearby cumulative projects are not known. However, with the distance of the projects in relation to the Proposed Project site and the short-term noise increases from the Proposed Project, noise generated from these projects would not combine to cause a cumulative impact because of the distances between the project sites. The projects would not result in significant impacts at the same noise-sensitive receptors. The cumulative impact on noise-sensitive receptors from temporary or periodic noise increases would be less than significant.

Groundborne vibration**:** Construction of the cumulative projects would require the use of heavy equipment that would generate groundborne vibrations. Vibration impacts associated with construction activities would primarily affect receptors located closest to staging areas, TSP, and LWS pole installation sites and those located near conductor removal/replacement locations that would include the use of an excavator, heavy trucks, boom/crane truck, auger truck, and water trucks. Vibration levels attenuate rapidly with distance. While the high-speed rail project could generate vibration during operation, the Proposed Project would not be a source of vibration during operation. Due to the distance between the Proposed Project and cumulative project construction activities, the cumulative vibration impact from construction would be less than significant.

Recreation

Geographic Extent

The geographic extent for the analysis of cumulative impacts associated with recreation includes areas within 1 mile of the Proposed Project alignment. A geographic distance of 1 mile is appropriate because neighbors are expected to use recreational facilities in proximity to their community. A 1-mile area surrounding the Proposed Project alignment includes the parks that are most likely to be used by the same community that uses the parks affected by the Proposed Project.

Impacts Avoided by the Proposed Project

The Proposed Project would not require the construction or expansion of recreational facilities or contribute to population growth that could cause the deterioration of recreational facilities. The Proposed Project would not contribute to a cumulative impact from the construction or expansion of recreational facilities or from population growth.

Potential Cumulative Impacts

There are no developed recreational facilities or trails in the vicinity of the Proposed Project alignment, except for the Fort Tejon State Historic Park. During conductor removal and installation activities within the Fort Tejon State Park parking lot, access to the Fort Tejon State Historic Park's parking lot and pedestrian traffic through the area would be restricted for public safety. There are no other projects in the vicinity that would result in closure of Fort Tejon State Historic Park and, therefore, the Proposed Project would not result in cumulative impacts from closure of the parking area. No cumulative impact on recreation would occur.

Transportation and Traffic

Geographic Extent

The geographic extent for the transportation and traffic cumulative analysis includes the local and regional roadways and highways that would be crossed by the Proposed Project or utilized for transportation of Proposed Project materials. The extent of the analysis specifically includes all projects within 1 mile of the Proposed Project alignment because these projects are expected to use the same roads for access. In general, the Proposed Project's transportation and traffic impacts (such as increased traffic volume and lane closures) would diminish with increased distance from the Project area.

Potential Cumulative Impacts
The Proposed Project and cumulative projects listed in Table 3.21-2 that involve construction vehicle trips or add permanent vehicle traffic to roadways would contribute to the cumulative scenario for traffic. At this time, the construction schedules for the cumulative projects are not known.

Conflict with traffic standards: Construction worker vehicles and haul trucks used during construction of the cumulative projects would use local roadways to access work sites. Most of the cumulative projects are located in Kern County, and many would use the same local roadways as the Proposed Project for access. However, at this time, the construction schedule for the cumulative projects is not known. In addition, the Proposed Project would generate temporary vehicle trips during construction. Construction crews would be transported to and from construction work areas in construction vehicles or helicopters. Temporary workers needed for construction are expected to reside in Kern County and Los Angeles communities adjacent the Proposed Project alignment, including the city of Bakersfield and the city of Arvin. Workers are not expected to commute for long distances to reach the Proposed Project site because they would be residing in areas along the Proposed Project alignment. Taken together with the other projects, the cumulative impact on local roadways would be less than significant.

Air traffic patterns: The cumulative projects would not generate air traffic that could affect air traffic patterns. No cumulative impact on air traffic would occur.

Traffic hazards: Construction of the cumulative projects would increase truck traffic to and from work sites and could require temporary lane closures. The cumulative projects may use the same local roadways as the Proposed Project. The cumulative project construction could overlap with the Proposed Project and create a significant impact from increased traffic hazards. SCE would implement APM TRA-1, which requires implementation of traffic control measures consistent with the CAMUTCD and CATTCH, where necessary. With implementation of APM TRA-1, the Proposed Project's contribution to cumulative traffic hazards would be less than significant.

Emergency access: Lane and road closures may be required during construction of the cumulative projects. Closures have the potential to restrict or slow down emergency vehicles and responders. Construction of the cumulative projects may result in lane and road closures on the same local roadways as the Proposed Project, depending on the construction schedule. While the Proposed Project and cumulative projects could affect the same roads, the Proposed Project duration of lane or road closures would be limited to a few minutes or hours at any location during stringing, and the cumulative impact on emergency access on local roadways would be less than significant.

Alternative transit: Bicycle lanes, bus stops, and bus routes have the potential to be affected by lane and road closures required during construction of the cumulative projects or during stringing of overhead power lines for the Proposed Project. Each cumulative project may have limited impact on some bicycle lanes, bus stops, and bus routes. Most of these impacts would be

localized (i.e., development projects) and/or of limited duration due to the nature of the construction projects (i.e., linear projects). It is not likely that all closures would happen at the same time or affect the same facility. Even when all closures are considered together, disruption to the overall system would be minimal and not cumulatively significant.

Utilities and Service Systems

Geographic Extent

The geographic extent for the analysis of cumulative impacts associated with utilities and public services is the service area of the cities and counties near the Proposed Project, including Kern County, Los Angeles County and the cities of Arvin and Bakersfield.

Impacts Avoided by the Proposed Project

Construction of the Proposed Project would not exceed wastewater treatment requirements; require or result in the construction of new or expanded water or wastewater facilities; require or result in the construction of new or expanded storm water drainage facilities; or conflict with federal, State, or local statutes and regulations related to solid waste. The Proposed Project would not contribute to cumulative impacts on these resources.

Potential Cumulative Impacts

Wastewater treatment capacity: The Proposed Project would generate minimal wastewater during construction from portable restrooms and, possibly, from dewatering. Although construction of the cumulative projects would result in generation of additional wastewater, the Proposed Project's contribution would be minimal and would not result in exceeding the wastewater treatment capacity of the wastewater treatment systems. The cumulative impact would be less than significant.

Water supplies and facilities: Construction of the cumulative projects would require varying quantities of water for dust control and/or compaction. The majority of the cumulative projects that could be constructed simultaneously are small and would require little water.

The Proposed Project would require an estimated 350 acre-feet of water during the 2-year construction period. SCE would use recycled or reclaimed water to the extent feasible, if available. Should sufficient quantities of recycled or reclaimed not be available to supply the entire Project, SCE would purchase water from commercial purveyors to supplement the recycled or reclaimed water available. The Proposed Project's short-term demand for water would be minimal compared to overall water demand for Kern County, and SCE would primarily use recycled water for the construction water. Additionally, the comparatively small quantity of water required during construction of the Proposed Project would not significantly impact existing water supplies. The cumulative impact on water supplies and facilities would be less than significant.

Landfills: The regional landfills that serve the cumulative projects and Proposed Project have approximately 94 million cubic yards of capacity. The Proposed Project would generate approximately 2,021 tons of solid waste. Approximately 35 percent of waste generated by Proposed Project construction would consist of recyclable content and would be hauled to a

recycling facility for disposal. The cumulative projects would not result in waste generation in excess of the available landfill capacity. The cumulative impact on landfill capacity would be less than significant.

Wildfire

As analyzed in Section 3.20: Wildfire, depending on the pathway of migration, the geographic scope for cumulative effects relating to wildfires would include areas with very high fire hazard severity or state responsibility areas in the same region as the Proposed Project. Portions of the high-speed rail (#1), Grapevine at Tejon Ranch (#2), and Mountain Village at Tejon Ranch (#3) project sites are located in the very high fire severity zone. The high-speed rail project EIRs/EISs for the Fresno to Bakersfield section and for the Bakersfield to Palmdale section include mitigation measures to reduce impacts from potential fire hazards. The Grapevine at Tejon Ranch and Mountain Village at Tejon Ranch projects are also subject to their EIRs, which include mitigation for wildfire hazards, as well. SCE would implement APM HAZ-3, which would require SCE to develop and implement a project-specific Fire Prevention and Emergency Response Plan, which would include specific fire prevention protocols and emergency procedures to reduce wildfire risk during construction of the Proposed Project. Additionally, SCE would implement standard fire prevention protocols during construction activities and would comply with applicable laws and regulations. Because the cumulative projects include mitigation measures to offset their individual impacts, and because the Proposed Project includes APMs, the cumulative impact of the Proposed Project and cumulative projects would be less than significant with implementation of the project specific mitigation and APMs.

Once operational, the Proposed Project would not introduce a new source of wildfire risk associated with operation and maintenance activities. These features would aid in reducing wildfire risk and facilitating emergency suppression of fires. Given Proposed Project components such as access roads, vegetation clearance provisions, emergency suppression equipment, and regulatory requirements and the fact that the Proposed Project would replace existing aging infrastructure and wood poles, the addition of the incremental impact of the Project on wildfire would not be cumulatively considerable.

c) Would the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?

The following sections of this IS/MND discuss various types of impacts that could have potentially adverse effects on human beings:

- Dust and air pollutants emitted during Proposed Project construction activities (refer to Section 3.3: Air Quality)
- Potential increase in GHG emissions during Proposed Project construction activities (refer to Section 3.8: Greenhouse Gas Emissions)
- Potential release of gasoline, diesel fuel, oil, and lubricants associated with construction equipment and other vehicles (refer to Section 3.9: Hazards and Hazardous Materials)
- Noise generated by Proposed Project construction (refer to Section 3.13: Noise)

- Potential traffic hazards (refer to Section 3.17: Transportation and Traffic)
- Potential for wildland fires during Proposed Project construction activities (refer to Section 3.20: Wildfires)

The potential impacts on human beings are all temporary impacts that could occur during Proposed Project construction activities. Each type of impact with the potential to cause substantial adverse effects on human beings has been evaluated. The potential health impact from air pollutants generated during construction would be less than significant with implementation of APM Air-1. The hazard to the public from increased risk of wildland fires and the release of hazardous materials would be less than significant with implementation of APM HAZ-1 and APM HAZ-2. The effect from temporary noise increases on sensitive receptors would be less than significant with implementation of APM NOI-1, MM Noise-1, MM Noise-2 and MM Noise-3. Traffic hazards from lane, road, and pedestrian route closures would be less than significant with implementation of APM TRA-2 and APM TRA-3. The hazard to motorists from damaged roadways would be less than significant with the implementation of MM Traffic-2.

The Proposed Project would have a beneficial effect on human beings in the Proposed Project area by increasing electrical service capacity and reliability. Potential direct and indirect adverse effects on human beings would not be substantial with mitigation. The potential impact on human beings would thus be less than significant with mitigation.

Required APMs and MMs: APM Air-1, APM HAZ-1, APM HAZ-2, APM NOI-1, MM Noise -1, MM Noise-2, MM Noise-3, APM TRA-2, APM TRA-3 and MM Traffic-2, and MM Traffic-3 (refer to Section 3.3, Air Quality, 3.9: Hazards and Hazardous Materials, Section 3.13: Noise, and Section 3.17: Transportation and Traffic)

3.21.2 References

California High-Speed Rail Authority. 2014b. Final Environmental Impact Report/Environmental Impact Statement (EIR/EIS) for the Fresno to Bakersfield Section of the California High-Speed Rail (HSR) Project. https://hsr.ca.gov/programs/environmental-planning/project-section-environmental-documents-tier-2/fresno-to-bakersfield-final-environmental-impact-report-environmental-impact-statement-eir-eis/.

———. 2021a. Final Environmental Impact Report/Environmental Impact Statement (EIR/EIS) for the Bakersfield to Palmdale Section of the California High-Speed Rail (HSR) Project. Bakersfield to Palmdale. https://hsr.ca.gov/programs/environmental-planning/project-section-environmental-documents-tier-2/bakersfield-to-palmdale-draft-environmental-impact-report-environmental-impact-statement/.

5 Report Preparation Personnel

5.1 List of Preparers

5.1.1 Lead and Participating Agencies

This section lists the individuals who either prepared or participated in the preparation of this IS/MND. The CPUC is serving as the CEQA Lead Agency for preparation of this IS/MND.

California Public Utilities Commission

Eric Chiang, Project Manager at the CPUC, directed the preparation of this document. CPUC Legal Counsel reviewed this document.

Consultant Team

This IS/MND was prepared by Panorama Environmental, Inc., of San Francisco, California, under the direction of the CPUC. Table 5.1-1 identifies staff that contributed to this document.

Table 5.1-1 Consultant Team

Contributor	Title	Role/resource section
Susanne Heim	Project Director	Project oversight; Quality Control/Document Review; Biological Resources
Jessica Koteen	Project Manager	Project management; Quality Control/Document Review; Project Description; Cultural Resources; Tribal Cultural Resources; Paleontological Resources
Garett Peterson	Environmental Planner III	Aesthetics
Charlotte Hummer	Environmental Planner II	Air Quality; Greenhouse Gas Emissions; Hazards and Hazardous Materials; Noise; Mandatory Findings of Significance
Sara Sloan	Environmental Planner	Agriculture and Forestry Resources; Energy; Mineral Resources; AB52 Coordination
Kelsey Patterson	Senior Biologist	Biological Resources; Geology and Soils; Hydrology and Water Quality
Catherine Medlock	Environmental Planner	Land Use and Planning; Population and Housing; Public Services; Recreation; Utilities and Service Systems; Transportation and Traffic; Wildfire
Caitlin Jenson	GIS specialist	GIS and graphics
Lacar Musgrove	Technical Editor	Technical editing

Subcontractor Authors

Table 5.1-2 identifies subconsultants that contributed to the preparation of the document.

Table 5.1-1 Subcontractor Teams

Contributor	Firm	Resource section
Nicole Gordon, Milja Miric	The Sohagi Law Group, PLC, Los Angeles, California	Legal review
Tashi McMillen, Ari Rogers, Stephen Gergeni	Sequoia Ecological Consulting, Walnut Creek, California	Biological Resources
Patrick Miller	2M Associates Berkeley, California	Aesthetics
Paul Miller, Dan Jones, Michael Ratte	The RCH Group Rancho Cordova, California	Air Quality, Greenhouse Gas Emissions, Noise
Curt Duke, Morgan Beigle	Duke Cultural Resources Management, Rancho Santa Margarita, California	Cultural Resources, Tribal Cultural Resources, Paleontological Resources